

Learning for Sustainability

NSW Environmental Education Plan 2007-10



sustainable lifestyles • communication • participation • healthy ecosystems

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Learning for Sustainability

NSW Environmental Education Plan 2007-10

Foreword by the Minister for the Environment

The people of NSW place a high value on our unique natural environment and the opportunity to enjoy our national parks, beaches and rivers. We are also embracing changes in our daily lives to protect our environment and quality of life.

Learning for Sustainability 2007-10 is the State's second environmental education plan, aimed at assisting the community to work together to protect our precious environment.

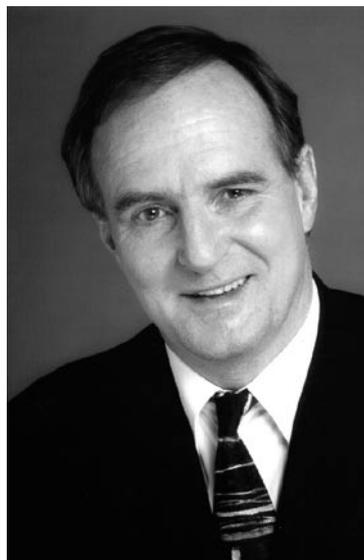
This plan will support the work of the community and industry groups, state and local government agencies, education institutions and individuals that currently provide high quality environmental education across NSW.

Learning for Sustainability 2007-10 builds on the achievements of the first plan and will help deliver environmental education programs that are well designed, topical and accessible. These invaluable programs provide us with the information and opportunities we need to make informed choices and learn how our actions can make a difference.

I encourage everyone involved in environmental education to take a look at the plan and find out how *Learning for Sustainability 2007-10* can support your important work.



Bob Debus
Minister for the Environment



The Plan's Vision

Effective and integrated environmental education that builds the capacity of the people of NSW to be informed and active participants in moving society towards sustainability.

Who has a role in implementing the Plan?

The Plan is relevant to all people whose work involves making decisions about environmental matters, including those working in environmental management, policy, education, communications, training, community involvement and research, whether in industry, educational institutions, government or community organisations.

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GLOSSARY

Action: a broad statement of what stakeholders and agencies will do to obtain an outcome.

Biodiversity: the variety of all life forms: the different plants, animals and micro-organisms, the genes they contain, and the ecosystems of which they are a part.

Capacity building: the process for enhancing the effectiveness of individuals, organisations and systems to achieve or define outcomes, by strengthening their knowledge base, competence, resources, networks, infrastructure and other forms of support.

Community: includes all spheres of government, business and industry and the general public. The term is also used in a more specific sense to refer to those affected by particular issues under consideration or who are interested in some way.

Corporate social responsibility: the commitment of business to contribute to sustainable economic development, working with employees, their families, the local community and society at large to improve their quality of life (World Business Council on Sustainable Development).

Cultural heritage: heritage consists of those places and objects that we as a community have inherited from the past and want to hand on to future generations. NSW's heritage is diverse and includes buildings, objects, monuments, Aboriginal places, gardens, bridges, landscapes, archaeological sites, shipwrecks, relics, bridges, streets, industrial structures and conservation precincts. (NSW Heritage Office website http://www.heritage.nsw.gov.au/06_index.htm.) In more recent years there has been considerable attention paid to the 'intangible' aspects of cultural heritage, meaning the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognise as part of their cultural heritage (*UNESCO Convention For the Safeguarding of the Intangible Cultural Heritage*, 2003, Art 1).

Ecological footprint: an 'ecological footprint' is a measure of community use of natural resources and ecological services. Essentially, it acts as a measure of human impact on environmental systems. Based on current consumption patterns, our 'ecological footprint' is calculated in terms of the biologically productive areas (air, land and water) necessary to continuously provide resources and services and absorb waste generated.

Ecologically sustainable development: development that aims to meet the needs of Australians today, while conserving our ecosystems for the benefit of future generations of all species. This term has been used throughout this document to refer to the path or framework for achieving sustainability.

Education: any process or activity that engages people in learning by sharing and developing knowledge, skills and attitudes. Education can occur through formal or non-formal processes. Non-formal education includes learning through a range of activities such as community participation, information and communication (including mass media), entertainment and recreation, extension and awareness-raising programs, experiential learning programs, skills training, on-the-job training and development, and short courses and personal development activities. These may be delivered by government agencies, non-government organisations and industry at a community and individual level. Formal education can occur through the curricula of pre-schools, primary and secondary schools, vocational education and training institutions and universities (see Appendixes II and III).

Education for Sustainability (Efs): education for sustainability motivates, equips and involves both individuals and communities in reflecting on how they currently live and work. This assists them in making informed decisions and creating ways to work towards a more sustainable world. Learning for sustainability seeks to implement systemic change within the wider community (Tilbury *et al* 2005).

Environment: the aggregate of all conditions that influence the life of a species, including natural, social, cultural, built and spatial elements.

Environmental education: any process or activity that assists the development of awareness, knowledge, skills and attitudes leading to environmentally responsible practices and behaviour.

Environmental citizenship: a process whereby people exercise rights and accept responsibilities for active participation as members of communities, nations and the planet to achieve sustainability.

Experiential learning: a participatory process through which people develop knowledge, skills and values through experience and critical reflection.

Integrated education for sustainability: an integrated approach to sustainability represents a shift from 'part' based management, to 'systemic' approaches that work to encourage new ways of thinking and behaving in response to complex sustainability challenges. It is based on the recognition that all aspects of the natural and human environment are interconnected and should be managed holistically. Integrated or holistic education for sustainability can mean such things as linking education to other methods used to promote sustainability; exploring interconnections between issues (ecological, social and economic) at local, regional and global levels; using learning methods that engage all aspects of people throughout their lives; and making links with others working in related areas.

Sustainability: the goal to be achieved through ecologically sustainable development. It refers to the ability to continue an activity into the future or maintain a state or condition undiminished (or enhanced) over time. Sustainability involves integrated ecological, personal and social (including economic) goals and implies changes in behaviour and practices by individuals and organisations.

Outcome: an intended result from the implementation of a plan.

Partnership: this term is often used interchangeably with terms such as coordination, collaboration, and networking, but current usage (IPAA, 2002) sees these concepts on a continuum based on the degree of formal relationship, change and commitment required. Partnership is the most committed form of relationship and can include joint planning, implementing and evaluating of activities, programs and policies. Successful partnerships combine an organisational commitment, honesty and trust with a common agenda of shared objectives and understanding of partners' priorities.

Performance indicator: a measurable item or tool used to monitor and report changes. The Council will use indicators to assess the extent to which the outcomes are being achieved.

Strategy: a broad statement of the methods employed for achieving an outcome.

Note on terminology: The Plan acknowledges that terms for environmental learning vary across different contexts and are often used interchangeably. In this Plan the term **environmental education** encompasses the field of learning relevant to the NSW Government's Environmental Education Plan as defined by the *Protection of the Environment Administration Amendment (Environmental Education) Act 1998*. In this context, the term 'environmental education' is used to describe the subject of the legislation and the Plan; any education that relates to the environment; earlier environmental learning approaches (see Table 1); and specific components of environmental learning.

The term **education for sustainability** refers to an emerging reformulation of environmental education consistent with current international statements on this topic by bodies such as UNESCO and IUCN (Hesselink *et al* 2000). In this context, usage of the term 'education for sustainability' in the Plan refers to a specific environmental learning approach as characterised in Appendix VI. In the Plan, reference is also made to **education for sustainable development** in relation to the United Nations Decade of Education for Sustainable Development (DESD) 2005-2014.

ABBREVIATIONS AND ACRONYMS

ACF	Australian Conservation Foundation
Ai Group	Australian Industry Group
ARP	Annual reporting process
BASIX	Building Sustainability Index
CEE	NSW Council on Environmental Education
CMAs	Catchment Management Authorities
CRC	Cooperative Research Centre
DEC	Department of Environment and Conservation NSW
DET	Department of Education and Training
DESD	United Nations Decade of Education for Sustainable Development
DEUS	Department of Energy, Utilities and Sustainability
DNR	Department of Natural Resources
DP	Department of Planning
DPI	Department of Primary Industries
EDO	Environmental Defender's Office of NSW
EECN	Environmental Education Coordinating Network
ESSP	Environmentally Sustainable Schools NSW Program
EfS	Education for Sustainability
ESD	Ecologically Sustainable Development
IUCN	The World Conservation Union
MPA	Marine Parks Authority NSW
NCC	Nature Conservation Council of NSW
NCOSS	Council of Social Services of NSW
NEEC	National Environmental Education Council
NEEN	National Environment Education Network
NGOs	Non-government organisations
NPA	National Parks Association of NSW
NRM	Natural resource management
OBOS	Office of the Board of Studies
Oz GREEN	Global Rivers Environmental Education Network Australia Inc.
REGEN	Random Evolution of Growth, Entertainment and Nature
RTA	Roads and Traffic Authority of NSW
SCA	Sydney Catchment Authority
SOE	State of the Environment Report
TAFE	Technical and Further Education
TCO	The Cabinet Office
TEC	Total Environment Centre
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNCED	United Nations Conference on Environment and Development
VET	Vocational education and training

OVERVIEW

NSW's natural resources are under ongoing pressure from human activities. The *NSW State of the Environment 2003* report "confirms other findings that continuing the current path of resource use will have serious environmental and economic consequences for NSW" (EPA 2003). There is also broad agreement that we need to protect the health, diversity and productivity of the environment because a healthy environment is an essential requirement for a productive economy and human wellbeing.

To meet this challenge, we all need to learn how to live in a way that is ecologically sustainable. Environmental education has a vital role to play in facilitating this lifelong learning process, and therefore in achieving sustainable outcomes for NSW. In recognition of this, the NSW Council on Environmental Education (the Council) has developed *Learning for Sustainability: NSW Environmental Education Plan 2007-10* (the 2007-10 Plan), in close consultation with a wide range of stakeholders.

The 2007-10 Plan recognises and responds to the need for urgent and considered action to sustain our environmental resources and promote sustainable living for the benefit of present and future generations. It builds on the achievements of the 2002-05 Plan, which has been revised and updated to help meet current and emerging sustainability challenges.

What does the Plan aim to achieve?

The Plan strives to build the capacity of the whole community to move purposefully towards a sustainable future. It is guided by the vision to achieve:

Effective and integrated environmental education that builds the capacity of the people of NSW to be informed and active participants in moving society towards sustainability.

To realise this vision, the Plan sets out seven key **outcomes** (see Sections 2.5 and 4) that the Government will pursue in partnership with other sectors, and the strategies and specific actions that are to be implemented to achieve these outcomes. It also sets out who is responsible for managing the **implementation** of each action (see Section 3), and the indicators that will be used in measuring and evaluating progress towards achieving each strategy.

The Plan's outcomes are:

1. **improved integration** of environmental education with other tools and strategies used by organisations to promote sustainable development.
2. **enhanced cross-sectoral coordination** of environmental education programs.
3. **expansion of partnership and network activities** between environmental education providers which enhance the quality and reach of their programs.
4. **improved access** for all people in NSW to high quality environmental education programs.
5. **enhanced training, professional development and other support** for those developing and delivering environmental education.
6. **increased research and evaluation** of effective environmental education.
7. **increased active and informed participation** by NSW people in creating a sustainable future.

The first six of these outcomes are expected to lay the foundations for achieving the seventh outcome.

The Plan is founded on seven basic **principles** (see Section 2.3) that promote integrated environmental education. These principles recognise that all aspects of the natural and human environment are interconnected and should be managed holistically. They establish a primary role for education in assisting the people of NSW to move towards sustainability. This role is to promote quality, lifelong learning that results in social change through the initiatives of individuals and organisations.

Importantly, the Plan seeks to address, in an integrated and coordinated way, a wide range of environmental issues, including the following **priority environmental themes for environmental education** in NSW (see Sections 1.3 and 3.2):

- **Climate change:** the need to reduce greenhouse gas emissions and mitigate the environmental, social and economic costs of climate change (for example, through Actions 10.10 and 10.11)
- **Total water cycle management:** the need for urban and regional catchment-based water cycle management to promote water conservation, prevent pollution of surface and groundwater resources, protect aquatic and floodplain biodiversity, and provide and maintain environmental flows (Actions 10.2, 10.3, 10.8, 10.12, 10.16 and 10.17)
- **Biodiversity conservation:** the need to conserve terrestrial and aquatic biodiversity, protect ecosystem health and maintain critical ecosystem services (Actions 10.6, 10.7, 10.8 and 10.18)
- **Landscape management:** the need for systems-based landscape management to address cumulative impacts of unsustainable land use and promote healthy and productive landscapes (Actions 10.2, 10.3, 10.4, 10.8 and 10.17)
- **Sustainable production and consumption:** the need to stimulate change in production and consumption patterns, and encourage waste avoidance, resource recovery and active conservation of resources (Actions 10.14 and 10.15)
- **Pesticide and chemical management:** the need to minimise the impacts of hazardous pesticides and chemicals on environmental systems and human health, and promote safer alternatives (Action 10.5)
- **Air quality:** the need for continued action to tackle indoor and outdoor air quality issues that affect environmental quality and human health (Action 10.9)
- **Sustainable housing and transport:** the need to promote innovative urban planning, green design techniques and ecologically sound transport alternatives and networks (Actions 10.11 and 10.21).

The Plan also responds to six **ongoing educational needs** (see Section 2.4) that were identified for environmental education in NSW through consultation and review. These needs include a more holistic approach to environmental education; improved access to environmental education programs; better planning, coordination and partnership programs; enhanced professional development and training; quality improvement, research and evaluation; and appropriate resourcing and incentives.

Who has a role in implementing the Plan?

All whose work involves making decisions about environmental matters have a role to play in implementing the Plan's strategies and actions, and contributing to the achievement of its outcomes (see Section 3.1). This includes people working in management, policy, education, communications, training, community involvement and research – whether in industry, educational institutions, government or community organisations.

The Plan is particularly relevant for those who:

- have responsibilities for planning corporate strategies, plans or policies
- work for organisations that deliver environmental and natural resources programs, including State Government agencies and non-government organisations, industry and community groups
- are involved in providing environmental education programs and activities, and use education and training, information, advice and communication tools
- provide professional development and training and other support for environmental educators
- manage programs and operations that have an impact on the environment.

For each action within the Plan, specific organisations or groups have been assigned the responsibility for managing implementation. The Council's role in implementing the Plan is to facilitate coordination and to monitor, evaluate and report on progress towards achieving the Plan's outcomes.

The Plan's strategies and actions are designed to be implemented within its three-year timeframe. However, the achievement of its outcomes is expected to be a progressive, ongoing process and may not necessarily be completely achieved by the end of this timeframe.

Navigation guide

To help you quickly find what you're looking for in the 2007-10 Plan, the content and purpose of each section is outlined below.

THE 2007-10 PLAN IN CONTEXT

(Section 1)

Purpose, development process, achievements against the 2002-05 Plan, challenges and drivers for the 2007-10 Plan.

Read this section to find out about what has driven the Plan's priorities



THE FOUNDATIONS OF THE 2007-10 PLAN

(Section 2)

A new strategic direction for environmental education in NSW based on education for sustainability, and the vision, principles and needs that guided the development of the Plan's outcomes.

Read this section to find out about the thinking that underpins the Plan



IMPLEMENTATION, MONITORING, REPORTING AND EVALUATING

(Section 3)

Roles, responsibilities and processes for implementing, monitoring, reporting on and evaluating the effectiveness of the Plan.

Read this section to find out who will play a part in implementing the Plan, and what the roles and responsibilities of these participants are



OUTCOMES, STRATEGIES AND ACTIONS

(Section 4)

Outcomes, strategies and actions for achieving the NSW Government's vision for environmental education.

Read this section to find out the specific actions to be taken under the Plan

THE 2007-10 ENVIRONMENTAL EDUCATION PLAN IN CONTEXT

The NSW Government is committed to ecologically sustainable development (ESD) as a framework for dealing with the challenges of environmental sustainability. Over recent years, there has been an extensive global effort to develop new tools and approaches to achieve sustainability. Environmental education has emerged as a vital tool, because it helps people to understand the nature and complexity of environmental challenges and builds their capacity to take appropriate action.

In NSW, there is a pressing need to better integrate the educational, regulatory, technical and economic tools and strategies within the management approaches we use to promote sustainable development, to maximise the effectiveness of these approaches and overcome the considerable environmental challenges we face. The 2007-10 Environmental Education Plan has been developed to help meet this need.

The Plan forms a central plank in the Government's package of policies, strategies and actions for fostering sustainable development. Together with other key strategies, it aims to guide the implementation of education for sustainability programs across all levels of our community, to motivate the citizens of NSW to tackle current and emerging sustainability challenges, and to equip them with the knowledge and skills they need to make a difference.

This section puts the Plan in context, by explaining its purpose and development process, the challenges and urgency that drove its development, and its resourcing.

1.1 Purpose of the Plan

The purpose of the 2007-10 Plan is to set out a strategic framework for developing environmental education in NSW over the next three years, so that it is more effectively integrated with other environmental management tools, fosters collaborative learning and reflective practice, and has the capacity to purposefully progress society towards a sustainable future.

This strategic framework clearly establishes the direction and priorities for environmental education for the next three years. Its outcomes focus on:

- developing comprehensive and coordinated education that addresses priority sustainability issues
- building the capacity of the environmental education system to address sustainability education needs.

The Plan also sets out the strategies and actions to be taken to achieve these outcomes. These strategies and actions are designed to address the needs of those delivering environmental education, as well as the needs of those who seek access to this education.

The Plan is a living document: it will be updated regularly over 2007-10 to ensure that it responds to emerging sustainability priorities and new policy directions.

1.2 Development process

The Plan was developed by the NSW Council on Environmental Education (the Council), which was established under the *Protection of the Environment Administration Amendment (Environmental Education) Act 1998* to advise the State Government on strategic directions for environmental education. The Council's primary task is to prepare three-year environmental

education plans for NSW. The first of these plans was for the period 2002-05, and was based on a comprehensive assessment of the environmental education needs of NSW people and an analysis of the priority sustainability issues in this State.

The Council's development of this 2007-10 Plan has been collaborative, building on earlier work and drawing on a wide variety of input. The development process included:

- reviewing the 2002-05 Plan and its annual monitoring reports to identify the successes that arose from the implementation of that plan, the areas where progress was less certain, and the issues that affected the success of implementation and the progress towards sustainability
- conducting consultation processes, including holding a series of focus group discussions between Council members and a broad range of stakeholders and inviting submissions on a consultation draft of the Plan
- undertaking desktop research on emerging trends in environmental education, and assessing the current and emerging environmental challenges and government policy priorities.

The 2007-10 Plan retains many of the strategies included in the 2002-05 Plan, building on its successes and revising actions to address emerging issues affecting progress towards ESD. (Box 1 provides a snapshot of these successes and an indication of the issues that were taken into account in developing the 2007-10 Plan.)

BOX 1: Achievements against the 2002-05 Plan outcomes

As part of the development process for the 2007-10 Plan, the Council reviewed the 2002-05 Plan and its annual monitoring reports (www.environment.nsw.gov.au/cee). This review captured the experiences of agencies and organisations responsible for implementing Plan actions, and identified the issues that affected the achievement of the Plan's ultimate outcomes. The review informed the development of actions that build on successes of the implementation of the 2002-05 Plan and address areas where progress has been less certain.

The stated outcomes of the 2002-05 Plan were ambitious and the Council recognised that all outcomes would not be fully achieved over its three-year period. A snapshot of achievements against these outcomes is provided below, together with an indication of the issues identified as relevant for the 2007-10 Plan and the corresponding actions:

Integration of education with other tools and strategies

There have been significant improvements in the integration of environmental education with other tools and strategies used by organisations to promote ESD. For example:

- the State Government's recent environmental and natural resource management reforms and initiatives, such as the *Metropolitan Water Plan* and the *NSW Greenhouse Plan*, have integrated education and community involvement as core strategies
- an increasing number of State Government agencies are incorporating environmental education into key corporate planning documents
- local councils' long-term strategies frequently include education and community engagement and greater provision of environmental education programs.

Overall, movement towards this outcome has been uneven. Monitoring indicates that environmental education is not included in the corporate planning documents of almost half of State agencies and 60 per cent of local councils' corporate plans. For this reason, strategies 1.1, 1.2 and 1.3 have been retained in the 2007-10 Plan, to improve the integration of education.

Cross-sectoral coordination

Cross-sectoral coordination of environmental education programs has improved and educational networks have been enhanced. The NSW Environmental Education Coordinating Network (EECN) has helped NSW Government agencies and non-government organisations share information and coordinate their work.

While a significant increase in the coordination of environmental education programs has been reported, new programs and changing delivery structures make it important that the 2007-10 Plan retains a strong focus on improving coordination of programs across NSW. For this reason, strategies 2.1 and 2.2 have been retained, but related actions have undergone significant revision to reflect changing institutional arrangements and emerging sustainability challenges.

Partnerships and network activities

Partnerships are a focus for many organisations. Eighty per cent of State agencies reported developing programs in partnership with other organisations and 72 per cent of local council programs were developed or run in partnership with other organisations. There are a number of excellent examples of genuine partnership arrangements, particularly between government and non-government organisations, such as the *Our Environment – It's A Living Thing* program, which is a useful source of case studies.

There is strong evidence that partnership and network activities are increasing, but it is difficult to assess the depth and extent of initiatives reported. The development of partnership-based programs across all sectors of the community is critical to the delivery of effective environmental education in NSW and it remains an environmental education priority. To progress the development of partnerships and achieve cost effective program delivery, strategies 3.1 and 3.2 have been retained in the 2007-10 Plan.

Access to education programs

Access to quality environmental education programs for all people in NSW is improving. The web is regularly used to increase access to environmental education information and a substantial majority of State agency websites provide links to environmental education websites.

While access to environmental education has grown, programs are often generic and not targeted to specific audiences. Youth and/or seniors are the most commonly targeted specific group by both State agencies and local councils (mainly schools). However, there are few programs for Aboriginal and Torres Strait Islander people, and ethnic and rural communities. This is indicative of the need for more context-specific, locally relevant education programs, designed to meet the needs of particular groups in the community. In the 2007-10 Plan, strategies 4.1, 4.2 and 4.3 are aimed at increasing participation and engagement across all community sectors.

Training and professional development

It is difficult to assess whether there has been enhanced training, professional development and other support for those developing and delivering environmental education. While all universities reported that their teacher training degrees and courses included either compulsory or voluntary environmental education, this training is not a requirement for employment. There have been enhancements in environmental vocational education and training, but it is clear that many employees do not have the basic environmental competencies needed in their work. Some State agencies, councils and non-government organisations reported that they provided some form of environmental education training and professional development, but the majority did not. Strategies 5.1, 5.2 and 5.3 in the 2007-10 Plan address this need.

Research and evaluation

There has been some progress in boosting research and evaluation of environmental education. In 2004, the Council held a conference titled *Effective Sustainability Education: What Works? Why? Where and What Next? Linking Research and Practice*, which showcased a wide range of examples of the use of evidence in managing programs. New evaluation tools have been developed and

significant training has occurred, but many programs are being run without a strong evidence-base for design or effectiveness. For this reason, strategies 6.1, 6.2 and 6.3 have been revised to improve the quality and extent of research and evaluation.

Increased active and informed participation by NSW people in creating a sustainable future

This outcome represents the cumulative effect of the six outcomes discussed above. The DEC's statewide surveys, *Who Cares about the Environment?* (2006) and *The Environment and Ethnic Communities 2004* (2005), show that environmental knowledge has grown in recent years, and more people can identify a range of specific environmental issues. Some environmental behaviours have increased since 2003, such as reducing water consumption, reducing fuel consumption and avoiding the use of plastic bags to carry shopping. Other evidence suggests that participation in environmental activities in the workplace and through recreational activities is increasing, as is demand for environmental information.

1.3 Challenges

The Council's assessment of the current and emerging environmental challenges and government policy priorities identified a range of interconnected environmental, education and community drivers and priorities that have shaped the content and priorities of the Plan. These priorities, outlined below, create focus for the implementation of the 2007-10 Plan.

Environmental drivers and priorities

Increasing ecological footprint of people in NSW

'Ecological footprint' is a measure of human impact on environmental systems through the use of natural resources and ecological services. It involves calculating the biologically productive areas (air, land and water) required to continuously provide resources and services and absorb the waste generated. The *NSW State of the Environment 2003* report (The SOE 2003) demonstrated that in the five years between 1993-94 and 1998-99, the NSW community increased its total ecological footprint by 23 per cent (to over seven hectares per person) while the population grew by only 7 per cent (EPA 2003).

One of the major causes of this increase is unsustainable production and consumption patterns. Therefore, to reduce our collective footprint and the pressure it places on natural resources and ecosystem services, we need to increase efficiency in production and change consumption patterns to optimise resource use and minimise waste. There is a need for education to promote a better understanding of the relationship between production, consumption and the environment. This education should focus on issues such as sustainable lifestyles, cleaner production, eco-design, product lifecycles, waste avoidance, resource recovery and efficient and less polluting energy and transport technologies.

There is also a need for education directed at changing individual lifestyles and organisational values. One example of this kind of education is BASIX, an innovative planning tool that integrates education and regulation to promote sustainable urban development across NSW by assessing the potential performance of new homes against a range of sustainability indices.

NSW water reforms

Water is one of our most critical resources. As our population continues to expand there will be increasing pressure on NSW's water supply and quality. The SOE 2003 found that:

- freshwater riverine ecosystems are extensively degraded across NSW
- many NSW waterways have poor water quality and increased salinity is projected in some areas
- surface water extraction is unsustainable in parts of NSW
- use of some groundwater resources in NSW is unsustainable and there is a risk of over-extraction.

Water is essential for our communities, the economy and the environment. Securing Sydney's water needs over the next 25 years means ensuring that we have:

- sufficient water available over time to meet the needs of a growing city and to protect river health; and
- the ability to withstand current and future droughts, and impacts from climate change.

The *2006 Metropolitan Water Plan* sets out how the NSW Government will achieve these objectives and provide a secure supply of water that can meet the long term needs of Sydney, ensuring that water supplies are adequate during drought, and minimising costs to the community and the environment. Implementation of the plan involves a range of strategies and includes Australia's largest water savings program and one of the country's largest recycling schemes.

The NSW Government has introduced a number of other major initiatives aimed at moving NSW towards a total water cycle management approach. Key examples include:

- *Water Management Act 2000 and Amendment Act 2004*
- *Water Management (General) Regulation 2004*
- *Water Efficiency Labelling and Standards Act 2005*
- Best Practice Guidelines for Integrated Water Cycle Management (DEUS)
- Water for a Healthy Country (Flagship CSIRO Program)
- Hawkesbury-Nepean River Management Forum.

The NSW Government also actively participates in national water reform programs through the Council of Australian Governments, Natural Resource Management Ministerial Council and Murray-Darling Basin Ministerial Council including:

- National Water Initiative
- Living Murray
- Snowy River Inquiry and Outcomes Implementation
- National Action Plan for Salinity and Water Quality.

The NSW Government is currently implementing the Water for Life Education Program to coordinate an integrated approach to environmental education across the greater Sydney area.

Climate change

On a per capita basis, Australia is the second largest producer of the greenhouse gas emissions that contribute to climate change. There is a need to learn how our actions impact on this process, implement cost-effective ways to reduce emissions, and plan for social, environmental and economic impacts of climate change.

The NSW Greenhouse Plan outlines ongoing strategic actions to achieve the Government's key emission reduction targets, including:

- setting NSW on a long-term path towards a prosperous economy with low net carbon emissions
- raising awareness of all greenhouse issues among the broader NSW community to drive action to reduce emissions by individuals
- deepening our knowledge of climate change impacts on NSW and, where appropriate, beginning the adaptation processes.

Education can play an important role in ensuring these targets are met.

Natural resource management

One of our greatest challenges is the ecologically sustainable management of our natural resources – soil, water, plants and animals. Some of the most important issues in natural resource management (NRM) are water quality and availability, salinity, soil health and erosion, native vegetation loss, and conservation of threatened species.

In NSW, NRM is based on a coordinated management approach at a regional catchment scale. The major changes that have taken place in this field since the 2002-05 Plan are the establishment of Catchment Management Authorities (CMAs) and a move away from programs focused on specific issues (such as salinity or acid soils) to integrated programs designed to achieve regional landscape management objectives.

The CMAs' role is to set the strategic direction for NRM in their region, and to guide State and local government agencies and other committees, community groups and individuals in their planning and implementation of NRM actions. There is a need for capacity building to support participatory decision-making, cross-sectorial problem solving, resource sharing and collaborative action.

Biodiversity conservation

Terrestrial and aquatic biodiversity in NSW is increasingly threatened by unsustainable practices and land management. Land clearing, modification by grazing, changed fire regimes, overexploitation of species, the introduction of exotic species and pollution all pose serious threats to the conservation of biodiversity. Unless these threats are addressed, loss of biodiversity will adversely affect the health of ecosystems and the provision of critical ecosystem services, such as clean air and water, the recycling of nutrients, and the availability of resources such as food and fibre.

Educational approaches will play an important role in conserving biodiversity as part of the NSW Biodiversity Strategy, currently in development. The conservation of biodiversity includes considering the special relationship Aboriginal people have with the land in order to explore how we can live more sustainably in the Australian environment.

Cultural heritage

The Australia ICOMOS Burra Charter (1999) establishes an agreed framework and standards for the conservation and management of places of cultural heritage in Australia. Conserving cultural heritage, including Aboriginal, historic, built and landscape elements, contributes to a quality environment and generates responsibility for stewardship of that heritage.

Future action to conserve cultural heritage should incorporate traditional knowledge from Aboriginal people into decision-making frameworks and the adaptive re-use of historic heritage (for example, finding new uses for historic buildings and materials). The NSW Government's Aboriginal Affairs Policy 2003-2012: *Two Ways Together* establishes a framework for partner-based action between cluster groups of government agencies and Aboriginal peak bodies to address priority issues including culture and heritage.

Pesticide and chemical management

The impacts of chemicals and pesticides on the environment and public health can be severe, ranging from fish kills to long-term chronic impacts on children's respiratory systems. Pesticides and chemicals have the potential to pollute our air and water, contaminate our waste streams and impact on our ability to achieve sustainable resource use.

Education aimed at informing regulators, industry and the community about potential chemical and pesticide risks and sustainable chemical use is vital to enable the community to make better choices about the use of hazardous pesticides and chemicals, and to eliminate or reduce their environmental, public health, and economic impacts.

Air quality management

Air pollution is associated with acute health effects (such as asthma), chronic health effects (such as lung cancer, bronchitis and cardiovascular disease), and mortality. Although NSW has made

important advances in managing air quality, significant challenges remain. Photochemical smog (ground level ozone) and particulates (PM10) continue to exceed national air quality standards, and these pollutants pose a significant threat to urban air quality.

Action for Air, the Government's 25-year air quality management plan for the Sydney Greater Metropolitan Region is a multi-strand strategy which incorporates education as an integrated tool designed to tackle air quality issues.

Educational drivers and priorities

The priorities and objectives of two global environmental education initiatives – Agenda 21 and the United Nations Decade of Education for Sustainable Development 2005-2014 – were taken into account in developing the 2007-10 Plan:

Agenda 21 is a comprehensive plan of action for sustainability put forward at the United Nations Conference on Environment and Development held in Rio de Janeiro in 1992, and reaffirmed at the 2002 World Summit on Sustainable Development held in Johannesburg.

'Education, including formal education, public awareness and training should be recognised as a process by which human beings and societies can reach their fullest potential. Education is critical for promoting sustainable development and improving the capacity of the people to address environment and development issues.'

(Agenda 21, Chapter 36, 1992)

Agenda 21 advocates a holistic approach to environmental education, to help people to understand the complex, interconnected nature of environmental systems in a socio-economic, political and cultural context. Fundamental to this approach are the concepts of participation, critical reflection, ownership and empowerment. The three major priorities identified for holistic environmental education include:

- improving the quality of and access to basic education
- reorienting existing education to address sustainable development
- developing public understanding, awareness and training across all sectors of the community.

United Nations Decade of Education for Sustainable Development (DESD) 2005-2014 is an opportunity to focus the global implementation of environmental education for everyone's benefit, while working to build the community's capacity to co-create a sustainable future. The draft National Framework for the DESD in Australia (Australian National Commission for UNESCO 2005) identifies the key objectives and opportunities in Australia as:

- clarifying a common vision for education for sustainability and the DESD in Australia
- promoting awareness of quality education for sustainability and the DESD in Australia
- promoting innovative practice in education for sustainability in both formal and non-formal learning sectors
- equipping educators with the skills and competence to critically engage learners in an open exploration of sustainability issues
- ensuring that adequate and appropriate resources and materials for education for sustainability are available and accessible to all learners
- promoting monitoring, evaluation and research on education for sustainability and the DESD
- strengthening cooperation on education for sustainability at all levels across State and Territory borders
- encouraging Australian participation in international DESD activities, especially in Asia and the Pacific.

The top two priorities for the DESD in Australia are to develop:

- a national strategy and action plan for the decade to guide participants and catalyse change towards education for sustainability by providing a united approach for action over the decade
- an inclusive partnership network for the decade to bring together all stakeholders for cohesive action.

The 2007-10 Plan effectively addresses the objectives of the DESD. It will support and link to the DESD process as it rolls out and provide leadership for its implementation in this State (Action 16).

Community drivers and priorities

To be effective, education for sustainability must address the sustainability issues that the people of NSW see as the top priorities. Community priorities and concerns in relation to the environment are identified by statewide research, *Who Cares About the Environment?* conducted every three years. Since 1994, education has consistently been rated as one of the more important initiatives the government can undertake to protect or improve the environment. In addition, the research conducted in 2003 and 2006 (DEC 2004 and 2006) established that:

- people clearly value the environment as part of their lives and many are willing to pay to protect it. They also support compulsory environmental regulation.
- all sectors (across government, industry and community) need to do more to protect the environment.

Further, broad-based research on *The Environment and Ethnic Communities in 2004* (DEC 2005), involving eight of NSW's largest ethnic communities, established that a high priority for a range of environmental issues exists, particularly water conservation. Lack of knowledge was identified as a key barrier to adopting sustainable actions for these communities.

1.4 Resourcing the Plan

The Plan has an important role to play in supporting effective resourcing of environmental education activities in NSW. The 2007-10 Plan seeks to maximise the value of existing extensive commitments across industry, government and community, and to promote the identification of new sources of funding.

Current expenditure on environmental education in NSW is substantial. Industry, environment organisations, NSW Government agencies, and community groups all allocate considerable resources to environmental education, communication, training and development activities.

In the past year, the NSW Government announced several new sources of funding. For example:

- the Environmental Trust announced more than \$4.65 million towards new environmental education initiatives.
- the Water for Life Education Program, funded through the Government's Water Savings Fund as part of the 2006 Metropolitan Water Plan. The objective of the Government's Water Savings Fund is to increase public awareness and acceptance of the importance of water savings measures.
- the NSW Greenhouse Plan identifies \$7.5 million for implementing an awareness raising campaign.

The community and industry sectors are also making major contributions, although it is difficult to estimate current expenditure. To take one example, the Total Environment Centre is building the capacity of business and industry to meet the challenges of corporate social responsibility (CSR), utilising participatory forums and debates as an educational medium. This innovative partner-based engagement is funded by industry program partners (30 per cent) and registration fees (70 per cent), and has an approximate value of \$500 000 per annum.

Along with the recently announced new sources of Government funding, the Plan assists in identifying new resources and maximising the value of existing resources by:

- promoting integration of funded education activities within new reforms and initiatives
- helping to align education programs against Plan outcomes thereby maximising their impact
- establishing partnerships to identify common goals and share resources
- improving coordination and networks to reduce duplication and allow redirection of some funding
- encouraging government and non-government organisations to continue to identify funding sources for their education programs
- encouraging education providers to seek innovative new funding via grants, sponsorship, levies, cost recovery, user-pays approaches and subsidies.

2.

THE FOUNDATIONS OF THE 2007-10 PLAN

The 2007-10 Environmental Education Plan is underpinned by thinking and research in four key areas:

- the role of education in achieving sustainability
- the vision for environmental education in NSW
- the principles that underpin this vision
- the ongoing environmental education needs in NSW.

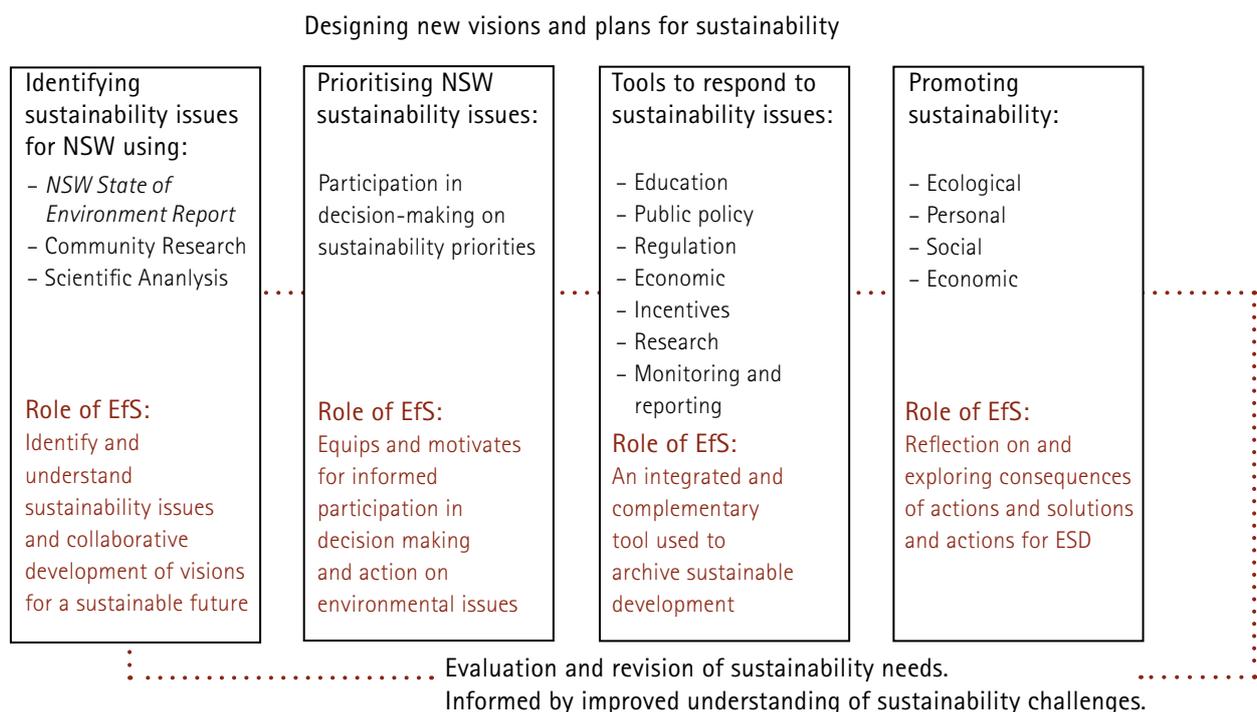
This section provides an overview of this thinking and research, and the Plan outcomes that resulted from it.

2.1 The role of education in achieving sustainability

Education has a key role to play in achieving sustainability outcomes for NSW – by helping communities to understand how our individual and collective behaviour affects the environment, and how to move towards sustainability over time.

Education for sustainability, as shown in Figure 1, must be comprehensive and closely integrated with the suite of other tools used to address sustainability issues. These tools include public policy, regulation, economic incentives, infrastructure, research, and monitoring and reporting. None of these tools alone can provide the impetus to move towards sustainability in NSW, but they can each play a complementary role when used together. The role of each tool in relation to the others must be tailored to meet specific needs.

Figure 1: Role of education in achieving sustainability



To effectively address specific sustainability issues, education programs must be comprehensive, complementary, and designed to meet the needs of all relevant sectors (i.e. all stages of formal education, government agencies, the community, non-government organisations, industry, local government). In addition, delivery must be shared across the appropriate sectors in an effective, efficient and mutually supportive manner.

The environmental education concepts and approaches used in NSW continue to evolve in response to changes in our understanding of environmental issues and the role of education in achieving sustainability. Most recently, there has been a shift towards the concept of ‘education for sustainability’. This shift in emphasis, and the meaning of education for sustainability are explained below.

Shifting emphasis towards education for sustainability

Many terms have been used over time to describe the thought and practice of learning about our relationship with the environment, and to reflect the changes in concepts and approaches that have occurred. For example, in the 1970s, earlier notions of ‘nature studies’ were succeeded by the concept of ‘environmental education’. More recently, a number of international statements by UNESCO and the IUCN have introduced the terms ‘education for sustainability’ and ‘education for sustainable development’ to capture new understanding and concepts in environmental management and education. Essentially, this shifting focus signifies the re-orientation of environmental education to address the complexities of ESD. Table 1 outlines the key changes in thinking reflected by the shift towards education for sustainability.

Table 1: Shifting emphasis towards education for sustainability

Focus	Earlier approach	Emergent approach
Problem	Pollution	Causes of unsustainable resource use
Solution	Environmental protection and conservation	Collaborative solutions for sustainable development
Connectedness	Humans separate from ecosystems	Humans part of ecosystems
Goals	Individual awareness, knowledge and behaviour	Sustainable lifestyle and societies
Methods	Predominately information-based	Participatory and experimental, community development and capacity building
Time and scale	Short-term, local and national	Long term systemic
Learners	Audience and target groups	Participants, stakeholders and partners
Implementation	Mainly top and bottom	Through partnerships and networks
Legitimacy	Technical and scientific expertise	Multiple perspectives – based on different ways of seeing, knowing and doing

What does 'education for sustainability' mean?

Over the past decade, environmental education has been reconceptualised, driven by the urgency and scope of sustainable development. 'Education for sustainability' encapsulates this shift in understanding and aims to empower all levels of society to participate in decisions about the way we do things individually and collectively. In essence, it is:

'Education that equips and involves both individuals and communities in reflecting on how they currently live and work. This assists them in making informed decisions and creating ways to work towards a more sustainable world. Learning for sustainability ... seeks to implement systemic change within the wider community.'

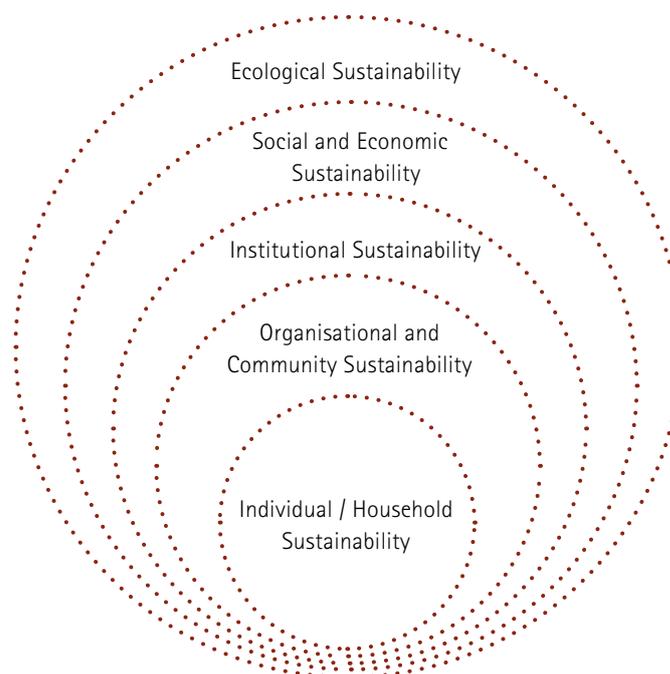
(Tilbury et al 2005)

Education for sustainability is a process for achieving sustainable development that involves encouraging people to explore the complexity and implications of sustainability, and work towards a sustainable future. Its fundamental aspects include:

- focusing on values and ability to co-create a sustainable future
- building capacity for sustained change and improved quality of life
- linking awareness-raising and behaviour changes to broader lifestyle choices
- developing skills and knowledge for socially critical citizens to deal with complex issues
- focusing on sustained social, institutional and organisational change, working to mobilise learning across all levels of society
- focusing on triggering fundamental shifts through creative exploration of values and ideas (IUCN 2005).

Figure 2 illustrates the potential scope and influence of education for sustainability. This model shows that education outcomes at each level are interdependent.

Figure 2: The scope and influence of education for sustainability



Implementing education for sustainability programs generates opportunities for practitioners to integrate issues and outcomes across a number of levels. The cumulative impact of educational outcomes across all spheres helps to progress society towards ecological sustainability. (See Appendix VI for an outline of the key elements of education for sustainability, which can provide guidance in identifying, shaping and evaluating programs.)

Terms used for environmental education vary across cultural and political contexts, both locally and abroad, and will continue to evolve. The term 'education for sustainability' is used to describe the key elements of contemporary environmental education in the 2007-10 Plan. We have also continued to use the term 'environmental education' more generally to describe the subject of the Plan. (See the note on terminology in the Glossary on page ii for more information on the way these terms are used in this document.)

2.2 2007-10 Plan Vision

The 2007-10 Environmental Education Plan is guided by a vision to achieve:

Effective and integrated environmental education that builds the capacity of the people of NSW to be informed and active participants in moving society towards sustainability.

Thus, its ultimate goal is an ecologically literate community that, through education for sustainability, is empowered and motivated to pursue sustainable lifestyles and create a sustainable future.

Environmental learning is a lifelong process that exists in a variety of forms. It aims to help individuals and organisations make the decisions required to ensure the development of a sustainable society. Education for sustainability includes both **formal** education and training in schools, TAFE and universities, and **non-formal** programs and activities such as:

- personal education programs
- information products and services, including via print, web and telephone
- training, development, extension, awareness-raising and site-specific programs, including workplace and community-based programs
- public communications programs, including information delivered through campaigns and mass media
- community development programs.

2.3 Principles that underpin the Plan

The 2007-10 Plan is underpinned by seven principles. These principles are:

1. **The development and delivery of environmental learning in NSW is aimed at assisting the community to move towards sustainability:** Effective and integrated education for sustainability programs are integral to building an informed, active and environmentally responsible community.
2. **Education for sustainability is integrated with other environmental management tools:** To achieve sustainability, education for sustainability must be integrated with public policy, regulation, economic incentives, infrastructure, research, and monitoring and reporting.

3. **Education for sustainability acknowledges the complex connections between diverse aspects of environmental problems:** A more comprehensive and proactive approach to addressing environmental issues extends the focus of education from specific local and visible symptoms of environmental problems (such as water pollution or waste disposal) to the underlying causes of these problems (such as personal and social values, and organisational structures).
4. **Education for sustainability promotes social change through the initiatives of individuals and organisations:** Quality education promotes changes in personal behaviour, and organisational practices to deliver changes in broad social, economic and physical systems.
5. **Education for sustainability builds a 'learning society' through critical and reflective engagement, to enable the development of new understandings of the environment and our place within it:** Because there are no simple prescriptions or blueprints for sustainability, building individual and organisational capacities to sustain learning is a key role for education. This involves establishing processes for co-operative learning with other stakeholders.
6. **Education for sustainability is a lifelong learning process that provides environmental learning opportunities for all sectors of society:** Education for sustainability needs to engage people of all ages and backgrounds. This requires provision of comprehensive learning designed to equip people to make decisions and take actions that are environmentally sustainable at home, at work and during recreation.
7. **Continual improvement is at the basis of all planning, delivery and evaluation of education for sustainability:** Improving the effectiveness of education involves the use of research, evaluation, co-learning and adaptive management.

2.4 Ongoing environmental education needs

In 2000, the Council conducted an extensive review of environmental education to identify areas that need improvement. The Council's 2005 review, which included consultation with stakeholders, found that the following environmental education needs are still relevant in NSW.

A more holistic approach to environmental education

Some programs deal with specific environmental issues in isolation from key factors that are causally related or relevant to solutions. A more integrated approach is required in framing environmental issues and challenges and designing education programs.

Improved access to environmental education programs

There is a major challenge in providing environmental education equally to all people in NSW. It is important to ensure it is spread across all sectors and regions and to groups with special needs, taking into account, in particular, cultural background, language and disability.

Better planning, coordination and partnership programs

The way in which programs are planned and their ongoing coordination have been identified as needing improvement to ensure that essential information, people and resources are brought together at appropriate stages.

Enhanced professional development and training

In some situations, the planning, implementation and evaluation of environmental education is being undertaken by staff who do not have adequate training to enable them to realise the full potential of their work. On occasions, decisions on environmental education are being made without appropriate information and expertise. There is general agreement among environmental educators that making advances will require improved understanding of environmental education as a tool for achieving sustainability.

Quality improvement, research and evaluation

The Council's review of current environmental education programs identified a lack of clarity about the strategies for change; how goals, objectives and strategies are linked; the appropriateness of methods for participant groups; and how to integrate consultation, research and evaluation. There is also a need for quality research on 'what works, when, where, how and why' and greater use of evaluation.

Appropriate resourcing and incentives

Although significant resources have already been directed towards environmental education in NSW, these can be used more effectively and innovative new sources need to be identified.

2.5 The 2007-10 Plan outcomes

The 2007-10 Plan includes seven key outcomes that Government will pursue over the period of the Plan. These outcomes, which were derived from the thinking and research outlined above, are:

1. **Improved integration** of environmental education with other tools and strategies used to promote sustainable development
2. **Enhanced cross-sectoral coordination** of environmental education programs
3. **Expansion of partnership and network activities** between environmental education providers that enhance the quality and reach of their programs
4. **Improved access** for all people in NSW to high-quality environmental education programs
5. **Enhanced training, professional development and other support** for those developing and delivering environmental education
6. **Increased research and evaluation** of effective environmental education
7. **Increased active and informed participation** by NSW people in creating a sustainable future.

The Government expects that achieving the first six outcomes will lay the foundations for achieving Outcome 7. For each outcome, the Plan identifies a range of **strategies and actions** that will be implemented to realise the outcome. These strategies and actions are described in Section 4.

3.

IMPLEMENTATION, MONITORING, REPORTING AND EVALUATING

This section describes the roles and responsibilities for implementing the Plan, the timetable and priorities for implementation, and the responsibilities for monitoring, reporting on and evaluating its effectiveness.

3.1 Roles and responsibilities for implementation

The Plan is not just relevant for environmental educators – all those whose work involves making decisions about environmental matters have a role to play in implementing its strategies and actions, and contributing to the achievement of its outcomes. This includes people working in management, policy, education, communications, training, community involvement and research – whether in industry, educational institutions, government or community organisations. However, environmental education specialists will play a decisive role in implementation. (Box 2 on page 17 outlines the ways in which individuals and organisations can make a difference. Box 3 on page 18 describes the different roles of each sector.)

Principal responsibility for implementing the Plan rests with:

- those responsible for corporate policy as well as the management of programs and operations that have an impact on the environment.
- organisations that deliver environmental and natural resources programs, including those that involve a partnership between State agencies and leading non-government organisations, industry and community groups. In many cases, the roles of State agencies in this area are closely tied to NSW environmental and natural resources legislation.
- providers of environmental education programs and activities, who use education and training, information, advice and communication tools (see Appendixes II and III).
- providers of professional development and other support for environmental educators.

Certain organisations have specific responsibility for managing the implementation process. These organisations are identified in the 'Responsibility' column in Section 4. Those identified in bold type in this column are designated as 'lead organisations' for the corresponding actions listed in Section 4, and have responsibility for coordinating planning and the development of partnerships in the delivery of these actions. Other organisations identified in the 'Responsibility' column should liaise with lead agencies in the delivery of relevant actions.

The Council has a specific role in implementing the Plan. This role is to facilitate coordinated implementation of the Plan, deliver actions for which it has responsibility, and monitor and report on and review the Plan. The Council will also liaise with relevant government agencies and non-government organisations to communicate and implement the Plan.

BOX 2: How can I make a difference?

The specific actions to be taken under the Plan (listed in Section 4) contain many opportunities for all stakeholders to contribute to its outcomes, and all stakeholders should examine these actions to identify those relevant to their activities. In addition, those in key roles in organisations can make a major contribution to realising the Plan's vision for education for sustainability by taking the following actions:

1. Incorporating environmental education into your organisation's corporate goals and policies

Managers can add value to their organisation's sustainability outcomes and trigger a cultural shift within the organisation by integrating environmental education goals and strategies into corporate documents, including their relation to other environmental management tools such as regulation, economic incentives and infrastructure. Undertaking this step will assist the organisations to meet Outcome 1.

2. Improving education program planning and delivery

Review existing and planned programs to ensure:

- environmental education is integrated with other management tools (see Outcome 1)
- environmental education initiatives are planned and delivered in a coordinated way which involves all relevant government and non-government sectors (see Outcome 2)
- partnerships and networks are fully used to increase the effectiveness of programs, reduce duplication and maximise the efficient use of limited resources (see Outcome 3).

3. Improving your knowledge and use of environmental education, communication and training

Identify opportunities to implement or enhance:

- research into the contributions environmental education might make to business outcomes.
- training and professional development of staff. In addition to training and education aimed at minimising the environmental impact of the organisation's operations (see below), there may be opportunities to use training to enhance staff knowledge of environmental education. It is important to improve our ability to integrate this education with other environment management tools and to improve our ability to develop, deliver and evaluate environmental education programs.
- networking for environmental education knowledge-sharing and critical reflection (see Outcome 3).
- monitoring and reporting of environmental education outcomes.

4. Contribute to specific NSW priority environmental themes

All stakeholders should examine the priority environmental themes and actions for environmental education in NSW (listed in the Overview section on page v) to identify those relevant to their activities and consider the opportunities provided by supporting their implementation.

5. Use education and training to reduce costs and environmental impacts of your organisation's operations

Identify opportunities to use staff education and training as a means to minimise the operating costs and environmental impacts of your operations, such as those related to water use, energy waste, cleanups of hazardous chemicals etc. For example, a training plan might be developed to assist staff to improve their understanding of environmental issues and reduce their impact on natural resources. For government organisations, this would include training to effectively implement Government Energy Training Plans, a Waste Reduction and Purchasing Plan and Green Fleet.

BOX 3: Role of each community sector in fostering education for sustainability

Environmental education takes many forms (see Appendix III) and is an important part of the work of all community sectors, including government, business and industry, non-government organisations, formal education systems and households. Education actions and outcomes across each sector are interconnected, highlighting the importance of well coordinated partnerships across sectors to deliver sustainability benefits for the whole community. While the overarching objectives of education for sustainability are the same for all involved, the specific roles and responsibilities of each sector are distinct.

Government

The role of the three tiers of government (local, state and Commonwealth) in environmental education is to implement policies and programs that inform and respond to the community's environmental education needs identified by such things as research, consultation and voting patterns. Since 1994 education has consistently been rated as one of the more important initiatives the government can undertake to protect or improve the environment.

Environmental education policies and programs at each tier facilitate the development of the community's capacity to make well informed decisions about ecologically sustainable development that protect our health, amenity and natural resources. While the role of government varies across jurisdictions, all levels can provide environmental leadership; sustainable planning frameworks; infrastructure and services; participatory decision-making; networks for collaboration; and the integration of sustainability into programs and operations.

Environmental non-government organisations

Research (EPA 2004) indicates that community-based non-government organisations (NGOs) are considered to be reliable sources of information about the environment. NGOs are also a key element in democratic processes: they engage government, business and industry and the broader community through a wide mix of educational methods such as campaigns, workshops, forums, conferences, on-ground works and participatory action. Thus, as advocates for environmental sustainability and social change, environmental NGOs can play an influential role in the delivery of environmental education across local, regional and international spheres.

Given the diversity and size of these organisations across NSW, the specific role of each in environmental education varies considerably. For example, leading environmental NGOs may focus on grant resourced, state-wide capacity building projects, whereas smaller groups are more likely to be involved in action orientated learning, where members and the public are educated through involvement in local issues. Environmental NGOs also have a strong reliance on collaboration and partnerships around issues of regional, national and international significance.

Business and industry

Ongoing involvement in internal and external environmental education is of significant importance for business and industry, helping organisations to meet regulatory requirements, improve community confidence, increase competitive advantages, reduce operational costs and minimise exposure to risk.

A primary responsibility of all business and industry is to ensure that staff, contractors and suppliers have the capacity and capability to carry out their responsibilities in a manner that minimises environmental impacts and promotes sustainability. This requires comprehensive workplace training and ongoing professional development, extended producer responsibility, coupled with systems that facilitate information flow across the entire organisation and beyond. This may include clearly articulated environmental decision-making processes, internal and external communication networks and documented management procedures.

In collaboration with environment NGOs and government, the business and industry sector plays an important part in contributing to education for sustainable production and consumption through knowledge sharing and engagement with peers, industry associations and consumers.

Formal education providers

Formal education providers include pre-school kindergartens; government and non-government primary and secondary schools; and post-school institutions such as universities and TAFE. These organisations offer curriculum-based learning that can systematically develop environmental knowledge, attitudes, skills and behaviours. These institutions also have responsibility for staff professional development and the environmental management of their sites and resources.

The compulsory years of schooling are crucial for the development of basic environmental literacy for all young people, while post-secondary education provides pre-service environmental competencies for participation in the world of work. For this reason, integrating comprehensive environmental learning within formal educational institutions is the foundation for lifelong environmental learning.

Individuals and households

Managing our everyday living brings us into contact with environmental issues and choices that affect our present and future quality of life. There are many ways that households can contribute to environmental sustainability – for example, through green purchasing, avoiding waste, conserving water and energy, avoiding hazardous chemicals and eco-friendly gardening. As active citizens and parents, we can also promote an ethic of environmental responsibility. Thus, building environmental literacy is essential for households and for those that deliver education for sustainability to this sector.

Given that we learn through experience, whether it be our own or others', it is important that all households reflect on current behaviours and explore ways to create a sustainable future. For example, individuals and households can identify practical ways to extend their environmental knowledge and behaviour and participate in civic environmentalism.

3.2 Timeframe and priorities for implementation

While the strategies and actions within the Plan are designed to be implemented within its three-year timeframe (2007-10), the achievement of the Plan's outcomes will be a staged and ongoing process. The scheduling of particular actions has been left to the discretion of the lead organisations as they have primary responsibility for planning and coordinating delivery.

The Plan seeks to address, in an integrated and coordinated way, a wide range of environmental issues, including the following **priority environmental themes for environmental education** in NSW:

- **Climate change:** the need to reduce greenhouse gas emissions and mitigate the environmental, social and economic costs of climate change (for example, through Actions 10.10 and 10.11)
- **Total water cycle management:** the need for urban and regional catchment-based water cycle management to promote water conservation, prevent pollution of surface and groundwater resources, protect aquatic and floodplain biodiversity, and provide and maintain environmental flows (Actions 10.2, 10.3, 10.8, 10.12, 10.16 and 10.17)
- **Biodiversity conservation:** the need to conserve terrestrial and aquatic biodiversity, protect ecosystem health and maintain critical ecosystem services (Actions 10.6, 10.7, 10.8 and 10.18)
- **Landscape management:** the need for systems-based landscape management to address cumulative impacts of unsustainable land use and promote healthy and productive landscapes (Actions 10.2, 10.3, 10.4, 10.8 and 10.17)
- **Sustainable production and consumption:** the need to stimulate change in production and consumption patterns, and encourage waste avoidance, resource recovery and active conservation of resources (Actions 10.14 and 10.15)

- **Pesticide and chemical management:** the need to minimise the impacts of hazardous pesticides and chemicals on environmental systems and human health, and promote safer alternatives (Action 10.5)
- **Air quality:** the need for continued action to tackle indoor and outdoor air quality issues that affect environmental quality and human health (Action 10.9)
- **Sustainable housing and transport:** the need to promote innovative urban planning, green design techniques and ecologically sound transport alternatives and networks (Actions 10.11 and 10.21).

3.3 Responsibilities for monitoring, reporting and evaluating

Monitoring and evaluation is an indispensable tool for providing an insight into what works and most importantly, informing the future direction of education initiatives. Well-documented, evidence-based evaluation and reporting is integral to the future development of quality education for sustainability programs in this State.

The Council has an ongoing responsibility for monitoring, reporting on and evaluating the effectiveness of environmental education in NSW and the implementation of the Plan. The *Protection of the Environment Administration Amendment (Environmental Education) Act 1998* requires that the Council:

- set out performance indicators to ensure environmental education contributions meet the specific needs of the community
- monitor progress on the implementation of the Environmental Education Plans against performance indicators set out in the plans
- prepare statements on the performance of environmental education programs in the State for inclusion in reports on the state of the environment.

In line with these requirements, performance indicators have been established against many of the strategies in the Plan. These indicators have two purposes. First, they provide a tool that all stakeholders can use to measure progress in achieving the Plan's outcomes. Second, the Council will use these indicators (and other information) to evaluate the effectiveness of the Plan, and of environmental education in NSW in general.

Table 2 outlines the Council's broad approach to evaluation. This table shows that to measure the effectiveness of environmental education, we need indicators across the causally related hierarchy of outcomes. It also demonstrates the link between this Plan, the outcomes of environmental education and priority sustainability outcomes. Taken together, these may be described as indicators of the effectiveness of the environmental education system.

The Council recognises that there is a need for both direct and indirect indicators, which measure the effectiveness of environmental education at different levels. This is because it is difficult to differentiate the role of environmental education from other environmental management tools in achieving a sustainability outcome. Measuring the effectiveness of outcomes is integral to continual improvement, to provide an insight into context specific solutions and challenges.

Table 2: Generic evaluation outcomes and system indicators for environmental education in NSW

Generic outcomes hierarchy	Environmental education system indicators Performance measures for the 2007-10 Plan	Generic evaluation questions Asked at each stage
<p>Sustainability outcomes</p> <p><i>Ultimate outcomes</i> – contribution of the Plan overall</p>	<ul style="list-style-type: none"> – Improvement in 'condition' and 'trend' indicators in the NSW SoE report – Changes in environmental behaviors and organisational practices indicated by various research studies 	<p>Efficiency:</p> <ul style="list-style-type: none"> – Could resource utilisation be improved? <p>Effectiveness:</p>
<p>Outcomes of environmental education delivery</p> <p><i>Intermediate outcomes</i> – changes in knowledge, skill, values and behaviour of stakeholders</p>	<ul style="list-style-type: none"> – Level of concern for ecological sustainability and knowledge of environmental issues as measured by relevant items in <i>Who Cares About the Environment?</i> – Number of 'good practice' case studies (integrated with other tools) identified in the ARP 	<ul style="list-style-type: none"> – Does it work? – Have the desired outcomes been achieved? – Is there evidence of sustained change? – What new needs can be identified as a result of outcomes achieved?
<p>Implementation of the Plan</p> <p><i>Immediate outcomes</i> – engagement of stakeholders with Plan actions</p>	<ul style="list-style-type: none"> – Percentage of new and ongoing major programs and reforms that incorporate education in meeting the Government's environmental priorities, as obtained from the ARP – Number of new environmental education programs and level of participation reported in the ARP – Number of new professional development programs that are based on the needs of environmental educators 	<p>Process:</p> <ul style="list-style-type: none"> – Is implementation well managed? – Is the process strategic, supported politically, organisationally and institutionally? – Is it adaptable and flexible to allow for changing needs? – To what extent did the Plan allow for stakeholders to integrate actions internally and externally with other environmental management programs/tools and organisations?
<p>Sustainability needs</p> <p><i>Assessment of environmental, community, educational and policy needs to which the Plan should respond</i></p>	<ul style="list-style-type: none"> – State of the Environment report – Triennial review utilising the ARP and other sources – Multi-level situational analysis and community consultation 	<p>Appropriateness:</p> <ul style="list-style-type: none"> – Does the Plan make sense? – Does it meet the needs of stakeholders? – Is the Plan responding to evidence and context specific needs?

Mechanisms for reporting against the performance indicators fall into three categories:

- *Annual reports to the Council from State Government agencies.* As part of the annual reporting process, State Government agencies will be required to report on their contribution to delivering the outcomes of the Plan. Where agencies are lead organisations, they will be expected to report on the progress of specific actions taken.
- *An annual report to the Government from the Council,* which includes an outline of progress in achieving the Plan's outcomes.
- *A triennial report to the Government – based on a review of the Plan by the Council.* This document will draw information from the annual reports of State agencies and non-government organisations; a triennial inventory of environmental activities and programs in NSW; and other sources of data such as the regular community survey, *Who Cares About the Environment?*, website usage and statistics from dedicated phone services. A summary of this report will be included in the NSW State of the Environment Report.

Although the Council has primary responsibility for data collection and reporting, networks of lead agencies established to coordinate major environmental education programs (see Action 8) will assist with monitoring the effectiveness of these programs and their performance indicators, and report on progress in the achievement of targets to the Council.

4.

OUTCOMES, STRATEGIES AND ACTIONS

The outcomes in the 2007-10 Environmental Education Plan provide a strategic direction for achieving effective and integrated environmental education in NSW. This section describes each of these outcomes, and the strategies and actions that are to be taken to achieve each outcome. It should be noted that not all strategies and actions will be achieved in full within the three-year timeframe of this particular plan.

Outcome 1: Improved integration of environmental education with other tools and strategies used to promote ESD

Environmental education is critical for achieving sustainable development in NSW. It is most successful when it is fully integrated with the suite of other tools being used for this purpose, during the planning, development and implementation phases of programs. These tools include public policy, regulation, economic incentives, supportive social and physical infrastructure, research and monitoring.

Strategy	Action	Responsibility*	Performance indicator#
<p><i>Strategy 1.1:</i> Promote the integration of environmental education and capacity building within corporate visions and key result areas through recognition that all organisations have environmental responsibilities.</p>	<p><i>Action 1:</i> Organisations to include within their corporate planning documents a clear statement of their environmental education goals and the steps that will be taken to implement these goals, including: program planning, budgeting, human resource development, and evaluation and review.</p>	<p>All organisations⁺</p>	<p><i>Strategy 1.1 Indicator:</i> Percentage of organisations that include a statement of education goals and capacity building in corporate planning documents as reported via the annual reporting process (ARP).</p>
<p><i>Strategy 1.2:</i> Integrate education in all major environmental and natural resource management programs and reforms.</p>	<p><i>Action 2:</i> Environmental and natural resource management programs and reforms to include details of the role of education in achieving stated outcomes. An adequately resourced education plan should accompany the implementation of these initiatives and demonstrate the links between education and other management tools and strategies.</p>	<p>NSW Government agencies, non-government organisations (NGOs), local government, Catchment Management Authorities (CMAs)</p>	<p><i>Strategy 1.2 Indicator:</i> Percentage of new and ongoing major programs and reforms that incorporate education in meeting the Government's environmental priorities, as obtained from the ARP.</p>

* In the Responsibility column, general classifications such as 'NSW Government agencies', 'NGOs', 'environmental education providers' and 'VET providers' are used. This does not imply that all organisations within the classification will be involved in delivering the action(s).

Performance Indicators will be collected for each strategy in the way specified in Section 3 – implementation, monitoring, reporting and evaluating. In summary, this will include information from the annual reporting process (ARP) followed by State Government agencies. It should also be noted that, in many cases, indicators for strategies do not relate to all actions.

+ Lead organisations are shown in bold.

Strategy	Action	Responsibility	Performance indicator
<p><i>Strategy 1.3:</i> Build an understanding of the role of environmental education in achieving environmental gains in conjunction with structural, economic and regulatory measures.</p>	<p><i>Action 3:</i> All organisations involved in the delivery of environmental education to promote awareness of its role and its value when integrated with other tools and strategies for achieving ESD.</p> <p><i>Action 4:</i> All relevant organisations be invited to identify and promote 'good practice' examples of the integrated use of environmental education, research and monitoring, public policy, regulatory, infrastructure and economic tools. Where these case studies are published on the internet they should link to the Council's website.</p> <p><i>Action 5:</i> Environmental education funding bodies, such as the Environmental Trust, to continue to fund research into the integration of environmental education with other environmental management tools and strategies.</p> <p><i>Action 6:</i> All organisations should consider planning briefings and seminars for key decision-makers on the role of environmental education in achieving environmental gains.</p> <p><i>Action 7:</i> Local government is encouraged to include indicators for environmental education activities in their annual State of the Environment (SoE) reports.</p>	<p>Environmental education providers</p> <p>Council, organisations with environmental and natural resource responsibilities</p> <p>Environmental education funding bodies</p> <p>All organisations</p> <p>Local government</p>	<p><i>Strategy 1.3 Indicators:</i> Number of 'good practice' case studies (integrated with other tools and strategies) captured on the Council's website and identified in the ARP.</p> <p>Value and percentage of funds committed to research and evaluation of integrating environmental education into sustainability programs.</p>

Outcome 2: Enhanced cross-sectoral coordination of environmental education programs

High-quality environmental education programs are developed and delivered through a coordinated and comprehensive approach involving all relevant sectors in planning and delivery. The sectors include NSW Government agencies, government trading enterprises, local government, Commonwealth bodies, non-government organisations, industry, community groups, schools, vocational education and training (VET) providers and the tertiary education sector at local, state, national and international levels.

Strategy	Action	Responsibility	Performance indicator
<p><i>Strategy 2.1:</i> Coordinate education programs for each priority environmental issue across all sectors, including government, industry, NGOs, community organisations and the formal education sector.</p>	<p><i>Action 8:</i> Council to convene cross-sectoral working groups to coordinate specific environmental education initiatives and to share learning, skills and resources.</p> <p><i>Action 9:</i> Informed by Action 8, the Council to lead and monitor working group progress and outcomes to ensure that there are environmental education plans for priority sustainability themes identified by Council.</p>	<p>Council, NSW Government agencies, local government, NGOs, and other education providers</p> <p>Council, NSW Government agencies</p>	<p><i>Strategy 2.1 Indicators:</i> Working group achieves target outcomes to agreed timelines.</p> <p>Number of environmental education plans developed as a result of working group activities.</p>
<p><i>Strategy 2.2:</i> Deliver specific environmental education programs that address priority sustainability issues in a coordinated fashion.</p> <p>Note: Action 10 focuses on statewide programs. However, the cumulative contribution of smaller local and regional programs is equally important. In many cases, these programs are delivered by local government and community organisations.</p>	<p><i>Action 10:</i> State agencies and other providers to deliver environmental education programs as part of significant environmental and natural resources initiatives. This should include:</p> <p><i>10.1:</i> Catchment Management Authorities (CMAs) to work in partnerships to plan and deliver education activities that will achieve objectives of Catchment Action Plans.</p>	<p>CMAs, Department Natural Resources (DNR), Department of Primary Industries (DPI), Department of Environment and Conservation (DEC), Department of Education and Training (DET), other NSW Government agencies and education providers, local government</p>	<p><i>Strategy 2.2 Indicators (Actions 10.1–10.24):</i> Progress towards completion of scheduled program actions reported through the ARP.</p> <p>Coordination examples as reported annually by government agencies.</p>

Strategy	Action	Responsibility	Performance indicator
	<p>10.2: Participate in delivery of national programs endorsed by the Natural Resource Management Ministerial Council, including:</p> <ul style="list-style-type: none"> - Australian Water Initiative - National Action Plan for Salinity and Water Quality - Natural Heritage Trust. 	<p>DPI, DNR, CMAs, Vocational education and training (VET) providers</p>	<p>Achievement of milestones set for national program.</p>
	<p>10.3: Participate in education programs that communicate new knowledge developed by Cooperative Research Centres and other research institutions relevant to environmental and sustainability issues, including:</p> <ul style="list-style-type: none"> - CRC for Australian Weed Management - Australasian Invasive Animal CRC - Bushfire CRC - eWater CRC - Desert Knowledge CRC - CRC for Irrigation Futures - CRC for Plant-based Management of Dryland Salinity - Sustainable Tourism CRC - Cotton Catchment Communities CRC 	<p>NSW Government agencies, universities and organisations that are partners in CRCs (DPI, DNR, DEC)</p>	<p>Number of education activities provided by CRCs in NSW.</p>
	<p>10.4: Provide training courses for farmers and rural landholders that integrate environmental and other aspects of sustainability, for example, through <i>PROfarm</i> and DPI extension service.</p>	<p>DPI, CMAs</p>	<p>Number of courses developed and number of participants.</p>
	<p>10.5: Improve pesticides and chemicals management through:</p> <ul style="list-style-type: none"> - education programs for householders to reduce risks associated with pesticide and chemical use, such as TEC's <i>Hazardous Chemicals in the Home program / Safer Solutions</i> as part of the <i>Our Environment - It's a Living Thing</i> program - providing appropriate training for non-English speaking market gardeners. 	<p>Total Environment Centre (TEC), DEC, VET providers</p>	

Strategy	Action	Responsibility	Performance indicator
	<p>10.6: Promote the conservation of biodiversity, including:</p> <ul style="list-style-type: none"> - delivery of the community awareness and participation components of the <i>NSW Biodiversity Strategy</i> - interpretation and education programs to foster understanding and appreciation of natural and cultural heritage in national and marine parks and other protected areas, such as the <i>National Park Discovery Program</i> - education programs to promote the conservation of marine biodiversity - delivery by NCC of the <i>Biodiversity Education Project</i> as part of the <i>Our Environment - It's a Living Thing</i> program - delivery of environmental education components of the <i>DEC Living Parks Strategy</i> - community-based biodiversity surveying, bushwalks, seminars, and other community education resources delivered by the <i>National Parks Association of NSW (NPA)</i> - community education activities and information resources of the <i>NSW Wildlife Information and Rescue Service (WIRES)</i> - fire management education components for biodiversity conservation, air and water quality. <p>10.7: Enhance community and industry capacity for involvement in biodiversity, natural and cultural heritage conservation on private and public lands through conservation partnerships.</p>	<p>DEC, DPI, DNR, CMAs, Marine Parks Authority (MPA), other NSW Government agencies, local government, NGOs, tertiary institutions</p> <p>Nature Conservation Council of NSW (NCC)</p> <p>NPA</p> <p>WIRES</p> <p>NSW Rural Fire Service</p> <p>DEC, other NSW Government agencies, CMAs, NGOs</p>	

Strategy	Action	Responsibility	Performance indicator
	<p>10.8: Improve community and landholder understanding of landscape and catchment management issues such as soils, water, vegetation management and cultural heritage, including:</p> <ul style="list-style-type: none"> - water management for the environment, including education initiatives under the NSW Water Education Plan - water conservation, including <i>Water For Life, Waterwise, Every Drop Counts</i> and other education components of the NSW <i>Water Conservation Strategy</i>, and The Metropolitan Water Plan - rolling out of the NSW Water Education Plan to address issues related to the protection and enhancement of water sources and the sustainable and efficient use of water. - water quality monitoring and associated education initiatives such as Streamwatch, Waterwatch, the NSW Water Bug Survey, and Oz GREEN programs <i>Kids, Companies and Creeks</i> and <i>MYRiveR</i> - the conservation and sustainable management of native vegetation, including education and capacity building initiatives as part of Catchment Action Plans - the conservation and sustainable use of marine resources - the conservation of cultural heritage (Aboriginal and historic) - community education through participation in REGEN festivals and events with a broad variety of environmental themes, including bush regeneration. 	<p>DNR, DPI, Sydney Water, CMAs, TCO, DEC, MPA, NSW Health, DET, other NSW Government agencies, local government, Sydney Catchment Authority (SCA), Landcare, Rivercare, Oz GREEN, REGEN and other NGOs, VET providers, other school and community volunteers</p>	

Strategy	Action	Responsibility	Performance indicator
	<p>10.9: Reduce air pollution through:</p> <ul style="list-style-type: none"> - a comprehensive resource kit designed to help councils to run and evaluate a professional woodsmoke reduction campaign and <i>Don't Light Tonight</i> alerts - education components of Local Air Quality Management Plans - air quality monitoring and associated education initiatives - National Pollutant Inventory reporting. 	<p>DEC, local government, industry, NSW Health, NCC Roads and Traffic Authority (RTA), tertiary institutions</p>	
	<p>10.10: Promote sustainable energy use and reduction of greenhouse gas emissions through:</p> <ul style="list-style-type: none"> - delivery of the community awareness component of the <i>NSW Greenhouse Plan</i> to raise awareness of the causes and impacts of climate change and promote ways in which individuals can reduce greenhouse emissions and adapt to inevitable change - educational components of the Energy Savings Fund and Energy Savings Action Plans for high energy users - encouraging uptake of accredited renewable energy products through educational components of the Green Power Accreditation Program including the partnership based programs such as <i>The Power of Everyone</i> and <i>The Green Power Tour</i> - encouraging uptake of the <i>Greenhouse Challenge Plus</i> program and the national <i>Energy Efficiency Opportunities Assessment</i> program - NCOSS and DEUS working with agencies who support low income households, and other people in need, to reduce their energy and water use and associated costs, as part of the <i>Our Environment – It's a Living Thing</i> program. 	<p>Department of Energy, Utilities & Sustainability (DEUS), The Cabinet Office (TCO), other NSW Government agencies, Local Government and Shires Association (LGSA), local government, energy retailers, industry, NGOs, tertiary institutions</p>	
		<p>NSW Council on Social Services (NCOSS), DEUS</p>	

Strategy	Action	Responsibility	Performance indicator
	<p>10.11: Promote sustainable transport behaviour through:</p> <ul style="list-style-type: none"> - community education, information programs and major participation events that encourage public transport use, walking and cycling such as the <i>TravelSmart</i> program - education programs that promote teleworking in the government and business sectors - guidelines on promoting public transport, walking and cycling through applying the Integrating <i>Land Use and Transport Policy</i> including the application of <i>Planning Guidelines for Walking and Cycling</i> (DIPNR and RTA, 2005) - information programs on efficient vehicle use and improving the environmental performance of vehicle fleets, including guidance on selecting better performing vehicles, sound maintenance practices and improved driving practices. 	<p>RTA, Department of Planning (DP), universities, NSW Health, transport operators, other NSW Government agencies, NGOs</p> <p>DEC, Department of Commerce</p>	
	<p>10.12: Improve community and industry knowledge, awareness and behaviour to reduce stormwater pollution through the delivery of a range of statewide and local education activities.</p>	<p>DEC, local government, CMAs, other NSW Government agencies, NGOs, industry</p>	
	<p>10.13: Contribute to a reduction in the incidence of littering and illegal dumping through:</p> <ul style="list-style-type: none"> - working through the NSW Litter and Illegal Dumping Action Alliance - enforcement officer education and training program - community education and awareness campaign, and evaluation and research of litter projects. 	<p>DEC, other NSW Government agencies, local government, NGOs, industry</p>	

Strategy	Action	Responsibility	Performance indicator
	<p>10.14: Promote business environmental sustainability through:</p> <ul style="list-style-type: none"> - partnership programs with individual businesses, clusters of businesses and industry sectors - NSW Sustainability Compacts with leading businesses - environmental reviews and education initiatives conducted by State agencies and local government - the provision of technical help to companies through the Australian Industry Group - the delivery by TEC of its <i>Green Capital</i> program, and its <i>Sustainable Staff Training Program</i> as part of the <i>Our Environment - It's a Living Thing</i> program - other initiatives developed by State agencies, industry associations and individual businesses. 	<p>DEC, local government, Department of State and Regional Development (DSRD), other NSW Government agencies, industry, NGOs</p> <p>Australian Industry Group (Ai Group)</p> <p>TEC</p>	
	<p>10.15: Promote improved waste management and resource recovery through:</p> <ul style="list-style-type: none"> - continued progress by NSW Government agencies on waste minimisation, sustainable purchasing, recycling and resource recovery, through policies such the Environmental Procurement Guidelines and Waste Reduction and Purchasing Policy and also through practices for accessing established government service contracts - procurement officer education and training programs - community education and information programs aimed at promoting sustainable living, promoting adaptive reuse of buildings and other resources, understanding the waste hierarchy, and in particular, encouraging transfer of reuse and recycling behaviours at home to the workplace and in educational institutions - industry participation in the National Packaging Covenant - programs run through the Ai Group Business Help Desk. 	<p>DEC, other NSW Government agencies, local government, industry, NGOs</p> <p>Ai Group</p>	

Strategy	Action	Responsibility	Performance indicator
	<p>10.16: Protect drinking water, including education components of catchment management and environmental planning initiatives.</p>	<p>SCA, DNR, DP, TCO, other water supply authorities, NSW Health, local government, relevant CMAs</p>	
	<p>10.17: Promote sustainable management of the coastal zone through:</p> <ul style="list-style-type: none"> - school and community education programs such as Our Coast; Project AWARE on the Rocks; the Fishcare Volunteer program; and education initiatives associated with Coastcare, Dunecare and Beachwatch - education components of coastal resource management and planning that address marine protected areas, coastal and estuarine management planning and fisheries and aquaculture, including the coastal regional strategies - education programs in partnership with industries that rely on the health of the coastal zone, including the fishing and aquaculture industries - survey programs with educational components (eg. NPA's HarbourKeepers and CoastKeepers). 	<p>DP, DNR, DPI, DEC, Coastal CMAs, local government, NSW Maritime, Coastal Environment Centre, marine discovery centres, MPA</p>	
	<p>10.18: Minimise the impact of recreation and tourism activities through the education of boat owners and other users of the coastal zone, national parks and reserves, and recreational areas.</p>	<p>DEC, NSW Maritime, other NSW Government agencies, Tourism NSW, industry associations, recreation associations</p>	
	<p>10.19: Promote sustainable management of inland waterways with river users, and users of riparian reserves and areas.</p>	<p>DPI, DEC, CMAs, industry, and recreational associations</p>	

Strategy	Action	Responsibility	Performance indicator
	<p>10.20: Enhance understanding of Aboriginal land management practices and cultural heritage through:</p> <ul style="list-style-type: none"> - cultural awareness training - cultural heritage interpretation and education by providing increased opportunities for Aboriginal people to 'tell their stories', such as the National Parks Aboriginal <i>Discovery</i> Program - environmental education initiatives associated with the management of National Parks and State Forests and the development of cultural and ecotourism opportunities - implementing the culture and heritage priorities of the NSW Government Aboriginal Affairs Plan 2003-2012: <i>Two Ways Together</i> - the <i>Protecting Our Places</i> grants program for environmental management by Aboriginal communities on their lands and on lands that are culturally significant to them. 	<p>DEC, Department of Aboriginal Affairs (DAA), Environmental Trust, DNR, CMAs, traditional owners, other NSW Government agencies</p>	
	<p>10.21: Promote liveable communities through:</p> <ul style="list-style-type: none"> - developing an understanding of and implementing sustainable building design and construction through the application of the BASIX program to all building approvals - providing councils, planners and the community with training in the use of BASIX - delivering regional strategies and other strategic planning directions that will deliver sustainability outcomes through the planning reform process - developing an understanding of the social significance of places of cultural heritage, including the Aboriginal cultural heritage, historic buildings and places, and landscapes 	<p>DP</p> <p>DEC, Historic Houses Trust of NSW, National Trust, Heritage Office, local government</p>	

Strategy	Action	Responsibility	Performance indicator
	<p>10.22: Promote ecologically sustainable ways of decision-making and living through:</p> <ul style="list-style-type: none"> - overarching education for sustainability policies and programs such as the Environmental Education Policy for Schools and its implementation through <i>Environmentally Sustainable Schools NSW</i> - contributing to an understanding of sustainability through the <i>Our Environment – It’s a Living Thing</i> program funded by the Environmental Trust - developing an understanding of global environmental issues, social equity issues and the relationship between environmental, social, personal and political issues - incorporating traditional knowledge from Aboriginal people into decision-making frameworks - working with ethnic communities through the Ethnic Communities Sustainable Living project - delivery by ACF of its <i>GreenHome</i> program and its Sustainable Australia project as part of the <i>Our Environment – It’s a Living Thing</i> program - delivery of the Oz GREEN's <i>Youth LEAD</i> and <i>Living Communities</i> programs - community education resources provided by Greenpeace, including the <i>True Food Guide</i>, the <i>Switched on</i> clean energy guide, the web-based <i>Eco-tips</i> and the <i>Get Active</i> website 	<p>DEC, DET, NGOs, other environmental education providers</p> <p>DEC, DEUS, TEC, NCOSS, NCC, ACF, local government</p> <p>ACF</p> <p>Oz GREEN</p> <p>Greenpeace</p>	

Strategy	Action	Responsibility	Performance indicator
<p>Strategy 2.3: Coordinate the development of teaching and learning materials that support specific environmental initiatives and projects.</p>	<p>10.23: Encourage people from culturally diverse backgrounds to learn about and take care of their local environments and to adopt sustainable lifestyles through:</p> <ul style="list-style-type: none"> - workshops and other activities delivered by a team of trained bi-lingual educators for NSW's eight largest ethnic communities - making a range of resources available in community languages - professional development training to assist educators address the needs of ethnic communities. 	<p>DEC, Ethnic Communities Council, local government</p>	<p>Strategy 2.3 Indicators: Number of jointly developed teaching and learning materials.</p>
	<p>10.24: Provide training for those working with environmental law to participate in environmental decisions and use the law to protect the environment through:</p> <ul style="list-style-type: none"> - EDO rural and regional environmental law workshops - EDO Law, Science and Environment seminars - EDO specialist workshops, eg. Mining Law, Native Vegetation Law, and Environmental Advocacy - EDO conferences and publications - university graduate and postgraduate education and research. 	<p>Environmental Defender's Office NSW (EDO), universities</p>	
	<p>Action 11: NSW Government agencies and Council working groups to ensure that agencies and educational providers coordinate the development of teaching and learning materials that support the implementation of major initiatives and projects.</p>	<p>Council working group members, DEC, NSW Government agencies</p>	
	<p>Action 12: DET and DEC to collaborate in the development of guidelines, links and case studies for the <i>Environmentally Sustainable Schools NSW</i> program web portal and the DET website (see Action 38).</p>	<p>DET, DEC</p>	<p>Launch of DEC ESSP web portal and DET website support for Environmental Education Policy implementation.</p>

Strategy	Action	Responsibility	Performance indicator
<p><i>Strategy 2.4:</i> Influence the development and review of national Training Packages in order to achieve effective integration of EfS into vocational education and training.</p>	<p><i>Action 13:</i> VET providers and industry organisations to engage with national Industry Skills Councils seeking the integration of sustainability in new and revised Training Packages, and the adoption of sustainability competency standards by industry.</p>	<p>DET, VET providers, industry</p>	
<p><i>Strategy 2.5:</i> Improve the coordination of environmental education with other jurisdictions at state, national and international levels.</p>	<p><i>Action 14:</i> The Council to establish communication protocols with the National Environmental Education Council (NEEC) and the National Environment Education Network (NEEN) with the specific purpose of providing input where appropriate to the National Action Plan <i>Environmental Education for a Sustainable Future</i> (Environment Australia 2000), regular feedback on Council activities and implementation of this Plan, and facilitating cooperation between jurisdictions to optimise outcomes from resources and effort.</p>	<p>Council, NEEC, NEEN</p>	<p><i>Strategy 2.5 Indicators:</i> Communication protocols and annual cycle of activities prepared and signed off by the Council, and NEEC and NEEN.</p>
	<p><i>Action 15:</i> The Council to liaise with environmental education advisory bodies in other jurisdictions (State, Federal and International) to share learning</p>	<p>Council</p>	
	<p><i>Action 16:</i> Environmental education providers to align their activities with the goals of the United Nations Decade of Education for Sustainable Development and the UN Decade of Water for Life (2005-14) to strengthen their work.</p>	<p>All environmental education providers</p>	

Outcome 3: An expansion of partnership and network activities between environmental education providers which enhance the quality and reach of their programs

The presence of strong partnerships between NSW environmental education providers and stakeholders (other providers, consumers, policy partners, etc.) in the development, delivery and evaluation of programs increases their effectiveness, reduces the extent of overlap and maximises the use of limited resources. Where relevant, these partnerships are extended to agencies in other States and internationally.

Strategy	Action	Responsibility	Performance indicator
<p><i>Strategy 3.1:</i> Encourage all education providers to work in partnership to deliver effective, well-targeted education.</p>	<p><i>Action 17:</i> As part of their project planning, education providers to make every effort to identify and work with appropriate partners in the development and delivery of their programs.</p> <p>Note: Critical to these partnerships are close working relationships between government, leading NGO and industry providers and community organisations, including environmental, service, health and cultural organisations. These partnerships may also include links between environmental educators and other groups such as health professionals.</p> <p><i>Action 18:</i> Where appropriate, NSW Government agencies to link with local government and community organisations to ensure State programs meet local priorities and needs.</p> <p><i>Action 19:</i> Council to invite relevant organisations to provide information on successful environmental education partnerships for promotion on Council's website and at conferences and workshops promoted by the Council (see Action 56).</p>	<p>All environmental education providers</p> <p>NSW Government agencies, local government, community organisations</p> <p>Council</p>	<p><i>Strategy 3.1 Indicators:</i> Number of programs and projects developed in partnerships as reported in the ARP.</p> <p>Examples of successful partnership activities.</p>

Strategy	Action	Responsibility	Performance indicator
	<p><i>Action 20:</i> NSW Government agencies, through existing roundtable processes, to liaise with business and industry to:</p> <ul style="list-style-type: none"> – determine methods of further promoting awareness of sustainability among industry – consider how industry can play a role in promoting sustainability awareness in its sectors – identify ways of improving partnerships between industry and government in the provision of education and training programs. 	<p>NSW Government agencies, industry</p>	
	<p><i>Action 21:</i> Industry associations and individual companies to extend existing links with government agencies, other industry bodies, NGOs, the community and formal education sectors, in the development and delivery of environmental education programs (eg. the role of the National Packaging Covenant Council as a representative Council of stakeholders in the management of packaging waste).</p>	<p>Industry, other environmental education providers</p>	
	<p><i>Action 22:</i> The DEC to work in partnership with the Total Environment Centre, NSW Nature Conservation Council, Australian Conservation Foundation, NSW Council on Social Services, DEUS and other organisations to deliver the <i>Our Environment – It's a Living Thing</i> program.</p>	<p>DEC, TEC, NCC, ACF, NCOSS, DEUS and other organisations</p>	<p>Number of <i>It's a Living Thing</i> actions completed and reported in the ARP.</p>
	<p><i>Action 23:</i> CMAs to work together and with the CEE to facilitate productive partnerships to implement the education objective in the <i>Catchment Management Act 2003</i>.</p>	<p>CMAs</p>	

Strategy	Action	Responsibility	Performance indicator
<p><i>Strategy 3.2:</i> Utilise partnerships to achieve cost efficiencies and identify additional resource options for the delivery of quality environmental education.</p>	<p><i>Action 24:</i> Providers to continue to identify innovative funding sources for their education programs. A mixture of grants, sponsorship, levies, user-pays approaches, subsidies and other funding sources should be identified.</p>	<p>Environmental education providers</p>	<p><i>Strategy 3.2 Indicators:</i> Number of new resourcing options reported.</p> <p>Percentage of providers reporting volunteer programs in the ARP.</p>
	<p><i>Action 25:</i> Where relevant, agencies and other environmental education providers to investigate the use and support of volunteers to assist their education efforts.</p>	<p>NSW Government agencies, other environmental education providers</p>	
	<p><i>Action 26:</i> Savings realised by local government working together through regional organisations or other networks to deliver environmental education to be 're-invested' in education.</p>	<p>Local government</p>	

Outcome 4: Improved access of all people in NSW to high quality environmental education programs

All people and sectors in NSW have access to high-quality formal and non-formal environmental education services and programs. (See Appendixes II and III for an overview of environmental education providers and their contributions). These services and programs provide relevant experiences, information and support to enable people to make decisions (at home, work and in the community) that are consistent with sustainable development principles.

Strategy	Action	Responsibility	Performance indicator
<p><i>Strategy 4.1:</i> Monitor future environmental education needs in order to propose adjustments to the delivery of environmental education.</p>	<p><i>Action 27:</i> The Council to analyse environmental education needs on a regular basis and coordinate and promote ongoing measures to meet these needs.</p>	Council	<p><i>Strategy 4.1 Indicator:</i> Triennial review utilising the ARP.</p>
	<p><i>Action 28:</i> Informed by Action 27, the Council to communicate to environmental education providers and other stakeholders any identified impediments to groups or communities accessing high-quality environmental education programs.</p>	Council	
<p><i>Strategy 4.2:</i> Promote comprehensive and up to-date information on the range of environmental education programs available in NSW, other States and overseas.</p>	<p><i>Action 29:</i> The Council to increase availability of information regarding environmental education via the internet by providing up-to-date information and web links on leading practice and major environmental education initiatives, research and Council activities.</p>	Council	<p><i>Strategy 4.2 Indicators:</i> Audit of the Council's and other relevant websites to establish currency and usage</p>
	<p><i>Action 30:</i> Environmental education providers to use web-based links to improve access to environmental education information.</p>	NSW Government agencies, including CMAs, and other environmental education providers	
<p><i>Strategy 4.3:</i> Provide environmental education programs that meet the specific needs of community sectors.</p>	<p><i>Action 31:</i> Providers, in conjunction with their stakeholders, to ensure their environmental education programs address the needs of ethnic communities, Aboriginal people and Torres Strait Islanders, people with disabilities, younger and older generations, those in regional NSW, and other specific community sectors (where relevant), and promote the availability of such courses.</p>	Environmental education providers	<p><i>Strategy 4.3 Indicator:</i> Number of new programs and resources targeting specific community needs.</p>
	<p><i>Action 32:</i> Programs for specific community sectors to be designed in conjunction with representatives of the sector and to use appropriate language, linguistic and communication tools.</p>	Environmental education providers	

Strategy	Action	Responsibility	Performance indicator
<p><i>Strategy 4.4:</i> Provide, and where possible, expand experiential learning in recreational, ecotourism and community information activities.</p>	<p><i>Action 33:</i> Adult and community education providers to ensure that courses and resources offered include relevant sustainability principles and practices.</p>	<p>Council, Board of Adult and Community Education, other adult and community education providers, NGOs</p>	<p><i>Strategy 4.4 Indicator:</i> Percentage increase in programs reported in the ARP.</p>
	<p><i>Action 34:</i> Environmental education providers and ecotourism operators to provide and where possible, expand the availability of wilderness and nature experiences, outdoor education and high-quality sites and displays, including visitor centres, museum exhibitions, walkways, parks and gardens and environmental education centres. The quality of such programs should be monitored regularly to ensure current sustainability and education principles are applied.</p>	<p>Professional non-formal environmental education providers (government and non government)</p>	
<p><i>Strategy 4.5:</i> Provide and where possible, expand the availability of environmental education to early childhood, school, TAFE and university students.</p>	<p><i>Action 35:</i> The Council to request the Office of Childcare to include environmental education in the early childhood curriculum framework.</p>	<p>Council, Office of Childcare</p>	<p><i>Strategy 4.5 Indicators:</i></p>
	<p><i>Action 36:</i> The Council to promote a joint project to research current teaching and learning of sustainability and environmental education in NSW schools, with a view to informing future rounds of curriculum review and development at the Office of Board of Studies.</p>	<p>Council, Office of the Board of Studies (OBOS), DET, tertiary education providers</p>	<p>Review of mandatory syllabuses undertaken and reported in the ARP.</p>
	<p><i>Action 37:</i> OBOS to endorse new courses developed by schools, in environmental education.</p>	<p>Council, OBOS</p>	
	<p><i>Action 38:</i> DET to implement <i>Environmentally Sustainable Schools NSW</i>, through the development of regional environmental education (or education for sustainability) strategies, supported by state office policy, planning, coordination and professional development programs.</p>	<p>DET, DEC, DEUS, DNR, Sydney Water, TCO, local government, CMAs, NGOs</p>	<p>Number of schools effectively implementing the Environmental Education Policy.</p>
	<p><i>Action 39:</i> DEC to deliver the National Parks <i>Discovery for Schools</i> program in partnership with schools.</p>	<p>DEC</p>	<p>Number of DET regions implementing regional strategies.</p>

Strategy	Action	Responsibility	Performance indicator
Strategy 4.6: Promote education for Corporate Social Responsibility for business and industry	<p><i>Action 40:</i> The NSW Government to communicate with all NSW universities to recommend they take appropriate action to increase the level and quality of the teaching of sustainability across degree programs. This may include encouragement for universities to sign and implement the Talloires Declaration (Association for University Leaders for a Sustainable Future 1990) and recognition of those institutions who take this action.</p>	<p>NSW Government through appropriate ministers, universities</p>	<p>Proportion of NSW universities meeting the agreed 'sustainability standards' based on the <i>Talloires Declaration</i>.</p>
	<p><i>Action 41:</i> The Council to encourage a proactive approach to promoting the enhancement of the teaching of sustainability in universities through consultation with the National Environmental Education Council and relevant professional associations.</p>	<p>Council, NEEC, professional associations, universities</p>	
	<p><i>Action 42:</i> The NSW Government to communicate with the Federal Minister for Education, Science and Training, the Federal Minister for Vocational and Technical Training and the Federal Minister for the Environment and Heritage to explore financial incentives to encourage the further development of campus functioning and curricula towards sustainability. This may take the form of positive financial incentives (such as tied grants) to meet the agreed 'sustainability standards' based on the <i>Talloires Declaration</i>.</p>	<p>NSW Government through appropriate ministers</p>	
	<p><i>Action 43:</i> Council to liaise with industry champions to develop case studies to foster Corporate Social Responsibility.</p>	<p>Council</p>	

Outcome 5: Enhanced training, professional development and other support for those developing and delivering environmental education

All environmental educators in NSW have access to training, professional development and other support mechanisms in order to improve their practice of environmental education.

Strategy	Action	Responsibility	Performance indicator
<p><i>Strategy 5.1:</i> Expand professional development for educators to include targeted programs that enhance their capacity to integrate education for sustainability into all educational activities.</p>	<p><i>Action 44:</i> Providers of professional development to design programs that provide the specific skills and knowledge required by educational staff who provide learning experiences that include environmental content.</p>	<p>VET providers, universities, community colleges and other professional development providers</p>	<p><i>Strategy 5.1 Indicators:</i> Number of new professional development programs. Percentage of these programs that included a written evaluation process.</p> <p>Number of places in EE courses offered by universities.</p> <p>Baseline numbers established and then subsequent annual collection of number of places filled.</p> <p>Percentage of teacher training programs that incorporate environmental education reported through the ARP.</p>
	<p><i>Action 45:</i> NSW universities are encouraged to expand the number of places available in sustainability education courses and make environmental education electives readily accessible to those in other programs.</p>	<p>Universities</p>	
	<p><i>Action 46:</i> Teacher education courses, both pre-service and in-service, should address the relevant aspects of environmental sustainability where found in the syllabuses of the Board of Studies and in the KLAs for both primary and secondary schools.</p>	<p>Tertiary education sector, professional associations, other professional development providers</p>	
	<p><i>Action 47:</i> DEC to deliver professional development for environmental educators as part of the <i>Our Environment – It’s a Living Thing</i> program.</p>	<p>DEC</p>	
	<p><i>Action 48:</i> Council to advocate to educational organisations the importance of providing professional development relevant to the emerging needs of education for sustainability.</p>	<p>Council</p>	

Strategy	Action	Responsibility	Performance indicator
	<p><i>Action 49:</i> Provide training courses for staff of CMAs and private agricultural consultants to ensure that they keep abreast of the latest scientific knowledge and best management practices.</p>	DPI, DNR	
	<p><i>Action 50:</i> Mentoring and networking to be supported as mechanisms to improve the design, delivery and evaluation of environmental education.</p>	NSW Government agencies, NGOs, professional associations for environmental educators	
<p><i>Strategy 5.2:</i> Enhance the capacity of university academics from all disciplines to integrate sustainability issues into the teaching of their discipline.</p>	<p><i>Action 51:</i> The NSW Government to encourage the Australian Vice-Chancellors' Committee to take a leadership role and collaborate with other relevant organisations for the purpose of designing a select number of discipline and professionally-related materials and/or courses on sustainability to be made available to universities as a means for academics to integrate sustainability issues into their teaching.</p>	NSW Government through the appropriate Ministers, Australian Vice-Chancellors' Committee	<p><i>Strategy 5.2 Indicator:</i> Appropriate materials and/or courses produced and usage rates in university programs.</p>
<p><i>Strategy 5.3:</i> Enhance the capacity of community groups and individual volunteers to deliver environmental education.</p>	<p><i>Action 52:</i> Agencies, local government and leading NGOs to develop networking, information and training opportunities to support community groups and individual volunteers who provide environmental education:</p> <p>– NCC to deliver the <i>Education Action Supporting Environment Groups (EASE)</i> project as part of the <i>Our Environment – It's a Living Thing</i> program.</p>	NSW Government agencies, local government, NGOs	<p><i>Strategy 5.3 Indicator:</i> No. of capacity building programs developed and implemented, and no. of participants, by relevant organisations.</p>
<p><i>Strategy 5.4:</i> Ensure that environmental educators hold qualifications and/or experience directly relevant to their responsibilities.</p>	<p><i>Action 53:</i> Employers to ensure that those responsible for environmental education have appropriate training and qualifications.</p>	All organisations	

Outcome 6: Increased research and evaluation of effective environmental education

Environmental education in NSW uses sound research and evaluation in order to deliver effective programs. This Outcome focuses on increasing the knowledge base and achieving continuous improvement through increased levels of research, effective sharing of research findings and ongoing evaluation.

Strategy	Action	Responsibility	Performance indicator
<i>Strategy 6.1:</i> Promote an increase in high-quality research into effective environmental education for a range of specific and priority purposes.	<i>Action 54:</i> The Council to continue to liaise with the Environmental Trust to monitor the scope and direction of social and educational grants made under its Environmental Research Grants program.	Council , Environmental Trust	<i>Strategy 6.1 Indicator:</i> Number of Trust applications funded.
<i>Strategy 6.2:</i> Promulgate the findings of high quality environmental education research to environmental education practitioners.	<i>Action 55:</i> The Council to investigate means to promote environmental education research findings in concise, plain English that can be applied to the design and improvement of environmental education programs.	Council	<i>Strategy 6.2 Indicators:</i> Conferences and workshops conducted with support of the Council. Number of events at which Council is formally represented.
	<i>Action 56:</i> The Council to encourage conferences and workshops that focus on research that identifies successful environmental education techniques.	Council	
<i>Strategy 6.3:</i> Expand the evaluation of environmental education programs to foster continuous improvement.	<i>Action 57:</i> Providers of environmental education to include appropriate evaluation strategies when developing educational programs in order to assess the effectiveness of the programs.	Environmental education providers	<i>Strategy 6.3 Indicator:</i> Increase in program evaluations reported through the ARP.
	<i>Action 58:</i> Providers to seek available research funds to conduct research relevant to enhancing the effective evaluation of environmental education programs.	Environmental education providers	

Achievement of Outcomes 1-6 is expected to lay the foundations for achieving Outcome 7 below.

Outcome 7: Increased active and informed participation of NSW people in creating a sustainable future

All members and sectors of the NSW population work together to develop and adopt ecologically sustainable ways of decision-making and living by critically examining current practices and collaborating in learning our way towards sustainable futures.

Strategy	Action	Responsibility	Performance indicator	
<p><i>Strategy 7.1:</i> Promote comprehensive provision of environmental education which encourages people to consider their role in creating a sustainable future.</p>	<p><i>Action 59:</i> Environmental education providers to design and deliver programs that build capacity by:</p> <ul style="list-style-type: none"> - developing understanding and appreciation of the need to urgently address key sustainability issues through individual and social change - engaging people in critically examining their decision-making frameworks - promoting leadership, partnerships and networks - promoting lifelong learning. 	<p>Environmental education providers</p>	<p><i>Strategy 7.1 Indicators:</i> Level of concern for ecological sustainability, and knowledge of environmental issues as measured by relevant items in <i>Who Cares About the Environment?</i> DEC Social Research Series.</p>	
	<p><i>Action 60:</i> All relevant organisations to identify and promote 'good practice' examples of programs that encourage sustainable living. Where these case studies are published on the web, they should be linked to the Council's website.</p>	<p>Relevant organisations</p>		<p>Themes in environmental education programs reported in the ARP.</p>
	<p><i>Action 61:</i> The Council to champion the adoption of innovative, high-quality and effective program designs and methods that promote environmental citizenship.</p>	<p>Council</p>		
	<p><i>Action 62:</i> The Council to work with non-government environmental education providers to explore ways to build their capacity to facilitate public participation and provide advice to government accordingly.</p>	<p>Council</p>		

Strategy	Action	Responsibility	Performance indicator
Strategy 7.2: Promote comprehensive provision of environmental education that encourages people to consider and influence the role of institutions and governance in creating a sustainable future.	<p><i>Action 63:</i> Environmental education providers to design and deliver programs that build capacity by:</p> <ul style="list-style-type: none"> – developing understanding and appreciation of the role of institutions and governance in facilitating a move towards sustainable living – encouraging institutions to critically examine their decision-making frameworks and incentive mechanisms in the context of sustainability outcomes (eg. industry associations' engagement with the finance and insurance sector to increase understanding of the relationship between environmental and financial risk) – promoting institutional accountability and transparency. 	All environmental education providers	<i>Strategy 7.2 Indicator:</i> Themes in environmental education programs reported in the ARP.
Strategy 7.3: All organisations delivering environmental education promote best practice education for sustainability.	<i>Action 64:</i> All organisations with environmental and natural resources responsibilities are encouraged to 'lead by example' and develop and implement environmental management strategies that directly or indirectly educate for sustainability.	Organisations with environmental and natural resource responsibilities	<i>Strategy 7.3 Indicator:</i> Number of management plans reported in the ARP.
	<i>Action 65:</i> Environmental education providers are encouraged to review and report on their programs to determine the extent to which they educate for sustainability.	Environmental education providers	
	<i>Action 66:</i> Providers to build a case for and promote to employers the benefits of investing in applied education for sustainability training relevant to their industries.	Environmental education providers	

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APPENDIX I

MEMBERS OF NSW COUNCIL ON ENVIRONMENTAL EDUCATION

Members of the Council responsible for developing the plan are listed below. Current members and their contact details are listed on the Council on Environmental Education website at www.environment.nsw.gov.au/cee

Dr Ronnie Harding

Independent Chair

Ms Julie Buckley

Associate Director, Primary Industries & Natural Resources Curriculum Centre
TAFE NSW

Representative of Government Departments and Agencies within the administration of the Minister for Education and Training

A/Prof Robyn Bushell

School of Environment and Agriculture
University of Western Sydney

Representative of NSW universities

Mr Bernard Carlon

Director, Business & Community Programs
Sustainability Programs Division
Department of Environment & Conservation

Representative of Government Departments and Agencies within the administration of the Minister for the Environment

Ms Di Dibley

Senior Policy Advisor
Australian Industry Group

Representative of Industry

Mr John Fisher

Program Leader, Environmental Planning & Management
Department of Primary Industries

Representative of Government Departments and Agencies within the administration of the Minister for Primary Industries

Mr Don Geering

A/Manager, Integrated Policy
Department of Planning

Representative of Government Departments and Agencies within the administration of the Minister for Planning

Ms Sue Lennox

Co-Founder/CEO
Oz GREEN

Representative of community-based organisations concerned with the protection of the environment

Mr Phil Smith

NSW Chapter, Australia Association
for Environmental Education

Representative of professional organisations concerned with environmental education

Mr Robert Randall

Director, Curriculum
Department of Education & Training

Representative of Government Departments and Agencies within the administration of the Minister for Education and Training

Mr Robert Verhey

Local Government and Shires
Association, NSW

Acting representative of local government or associations

Dr Lynn Webber

Manager, Conservation Partnerships
Parks & Wildlife Division
Department of Environment & Conservation

Representative of Government Departments and Agencies within the administration of the Minister for the Environment

Alternate Members

Mr Michael White

Alternate for Ms Buckley
Sustainability Coordinator
Department of Education and Training

Mr Bruce Simmons

Alternate for A/Prof Bushell
School of Environment and Agriculture
University of Western Sydney

Ms Angela Baker

Alternate for Ms Lennox
Education Coordinator
Nature Conservation Council of NSW

Mr Neil Dufty

Alternate for Mr Smith
Principal, Molino Stewart Pty Ltd

Mr Brian Powyer

Alternate for Mr Randall
Assistant Director, Curriculum
Department of Education and Training

Secretariat

Mr Geoff Young

Executive Officer, NSW Council on Environmental Education
Manager, Community Education Unit
Department of Environment and Conservation

Ms Zoe Cox

Secretary, NSW Council on Environmental Education
Department of Environment and Conservation

APPENDIX II

ENVIRONMENTAL EDUCATION PROVIDERS

Formal education providers

Children's services: long day care centres, pre-schools, family day care, out of school hours care

School: government and non-government primary schools, secondary schools and environmental education centres

Post-school: universities, TAFE, Registered Training Organisations, colleges

Non-formal education providers

Industry training/professional development: professional associations, private providers, workplace training

Government agencies: local, state and federal

Community-based adult education providers: neighbourhood centres, community colleges, community adult education centres, University of the Third Age

Unions: ACTU and individual unions, particularly those associated with building and development, agriculture, noxious industry waste, education, environment and health

Environment interest groups and organisations: peak national and state bodies, local issues groups, nature conservation and field naturalist groups, outdoor sporting and recreation voluntary organisations

Media and the arts: radio, television and print media; writing, performance and visual arts

Other community organisations: youth groups, religious organisations, service organisations, eco-tourism and nature based tourism operators

Source: EPA, 1996, *A New Approach to Environmental Education in NSW*, A NSW Government Green Paper, Environment Protection Authority, Sydney

APPENDIX III

ENVIRONMENTAL EDUCATION PRODUCTS, SERVICES AND PROGRAMS

Public communications, and information products and services

Publications (pamphlets, brochures and posters)

Telephone information services

Counter/shopfront services

Libraries

Internet sites

On-line databases

Research reports

Displays, exhibitions, lectures

Careers days

Interpretation programs

Visitor services

Providing technical advice

State of the environment reporting

Promotional products

Media liaison (press releases and interviews)

Advertising/marketing

Public education campaigns

Public relations

Documentary programs

Green product labelling

Environmental performances (music, dance,
drama and debates)

Training, development and industry-specific programs

Vocational education and training

Skills development courses

In-service/pre-service/professional

Development courses

Field days

Experiential learning programs

Workplace training

Work experience and workplace
induction programs

Sponsorship and work exchange programs

Occupational health and safety programs

Community development programs

Public participation mechanisms and programs

Casework/facilitating community
problem solving

Community grants/funding programs

Lobbying, advocacy, and political activity

Capacity building

Developing educational infrastructure

Developing environmental
management systems

Discussion groups and contact networks

Extension programs

Awareness-raising programs

Comprehensive personal education programs

School curriculum

Vocational education and training curriculum

University curriculum

Personal development courses

Action research programs

Outdoor and leisure education

Short courses/continuing education

Community education courses

Source: EPA, 1996, *A New Approach to Environmental Education in NSW*, A NSW Government Green Paper

APPENDIX IV

KEY ENVIRONMENT, NATURAL RESOURCE AND EDUCATION LEGISLATION

The following list comprises key environment, natural resource and education legislation in NSW. This list is not exhaustive. Information on current NSW legislation can be obtained from the *Legislation In Force* database at website www.legislation.nsw.gov.au. The database is a dynamic collection of over 1,000 current NSW Acts, 650 statutory instruments and 300 environmental planning instruments (EPIs) in HTML format, produced from the database compiled and constantly updated by the NSW Parliamentary Counsel's Office.

*Board of Adult and Community
Education Act 1990*

*Protection of the Environment Operations
Act 1997*

Catchment Management Authorities Act 2003

Sydney Water Act 1994

Coastal Protection Act 1979

Sydney Water Catchment Management Act 1998

Education Act 1990

*Technical and Further Education
Commission Act 1990*

*Environment Protection and Biodiversity
Conservation Act 1999 (C'wth)*

Threatened Species Conservation Act 1995

*Environmental Planning and
Assessment Act 1979*

Vocational Education and Training Act 2005

Heritage Act 1977

Waste Avoidance and Resource Recovery Act 2001

Higher Education Act 2001

Water Management Act 2000

Local Government Act 1993

Marine Parks Act 1997

National Parks and Wildlife Act 1974

Native Vegetation Act 2003

Native Vegetation Conservation Act 1997

Natural Resources Commission Act 2003

Pesticides Act 1999

*Protection of the Environment
Administration Act 1991*

*Protection of the Environment Administration
Amendment (Environmental Education) Act 1998*

APPENDIX V

KEY NSW GOVERNMENT AND NATIONAL POLICIES ON ENVIRONMENT

NSW Government Policy Initiatives

The NSW Government pursues a strong agenda of environmental and natural resources reform. These reforms are articulated through a series of policies, strategies and statements that have been used to inform the strategic direction of the NSW Environmental Education Plan 2007-10. Key policy initiatives include:

- *Action for Air: The NSW Government's 25-year Air Quality Management Strategy, 1998 and Update, 2005*
<http://www.environment.nsw.gov.au/air/actionforair/actionair.htm>
- *Action for Bikes: Bikeplan 2010*
http://www.rta.nsw.gov.au/trafficinformation/downloads/bicycbikep_dl1.html
- *NSW Biodiversity Strategy*
<http://www.nationalparks.nsw.gov.au/npws.nsf/Content/sbs+home>
- *BASIX Building Sustainability Index*
<http://www.basix.nsw.gov.au/information/index.jsp>
- *Catchment Management Authorities NSW*
<http://www.cma.nsw.gov.au/index.html>
- *NSW Coastal Policy*
http://www.dlwc.nsw.gov.au/regions/sydney/coast/nsw_coastal_policy.html
- *Environmental Education Policy for Schools (2001)*
<http://www.curriculumsupport.nsw.edu.au/enviroed/index.cfm>
- *NSW Greenhouse Plan (2005)*
<http://www.greenhouseinfo.nsw.gov.au/>
- *NSW Heritage Policy (1996)*
http://www.heritage.nsw.gov.au/01_subnav_05_2.htm
- *Native Vegetation Reform in NSW*
<http://www.nativevegetation.nsw.gov.au/>
- *Natural Resources Commission of NSW*
<http://www.nrc.nsw.gov.au/>

- *Planning Reforms in NSW*
http://www.planning.nsw.gov.au/planning_reforms/index.asp
- *Sydney Metropolitan Strategy*
<http://www.metrostrategy.nsw.gov.au/>
- *The Metropolitan Water Plan*
<http://www.waterforlife.nsw.gov.au>
- *Two Ways Together: the NSW Aboriginal Affairs Plan 2003-2012*
<http://www.daa.nsw.gov.au/policies/policy.html>
- *NSW Waste Avoidance & Resource Recovery Strategy (2003)*
<http://www.resource.nsw.gov.au/strategy.htm>
- *Water for Life*
<http://www.waterforlife.nsw.gov.au>
- *Water Management in NSW*
<http://www.naturalresources.nsw.gov.au/water/index.html12>

National Policy Initiatives

The NSW Government also contributes actively to the development and implementation of national policies and programs to achieve sustainability outcomes. These programs require collaboration between States, Territories and the Australian Government and typically are ratified through the Council of Australian Governments or Ministerial Councils (www.coag.gov.au/compendium/compendium.pdf). Key national policy initiatives that have been used to inform the strategic direction of the NSW Environmental Education Plan 2007-10 include:

- *Murray Darling Basin Initiative*
<http://www.mdbc.gov.au>
- *National Action Plan for Salinity and Water Quality*
<http://www.napswq.gov.au/publications/iga.html>
- *Natural Heritage Trust*
<http://www.nht.gov.au> and <http://www.nrm.gov.au>
- *National Land and Water Resources Audit*
<http://www.nlwra.gov.au>
- *National Water Initiative*
<http://www.pmc.gov.au/nwi>
- *The Living Murray*
<http://www.thelivingmurray.mdbc.gov.au>
- *National Water Quality Management Strategy*
<http://www.deh.gov.au/water/quality/mwqms/index.html>

APPENDIX VI

CHARACTERISTICS OF EDUCATION FOR SUSTAINABILITY

Drawing on the guidelines put forward by the United Nations Implementation Scheme for the Decade of Education for Sustainable Development (UNESCO 2005), the following set of characteristics encapsulate the key elements of Education for Sustainability (EfS):

- promotes life-long learning
- based on the principles and values that underlie ecologically sustainable development, covering all three realms of sustainability – environment, society and economy
- is evidence based, locally relevant and culturally appropriate, simultaneously acknowledging that fulfilling local needs often has international effects and consequences
- action oriented – a continuous process of learning and reflection, developing motivations and abilities to be involved
- informed by different professional and stakeholder perspectives
- employs a variety of educational methods, mediums and techniques which promote participatory learning and higher-order thinking skills
- outcomes documented, learning demonstrated and experience shared
- accommodates the evolving nature of the concept of sustainability
- engages formal, non-formal and informal education
- builds social capacity for community-based decision-making, environmental stewardship across government and private sector organisations and institutions.

These characteristics can be implemented in many different ways across all spheres of influence to be reflective of unique environmental, social and economic contexts and appropriately target locally relevant issues.

our environment *it's a living thing*
NSW GOVERNMENT PROGRAM