



our environment - it's a living thing

Professional Development for Educators Project

**Draft Needs Assessment Report and
Project Strategy**

Department of **Environment and Conservation** NSW



CONTENTS

<u>EXECUTIVE SUMMARY</u>	4
<u>PART A: BACKGROUND</u>	5
<u>INTRODUCTION</u>	5
<u>CONTEXT AND SCOPE</u>	6
<u>NEEDS ANALYSIS APPROACH</u>	8
<u>CONCEPTUALISING EDUCATOR NEEDS – THE MODEL</u>	10
<u>PART B: FINDINGS</u>	13
<u>NORMATIVE NEEDS OF EDUCATORS</u>	13
<u>FELT NEEDS OF EDUCATORS</u>	16
<u>PART C: DISCUSSION AND CONCLUSIONS</u>	34
<u>ENHANCED PROFESSIONAL DEVELOPMENT</u>	34
<u>PRIORITY NEEDS IN RELATIONSHIP TO THE NEEDS ASSESSMENT MODEL</u>	35
<u>PART D: A NEW PROFESSIONAL LEARNING APPROACH FOR SUSTAINABILITY EDUCATORS</u>	41

<u>PROFESSIONAL DEVELOPMENT FOR ENVIRONMENTAL EDUCATORS PROJECT APPROACH</u>	42
<u>PROJECT COMPONENTS</u>	42
<u>PART E: APPENDICES</u>	46
<u>APPENDIX 1: FINDINGS FROM THE LITERATURE</u>	46
<u>APPENDIX 2: METHODOLOGY AND STAKEHOLDERS WHO PROVIDED INPUT INTO THE NEEDS ASSESSMENT</u>	66
<u>APPENDIX 3: DISCUSSION GUIDE FOR FOCUS GROUPS AND ON-ON-ONE INTERVIEWS</u>	68
<u>APPENDIX 3: DISCUSSION GUIDE FOR FOCUS GROUPS AND ON-ON-ONE INTERVIEWS</u>	68
<u>APPENDIX 4. ON-LINE RESEARCH SURVEY</u>	69
<u>REFERENCES</u>	70

EXECUTIVE SUMMARY

The Our Environment – It’s a Living Thing (OEILT) *Professional Development for Environmental Educators* project is a multifaceted partnership program focused on laying the foundations for ongoing, demand based professional development across NSW. The project aims to achieve this through the development, provision and support of innovative professional learning solutions, which are aligned with priority professional development needs of environmental educators.

Successful professional development is based on sound evidence of the needs and demands of participants, hence the first step in shaping the *Professional Development for Educators* project strategy was to conduct a needs assessment which included:

- (i) Desktop research – current policy, literature and trends
- (i) Face to face and telephone interviews – 37 participants
- (ii) Focus groups and quasi focus group/seminar – 87 participants
- (iii) Online Survey - 161 participants

A needs assessment that contains input from almost three hundred people is comprehensive in its scope and findings. This report into the professional development needs of Environmental Educators in NSW in 2006 has both a depth of input and rigor in analysis.

Learning speeds up when research, programs and initiatives build on prior knowledge. This report and the strategy for *Professional Development of Environmental Educators* project builds on prior knowledge and previous professional development programs to provide a significant amount of new information about the professional learning needs of EE/EfS practitioners in NSW and new professional learning solutions to address identified professional development needs and market demand.

The needs in this study were reviewed in the context of a model developed at the outset of the project and refined during the data collection phase. The key findings, conclusions and recommendations are detailed in depth and structured with reference to that model. Normative and felt needs were analysed for each component of the model in an integrated fashion, so that the conclusions represented both sets of needs.

Drawing on the findings of the needs assessment process, an innovative capacity building strategy for the *Professional Development for Educators* project has been developed. Consistent with leading practice as advocated by the IUCN (Hesselink et al 2005), the strategy responds to identified educator needs, core goals of the Decade of Education for Sustainable Development (DESD) and key outcomes of *Learning for Sustainability 2006-09*.

By supporting the uptake and expansion of demand based professional development, the strategy put forward represents a new approach to professional learning. Breaking away from 'one size fits all' professional development, this new approach is based around educator engagement to shape learning opportunities around the specific needs of people providing sustainability learning programs.

The strategy is expected to be implemented over the next 1 year period by the Community Education Section of the Department of Environment and Conservation (DEC) in conjunction with OEILT program partners.

PART A: BACKGROUND

INTRODUCTION

The *Professional Development for Educators* Project has been initiated by the Department of Environment and Conservation NSW (DEC) as part of the Our Environment – It's a Living Thing Program. This project intends to build the professional skills of NSW educators who design, deliver and evaluate community education programs in the context of sustainable living. The overarching outcome is effective education which works to progress NSW towards sustainability by motivating and equipping individuals to adopt sustainable practices at home, work and play.

The aim of the *Professional Development for Educators* project is:

To contribute to meeting the priority professional development/training needs of those in NSW who provide environmental education/education for sustainability programs in a way that supports the outcomes of the NSW Government's Learning for Sustainability Plan.

The first step of this multifaceted project was to conduct a comprehensive needs assessment. The core objective of the needs assessment is:

To identify the professional development/training needs of those in NSW who provide environmental education/education for sustainability programs.

A multi-method approach underpins the needs assessment process. The assessment methodology integrates:

1. A review of existing information about NSW educator needs and current [Appendix 1]
2. Focus groups and key informant interviews conducted specifically for this project [Appendix 2 and Appendix 3]
3. Online research conducted specifically as a part of this project [Appendix 2 outlines the methodology and demographics; Appendix 4 copy of the survey] Note that the online survey development was informed by preliminary findings from the key informant interviews.

Building on prior knowledge and drawing on output of the rigorous needs assessment process outlined above, this report provides a significant amount of new information about the professional learning needs of EE/EfS practitioners in NSW.

More specifically, this report provides a comprehensive needs analysis of those involved in the design, delivery and evaluation of sustainability learning programs across NSW. A new focus and approach for professional learning is also put forward to guide and support future professional learning initiatives in NSW.

Aligned with the new vision of education for a sustainable future, as advocated by the United Nations Decade of Education for Sustainable Development (www.unesco.org/education/desd), the final part of this report outlines an innovative strategy for *Professional Development for Educators* project. Based primarily on the findings of needs assessment process, the strategy puts forward a suite of professional learning solutions designed to support the professional development of educators in NSW by addressing high priority needs meeting market demands.

CONTEXT AND SCOPE

Highly competent educators are required to equip and motivate both individuals and organisations to take action for a sustainable future. Education is a key strategy in promoting individual behaviour change and changes within the policies and operations of organisation. When used most effectively it complements and supports other interventions including regulatory approaches, economic incentives and policy and monitoring processes.

Education design, delivery and evaluation skills are gained through a vast array of mediums. Some of these include:

- the university sector as part of undergraduate and for some people, post graduate and/or through VET programs [for example Certificate 4 in Workplace Training and Assessment].
- conferences, workshops and short courses
- reflection and action research
- peer discussions, networks, stakeholder discussions etc
- professional reading.

The increased focus on life-long learning and the development of the Environmental Education/Education for Sustainability field has meant that those providing programs have new and diverse needs which require ongoing professional development processes and opportunities. In addition, some practitioners, particularly in the voluntary sector, do not have professional qualifications and/or experience in education and this enhances the level of need.

For the purpose of this project environmental educators [practitioners] are those who design, deliver and/or evaluate EE/EfS programs in the community sector. They may be professionals whose job title - or professional role and training - incorporates the delivery of education or communication, or they may be those who are involved in education as part of a broader role. The project also focuses on identifying the needs of educators who work as volunteers within the community sector. The challenge for this project is to ensure that the needs of all educators and associated personnel across a range of sectors are considered as part of the approach.

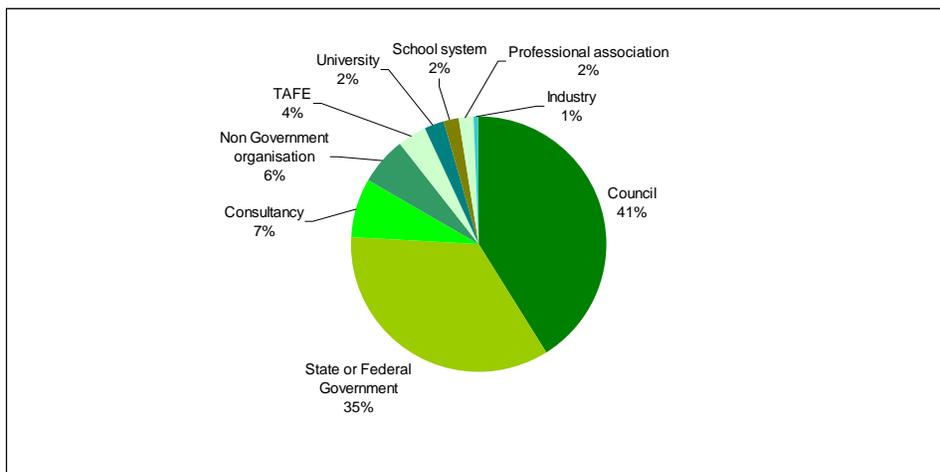
Those delivering community [non-formal] education are employed – or work as volunteers - across a variety of education providers, including state and local government agencies, non-government and community agencies, industry, universities and the Vocational Education and Training [VET] sector. It is important to note that this project does not consider directly the needs of classroom teachers in schools or those in the VET sector. By design it focuses on community or non-formal education.

In summary then this assessment identifies the needs of educators:

1. working in the community [non-formal] sector
2. employed full time or part-time, or those who are volunteers
3. with a full time focus on education or who work in other areas but also design, deliver and/or evaluate education.

Table 1 profiles professional demographics by sector of employment, based on the online survey sample of 161 respondents [see also Appendix 2]

Table 1. Employment Categories of Respondents to Online Survey



There was a wide representation of age and gender across the online survey sample, with a skew towards younger respondents (62% were under 40 years) and towards females (71%).

Almost all respondents (99%) are involved with environmental education (EE)/education for sustainability (EfS) in a paid capacity, with around a fifth (19%) combining paid and volunteer work. Approximately half of respondents have worked in EE/EfS for up to 5 years, and half for 6 years or over.

The vast majority of respondents have a university education and (69%) of respondents are employed full time, with 20% working part-time and 11% employed on a casual basis. The majority (55%) of respondents work within metropolitan NSW (covering Sydney, Wollongong and Newcastle), with 22% working in a country town or rural area and 6% in a large regional centre. Almost a fifth (17%) work across a combination of these locations.

One hundred and fifteen people provided direct verbal input as focus group participants and key informants. A profile of these stakeholders is provided in Appendix 2.

NEEDS ANALYSIS APPROACH

The nature of needs analysis involves collecting information that sheds light on a situation or a problem. For the purpose of this project the following definition describes the task most effectively

The needs analysis process is a series of activities conducted to identify problems or other issues in the workplace and to determine whether training is an appropriate response. A needs analysis is essentially a series of steps implemented to encourage effective change..... because a needs analysis specifically defines the gaps between current and desired organisational and individual performance [McArdle 1998].

The IUCN ([Hesselink et al 2005](#)) asserts that needs analysis is necessary to understand prior knowledge, what the needed skills exactly are, what resources already exist and how to plan and develop evidence based professional learning solutions. Needs analysis also works to identify suitable tools for professional learning, how to connect with other professional development mechanisms such as policy and frameworks (eg *Learning for Sustainability 2006-09*). It also works to shed light on managing the learning process, establish ownership of initiatives and encourage participation in all phases of professional capacity development.

Bradshaw (1972) as refined by Hawe et al [1990] suggests four different types of need that are important in the social change arena. He argues that it is essential to tap into each dimension of need to increase the chance of constructing a comprehensive picture of the situation.

1. Normative Need

Normative need refers to what expert opinion based on research defines as need. Often normative needs are reflected in public policy. For example, The NSW Environmental Education Plan, *Learning for Sustainability 2002 – 2005* proposes that there is “a need for quality improvement, research and evaluation”.

2. Expressed Need

Expressed need refers to what can be inferred about the need of a community by observation of the community's use of services; for example high visitor use of National Parks, or in the Health sector long waiting lists in hospitals. Expressed needs can however be

misinterpreted. Long waiting lists at a health service may be the result of inefficiency or lack of appropriate resources and not about the size/needs of the group wanting to be treated.

3. Comparative Need

Comparative need is derived from examining the services provided in one area to one population and using this information as the basis to determine the sort of services required in another area with a similar population.

4. Felt Need

Felt need refers to what “communities” say or feel they need. Common methods of assessing felt needs are household opinion surveys, phone-ins, public meetings and calling for submissions from those in the community.

The nature of the needs assessment process in this project focuses on *felt needs* and *normative needs* although there are small elements of *expressed and comparative needs* that are identified and considered as part of this report.

Too often, the planning of an intervention commences on a whim or at best a perception that some sort of program is required without any assessment of whether it is in fact needed by the target audience it is intended to serve.

Rigorous needs assessment provides a basis for shaping professional development programs around the specific needs and demands of educators. The benefits of a comprehensive needs assessment approach include:

- Training methods and content make direct links with the trainee’s own work experience, hence the requirement for case examples drawn from the person’s real experience. It is essential that the training approach be grounded in that experience.
- Needs assessment engenders a high level of commitment to the end outcome because of the process of collaboration, consultation and participation.
- Needs assessment focuses on what staff actually do in their jobs, what activities they are involved in, the information required, and where this is obtained from.
- Identification of needs helps to build a picture of the day-to-day activities that educators deliver.
- Once educator needs are understood, it then becomes a relatively straightforward process to identify potential solutions.

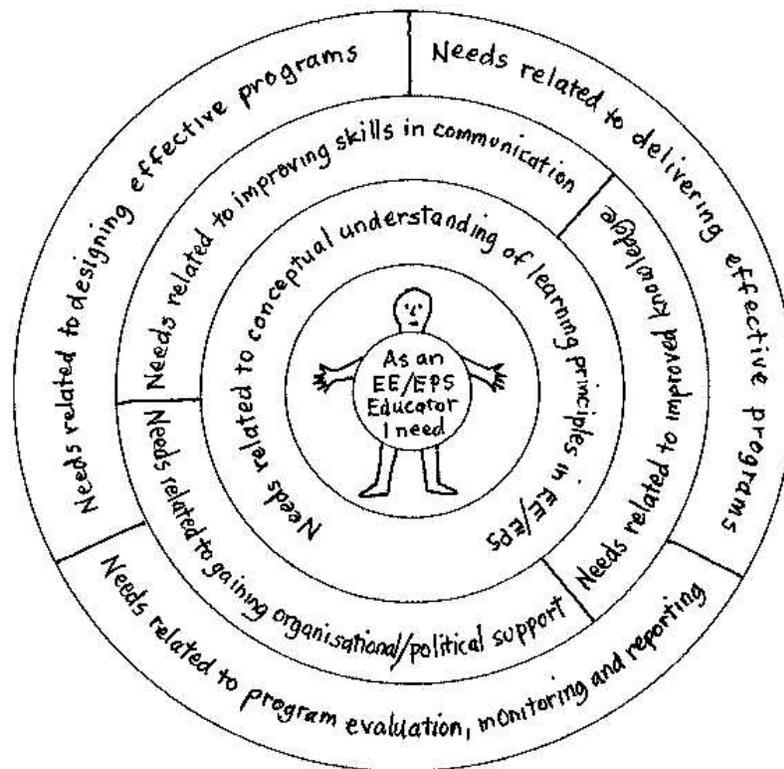
Successful professional development is based on sound evidence of the needs and demands of participants, hence the first step in shaping the *Professional Development for Educators* project strategy was to conduct a needs assessment which included:

- (ii) Desktop research – current policy, literature and trends
- (iv) Face to face and telephone interviews – 37 participants
- (v) Focus groups and quasi focus group/seminar – 87 participants
- (vi) Online Survey - 161 participants

CONCEPTUALISING EDUCATOR NEEDS – THE MODEL

In order to capture and report on the needs in an organised fashion an EE/EFS needs model was developed to guide analysis and grouping of educator needs. This model identifies all of the groups of needs that educators have expressed and works to illustrate how needs relate to each other. The model is illustrated below

Diagram 1 Needs Assessment Model



Conceptual understanding of the learning principles within EE and EFS is a central area of need upon which much of the effort of education relies and relates to all other areas of need. Those in the middle circle [knowledge, credibility and communication skills] are linked together because each relates to generic knowledge and skills necessary for effective education. Needs in the outer circle - improved skills in program design, evaluation [monitoring and reporting] and delivery all relate to the “how” of education. These key skill areas are placed in the outer circle, not because they are of lesser importance, to the contrary, but rather because in order to design, deliver and evaluate effectively educators are reliant on the need areas identified in the middle of the three circles - high level communication skills, organisational and political support and a sufficient knowledge base for their programs.

Expanding the needs statements in the model

In this section each of the needs in the model is considered in more detail so that the reader has a more complete understanding of what is contained in each need category. It is important to note that the findings from this study are organised under each of these statements of need.

Needs related to the conceptual understanding of the learning principles within Environmental Education and Education for Sustainability along with associated theory, policy and frameworks that guide good practice.

This category of needs includes:

- Understanding the nature of EE and EfS; principles and practices.
- Understanding of adult learning principles and practices as they relate to EE/EfS.
- Understanding of relevant educational theory and policy.
- Capacity to work within the values domain developing education that focuses on and promotes an ability to co-create a sustainable future. Values underpinning this include acceptance of the need for sustained social, institutional and community change that triggers fundamental shifts in behaviour.

Needs related to gaining organisational and political support for education efforts.

This need area relates to the credibility and status of education as a hard-edged tool leading to an improved environment and enhanced sustainability of individual and corporate behaviour and operations. It includes the needs of educators related to how and why organisation support is essential.

Needs related to improving skills in communication, in order to improve partnerships, collaboration and stakeholder relationships.

This relates to the capacity of the educator to communicate effectively in all aspects of the program; to establish collaborative approaches and partnerships, to undertake effective liaison with all stakeholders and to communicate the results of the program in a manner that demonstrates its impact.

Needs related to improved knowledge of environmental issues and/or program content and how to find information required for effective program design and delivery

This area of need includes:

1. Ways of finding relevant program content
2. Identifying key content required for a particular program
3. Skills in determining appropriate program content and distilling key content from the remainder.

Needs related to designing effective programs.

This area of need includes skills related to:

- Identifying/developing an effective strategic approach.
- Identifying and incorporating relevant social research [and undertaking it if necessary].
- Integrating education with other environmental management approaches.
- Developing goals, objectives and outcomes
- Developing programs oriented to behaviour/operational change.
- Program planning, including problem analysis, audience demographics.

Needs related to delivering effective programs.

This area of need includes:

- Capacity to use effectively a multitude of education tools:
 - Skills in delivering face to face education/presentation skills
 - Skills in delivering social marketing/community based social marketing
 - Skills in conducting information oriented programs [fridge magnets/brochures, information lines etc]
- Skills in delivering programs for behaviour/operational change.

Needs related to program evaluation, monitoring and reporting.

This area of need includes:

- Skills in planning evaluation
- Skills in undertaking evaluation
- Capacity to report on the outcomes of programs in a way that demonstrates impact
- Skills in measuring behaviour change occurring as a result of a program.

PART B: FINDINGS

This section of the document identifies the needs of educators from two perspectives, normative needs and felt needs. They relate to the required understandings, skills and competencies required to design deliver and evaluate effective EE/EfS.

NORMATIVE NEEDS OF EDUCATORS

The normative needs of NSW EE/EfS practitioners are established by research and expert opinion and translated into public policy and strategic approaches. The following section identifies normative needs as expressed at an international, national and state level. It then goes on to distil the major normative needs that apply to the delivery of EE/EfS in NSW, which will impact on education practitioners.

The draft NSW Learning for Sustainability Plan clearly identifies that a primary normative need that exists for EE/EfS practitioners in NSW is the need for enhanced professional development. The draft 2006 to 2009 plan states:

“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.” NSW LfS Plan 2006-2009.

Over the past ten years the traditional environmental education approach has evolved towards Education for Sustainability. Many factors have led to this shift, at an international, national, state and local level. Where they impact upon the needs of EfS and EE practitioners in NSW, they are discussed below.

Internationally

In December 2002, the United Nations General Assembly adopted resolution 57/254 to put in place a Decade of Education for Sustainable Development [DESD], lasting from 2005 to 2014. DESD is a far-reaching and complex undertaking with the following vision:

“A world where everyone has the opportunity to benefit from education and learn the values, behaviour and lifestyles required for a sustainable future and for positive societal transformation.” UNESCO. UNDESD Draft Plan of Implementation 2004.

The Implementation Plan for the Decade requires that all member countries will implement strategies and actions to meet the objectives of the Decade. As a consequence educators require skills in how to set their programs within a context of equity, poverty democracy and quality of life. More specifically, normative needs agreed to internationally include needs in experiential learning; future learning participatory problem solving and systems thinking.

As a normative need this has significant relevance as it moves education approaches towards EfS. The key characteristics of EfS are that it:

- promotes life-long learning

- is 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;
- is action oriented – a continuous process of learning and reflection, developing motivations and abilities to be involved
- is 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
- has 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.

Nationally

As early as 1997 national efforts were being undertaken to define and develop an approach to EE/EfS. These were drawn together in the 2000 to 2005 *National Action Plan, Environmental Education for a Sustainable Future* a document which sets out to “address the current needs of environmental education in Australia.”

Building on the *National Action Plan*, ARIES review of environmental education in Australia (Tilbury and Cooke 2005) highlights the need for National Learning for Sustainability Strategy. This would assist in building conceptual understanding and enhance education activity. Strategy development is to be underpinned by a national needs analysis of environmental education. The output of this needs assessment contributes to this process.

In June 2005 UNESCO and the Commonwealth Department of Environment and Heritage held a Symposium to launch the Australian approach to the DESD. In the report on the symposium, Professor Ken Wiltshire Chair, Australian National Commission For UNESCO states that: “*Having a DESD reminds us that sustainable development is not so much a technical concept but an educational one – not so much the end goal of a government policy but a process of learning how to think in terms of ‘forever’. This means that Education for Sustainable Development (ESD) involves learning how to make decisions that balance and integrate the long term future of the economy, the natural environment and the well-being of all communities, near and far, now and in the future.*”

The report goes on to say that: “*ESD mirrors the concern for education of high quality, demonstrating characteristics such as:*

- *Interdisciplinary and holistic: learning for sustainable development embedded in the whole curriculum, not as a separate subject;*
- *Values-driven: sharing the values and principles underpinning sustainable development;*
- *Critical thinking and problem solving: leading to confidence in addressing the dilemmas and challenges of sustainable development;*

- *Multi-method: word, art, drama, debate, experience, different approaches which model the processes;*
- *Participatory decision-making: learners participate in decisions on how they are to learn;*
- *Locally relevant: addressing local as well as global issues, and using the language(s) which learners most commonly use.*

Therefore as a normative need, practitioners require the skills to make their programs holistic, values driven, based on critical thinking and problem solving, participatory and locally relevant. They must also have the skills to identify and use a variety of education methods for delivery. These include skills in face-to-face facilitation and training, skills in social marketing approaches and skills in developing print and other material including written/electronic approaches.

It is noted that a new National Action Plan and a National Strategy for the DESD are currently in the early stages of development nationally and these will also further clarify and strengthen normative needs of practitioners. This needs assessment makes a solid contribution to this process by identifying gaps in professional competencies across NSW.

New South Wales

For the purpose of this study it is most important to identify the normative needs within NSW. In the main these are communicated through the NSW Governments' Environmental Education Plans 2002 - 2005 and the draft plan 2006 – 2009. These plans have been developed for Government by the NSW Council on Environmental Education. The Council's role is to:

- advise government on environmental education
- coordinate the preparation of state-wide 3 year plans for environmental education
- monitor the implementation of such plans.

The Council's vision as expressed in the plan is for:

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

Learning for Sustainability (LfS) 2006-09 identifies enhanced professional development as a key outcome. The Plan supports the United Nations Decade for Education for Sustainable Development (DESD) by highlighting the need to foster the potential of education for sustainable development.

The framework for the Plan is based on seven key outcomes, all working to build the capacity of the environmental education system in NSW. Outcome 5 of *LfS 2006-09*, is of particular relevance to professional development, calling for enhanced professional development opportunities and support for educators. Strategies aligned with this outcome aim to support those developing and delivering EfS programs and enable them to realise the full potential of their work. Strategies associated with other outcomes are also of significance to this project, focusing on improved integration and cross-sectoral coordination, expansion of partnership and access and increased research and evaluation.

The 2005 Consultation draft of LfS 2006-09 is available at:

<http://www.environment.nsw.gov.au/resources/drafenvplan0609.pdf>

Appendix 1 also identifies the following normative needs for NSW from the NSW Environment Protection Authority's 2000 study. These are consistent with some of the normative needs outlined above.

- Need assistance in determining and developing the strategic directions for their projects – putting their work in the bigger picture. Hence the need for more professional development in the design of programs.
- Educators have identified that the best way to obtain professional development is via face to face seminars and workshops
- Networks are an important way of extending educator skills

Key Normative Needs

When taking this all together there are some key normative needs that set a significant context for those designing, delivering and/or evaluating EE/EfS in NSW. These are outlined in the box below.

- | Normative Needs |
|---|
| <ul style="list-style-type: none">• <i>The concept of 'sustainability' is central for the future of EE/EfS. Practitioners need to be able to design and deliver programs about sustainability.</i>• <i>A national framework which is aligned with the principles of education for sustainability need to be developed</i>• <i>Education has a significant capacity to impact upon sustainability and the use of education to change people's behaviour is urgent.</i>• <i>There is a need for enhanced professional development for practitioners. Among other things this must assist them to grow EE into EFS [or ESD].</i>• <i>EE/EfS programs need to be built within a broader context of equity, poverty democracy and quality of life and must address values, behaviours and lifestyles.</i>• <i>High level skills in education program planning and delivery are essential. Practitioners require the skills to make their programs holistic, values driven, based on critical thinking and problem solving, participatory and locally relevant.</i>• <i>An understanding of the use of environmental education, communication and training alongside other environmental management tools is a clear normative need.</i>• <i>There is an ongoing need for professional development that provides leadership, status and credibility for EE/EfS practitioners and assists them to improve integration and cross sectoral coordination and partnership.</i>• <i>The increased use of [and capacity to use] research and evaluation is a clear normative need that can be impacted upon by professional development.</i> |

FELT NEEDS OF EDUCATORS

Findings about felt needs are discussed under the following headings:

- a) Major Challenges – General findings about needs
- b) Specific Needs – Findings aligned with model groupings (see Part A)
- c) Nature and Style of Future Professional Learning

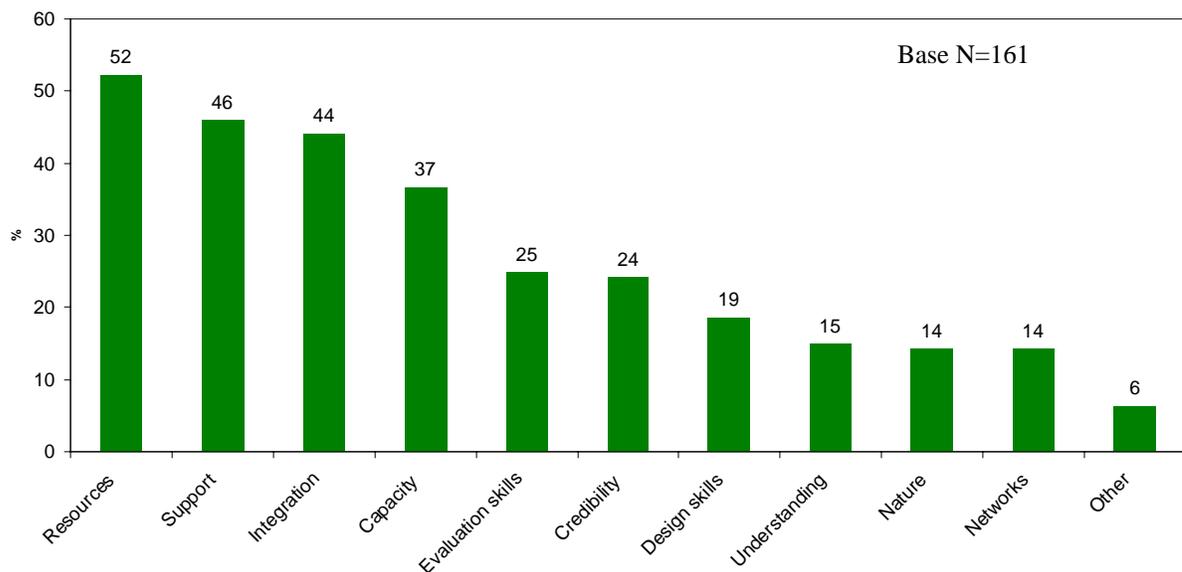
Findings are drawn from all data sets, the online survey, the key informant and focus group interviews and the literature.

Major Challenges - General findings about needs

There are a number of findings about felt needs that relate to broad challenges faced as environmental educators. Challenges identified below should be seen as contextual to overall discussion of the needs findings.

Respondents to the online survey were also asked to identify major challenges faced as educators. Table 2 outlines responses to the top three challenges faced across all 161 respondents. Unsurprisingly, lack of resources to deliver ongoing effective programs was most frequently nominated by respondents (52%) in their top three challenges. Inadequate integration of education with other environmental management tools, strategies and policy and lack of institutional/organisational support, structures and processes were the next most commonly endorsed challenges, receiving a vote from 46% and 44% of respondents respectively.

Table 2. The top three challenges faced by environmental educators [from online survey results]



NB: Full description of challenges identified above is provided in Appendix 4

Challenges faced by educators also emerged during key informants interviews and focus groups [See Appendix 3]. Themes from discussions are outlined below.

- 1 ***It's time to be hard-nosed about education:*** an increased quality of teaching and learning in education for sustainability is required. Education needs to gain credibility as a sustainability solution that delivers value for money.
- 2 ***Diversity of the field:*** Educators are employed or volunteer across a range of sectors therefore needs are diverse. For example, highly qualified, full time professional educators have markedly different needs to those providing education as volunteer members of community organisations. Diversity also relates to the number of years working as an educator.
- 3 ***Funding and Competition:*** Interventions are under-funded and that there is little money for professional development. Competition in the field impacts on the quality EE/EfS. As one NGO-based community educator said: *“Volunteers and community organisations are always seeking grants – making submissions - to keep continuity of service. Another said “a major challenge is that educators are constantly pitted*

against each other, seeking grants and running projects that their employer can hold up as model.

- 4 **Changing the world:** For some educators the size of the task is daunting. One said “*Environmental Educators [and education] are expected to change the world but given no resources or credible and technical support to do so.*” Another in local government said: “*education needs enough profile to be able to counter the consumption messages – this is our greatest challenge.*”
- 5 **Strategic approach:** A more strategic approach to environmental education is required to improve the reach and impact of efforts. Guidance and new structures are required to support evolving education approaches which work to progress sustainability. A key informant stated “*At an organisational level there is a need for some guidance in thinking strategically about the role that education approaches and other social/environmental change approaches play in achieving sustainability objectives*’
- 6 **Technical and personal isolation:** Isolation is a significant issue for educators. They report often working alone in large agencies and are unsupported professionally. In addition, those in regional/rural areas are at a significant disadvantage in accessing support unless they are able to organise it themselves. The fact that current professional development opportunities are provided through one-off events [conference, workshops etc] that don’t necessarily reflect the specific needs of individual educators, exacerbates this issue. Also it is often difficult to recruit experienced educators into rural and regional areas; hence there is a reliance on non-education specialists to carry forward education activity in a largely unsupported environment.

Specific Needs – Findings aligned with model groupings

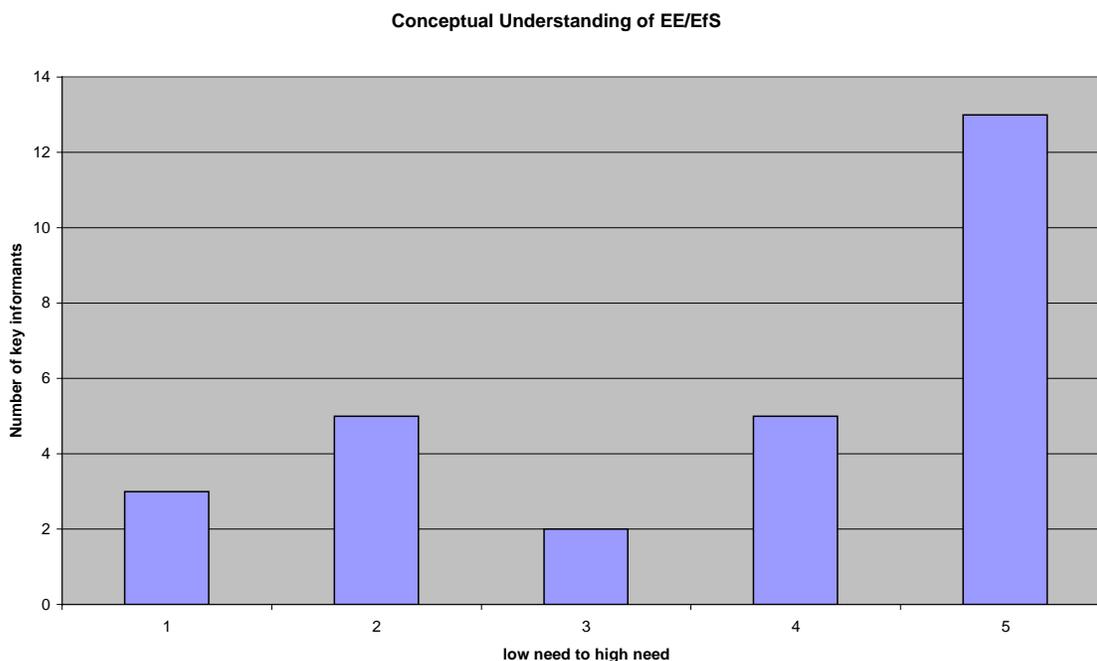
The specific felt needs findings for this study are organised under the headings outlined in the model in Part A.

Felt needs related to the conceptual understanding of the learning principles within Environmental Education and Education for Sustainability along with associated theory, policy and frameworks that guide good practice.

There was a significant amount of disparity in the views expressed by educators about the need for an enhanced conceptual understanding of EE and EfS.

Table 4 below confirms that while almost 50% of key informant respondents from the 28 one-on-one interviews thought there was a real need to increase conceptual understanding of EfS/EE, there was a spread of views across the field with over 25% giving it a weighting of only 1 or 2

Table 4. Need for conceptual understanding of EE/EfS [Key Informants].



Interestingly, online survey results indicate that the felt importance of this need is dependant on the time worked as an educator. Respondents who had worked in EE/EfS for 6-10 years were more likely (29%) than others to nominate inadequate understanding of sustainability issues as one of the top three challenges, whereas those who had been working for 2-5 years were less likely to (7%).

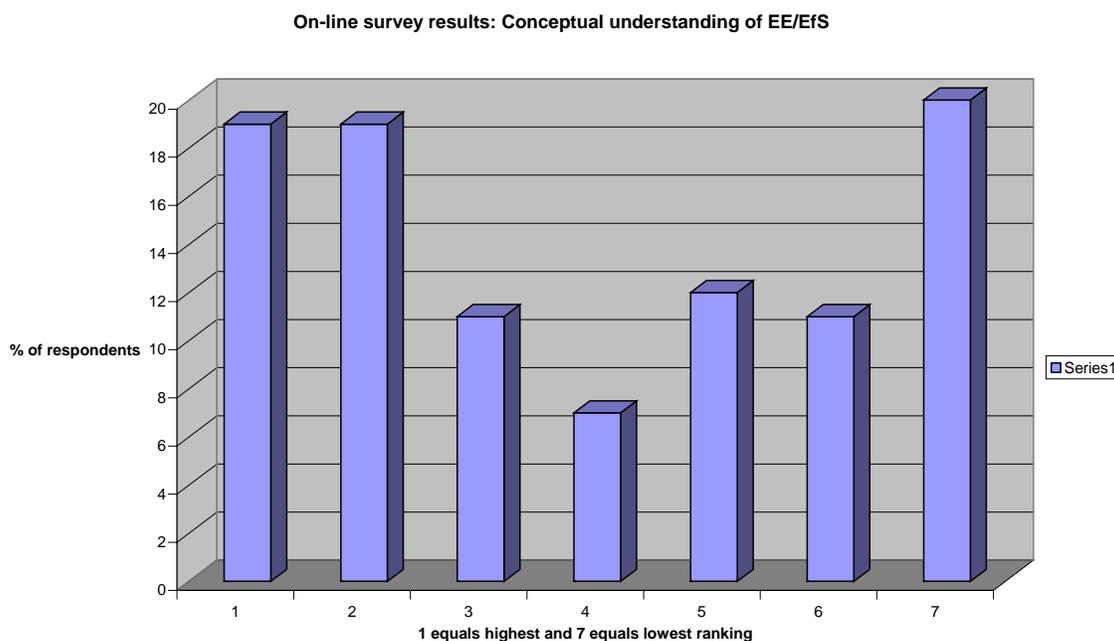
Within the Environmental NGO sector the EASE project [see Appendix 1.8] has indicated that there is still a need for improved conceptual understanding of education generally and EE/EfS in particular. Education is not always clearly defined by non-Government sector groups as a legitimate, important strategy. This often occurs because they lack the capacity to consider education - in terms of the resources of the group and its members, or as a tool for environmental management [education is considered to be a school based approach]

The evaluation of the Our Environment- It's a Living Thing Professional Development Program [see appendix 1.4] demonstrates that educators still need more depth of exposure to and understanding of education for sustainability.

Almost all of those interviewed saw it as highly important that those involved in EE EfS had a better understanding of adult learning principles as they relate to EE and EfS, and the skills to put these into practice.

Online survey results demonstrate disparity amongst respondents. 37% of respondents to the online survey saw this as either the highest or second highest need, but 20% ranked it as the lowest priority.

Table 5. Conceptual understanding of EE/EfS [Online survey]



Felt needs related to gaining organisational and political support for education efforts.

There is significant felt need being expressed about the credibility of the field of EE/EfS and the need to gain enhanced organisational/political support for education. This need relates to the issue of isolation which was discussed above.

By far the vast majority raised the issue of lack of status and support as the primary challenge. A review of the Discussion Guide in Appendix 3 will indicate that this statement of need was not identified at the outset of the project, when the guide was prepared. It emerged from the interviews and was subsequently included in the model in Part A.

For many respondents the greatest challenge for educators is *“gaining management support for education as a way of achieving sustainability objectives... it [education] is always considered at the end of the process and not really engaged at the beginning.”* A senior local government staff member said that education won’t flourish in local government until it *“is incorporated in the performance agreement and position description of every senior manager in every council.”*

Various colloquialisms were used to describe the harsh reality of the lack of status for education as an environmental management tool. These included:

- *“outside the tent”*
- *“at the bottom of the totem pole”*
- *“losing the battle”*
- *“Too much in a silo”*

- “lip service only.”

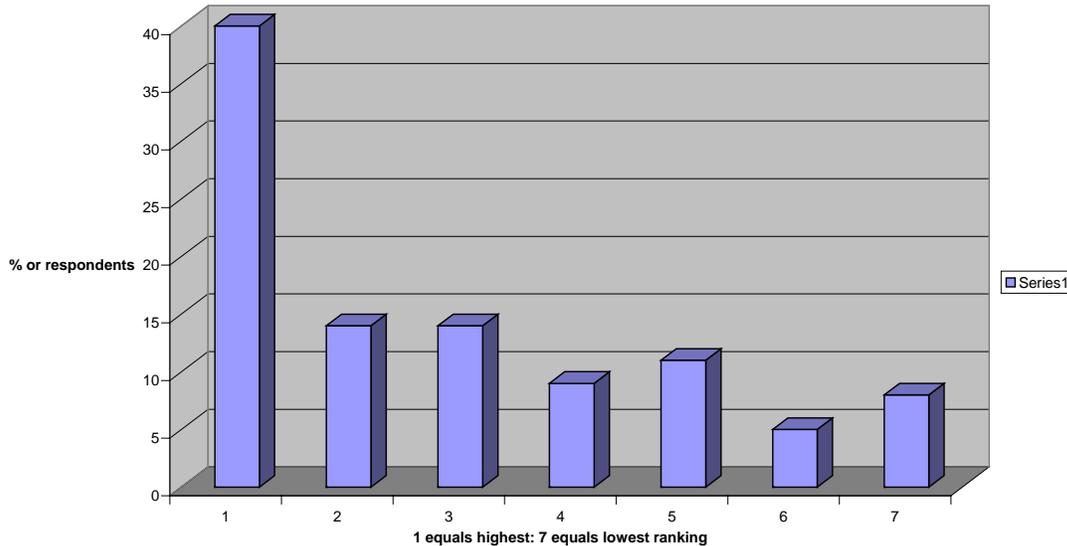
For many, this lack of status has two major implications:

- Insufficient funds are allocated by employers for training of staff engaged in the development and delivery of EfS programs including casual and temporary staff.
- A result of the lack of credibility of the field is that educators are generally low paid. This means we don’t attract the best talent.

Online research clearly demonstrates that enhanced credibility and organisational support for education is the most significant of felt needs, thus confirming input from key informants. Table 6 shows 40% of respondents to the online survey indicated that this was the highest level of need. An additional 28% rated it second or third in priority. Only 13% ranked it in the bottom two needs.

Table 6. Gaining organisational and political support for EE/EfS

On-Line Survey Results: Gaining Organisational Political Support

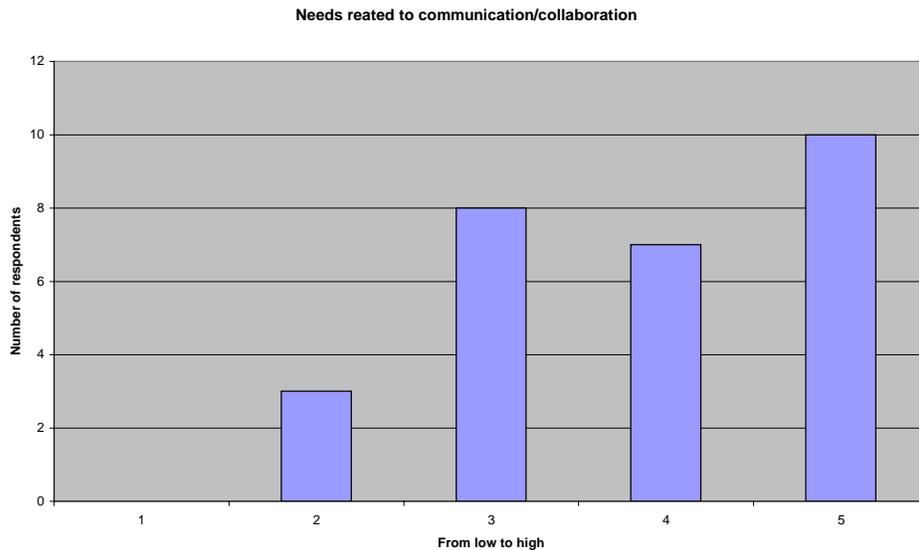


Felt needs related to improving skills in communication, in order to improve partnerships collaboration and stakeholder relationships.

In some ways the key informant interviews evoked limited and somewhat generic discussion about this need. It was as though all respondents took it as a given that anyone in education should have a significant level of skill in communication, building partnerships, collaboration etc.

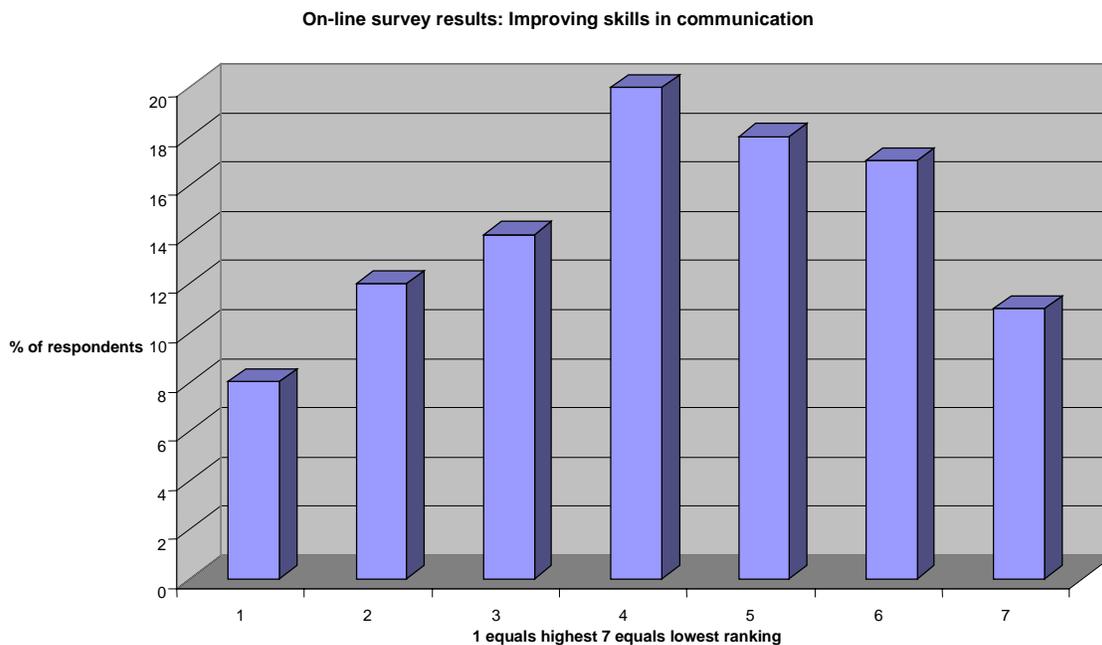
When asked directly to weight this issue however, the 28 key informants responded as indicated in Table 7. Most people rated this as a high level need and those that weighted it as a 2 or 3 in the main did so because they felt that educators were good communicators and had a relatively lower need for professional development in this area.

Table 7: Needs related to improving communication and collaboration [Key informants].



The online survey results broadly supported the input given by the key informants. The bell curve in table 8 below indicates that there were a range of views across the respondents. This is certainly not the highest area of need, but educators do see it as an important area of skill and are indicating a board need for professional development about communication and collaboration.

Table 8. Improving skills in communication [online survey results]



Key informants were fairly quick to move on from a discussion communication needs generally. In particular they did want to focus on how we communicate more effectively to get professional development needs met and what role networks and other structured communication approaches have in this process. The issue of networking and networks was of significant interest to numerous respondents who considered it to be important factor in meeting professional development needs.

Need for networking is captured by the following comments made by respondents:
“Too many struggle alone. Educators need the opportunity for learning discussions with peers who are doing like projects.”

“educators need to learn by reflection and mentoring... mentoring and networks play a major role in this.”

We need to “Bring people together in state-wide, regional and local forums. This will enable people to work together more effectively.”

It is clear that people value networks and place a strong emphasis on the role they play as both a mechanism and conduit for professional development. The actual nature and content of professional learning via networks is surrounded by disparate views.

Partnership was also highly valued. A Council educator made a number of important points about partnership. *“Whilst there is very much a need for us all to work with partnerships across federal/state/private and local - the issue is how to maintain it professionally into the future. This issue then links with the problem of staff moving about on short contracts, as relationships are very much developed between individuals.”*

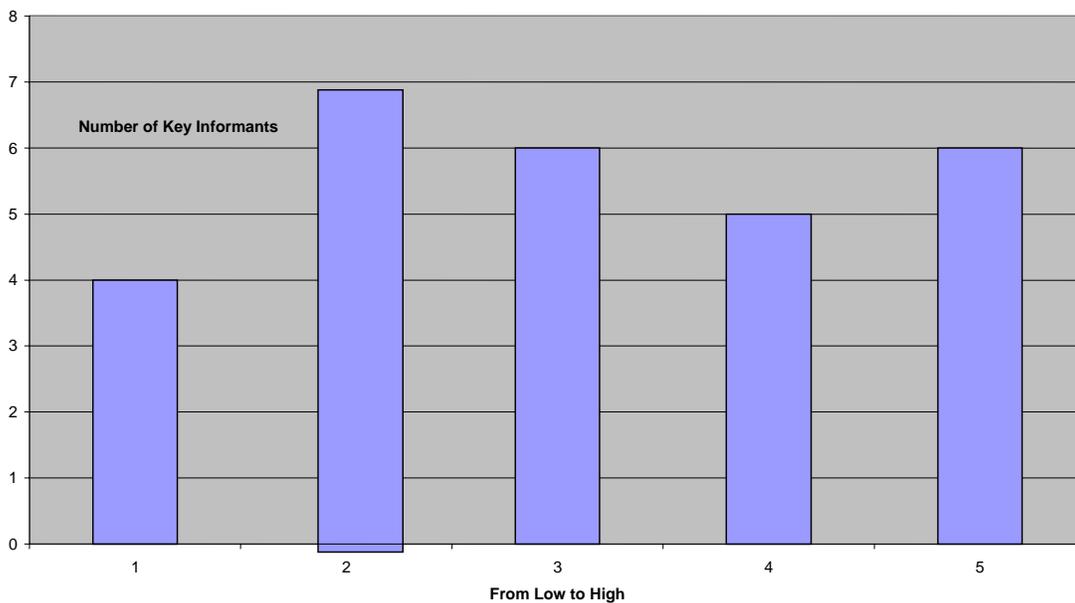
Respondents strongly asserted that partnerships were important when working with volunteers. *“In working with community organisations a partnership needs to be established to ensure training that enhances the facilitation skills of volunteers.”*

Felt needs related to improved knowledge of environmental issues and/or program content and how to find information required for effective program design and delivery.

Table 9 below, provides an interesting picture of the response from the key informants about how important it is to include “the content” in a PD program. While key informants consider knowledge of program content to be important, they were largely of the view that obtaining content knowledge was the responsibility of the individual educator and their employer [or the community organisation for which they volunteered]. *“People over-emphasize the need for professional development about program content. The more important issue is that educators can find out the content.”*

Overall views about content are divided. A proportion of respondents expect gaps in content knowledge to be addressed by the individual. Others were of the view that needs related to program content could be addressed through a strategic program of professional development. Table 9 illustrates the diversity of these views.

Table 9. Program content needs [Key informants]
Needs about content



Other issues worthy of note include:

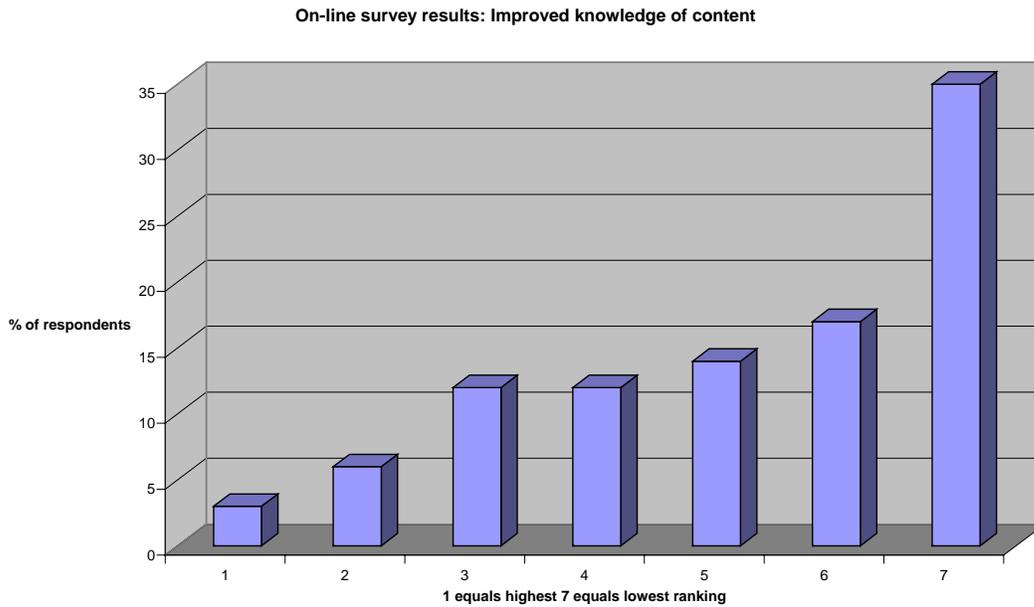
- *“Often people working regionally are not trained as educators [or don’t even identify themselves that way] and have specific needs for training about program content.”* It would appear that this is difficult to provide in regional or rural areas.
- The Environment Defenders Office [EDO] cited significant evidence based on the EDO’s community education program that educators needed information about legal issues and the environment. This should focus on *“improving knowledge of environmental law and improving advocacy skills in the ways in which the law can be used to obtain a positive environmental outcome.”*

In arguing for the importance of program content as a high priority need one educator said: *“It’s imperative that educators are receiving the most up-to-date information in the most inspiring fashion.”*

In summary, most key informants were happy enough with the level of content that educators currently have and don’t see the provision of more content related professional development as a high priority need.

This finding was confirmed by the data online survey data where 35% of respondents rated this as the lowest level of need. Only 3% of the 161 people who responded online view this as the highest need for a professional development program.

Table 10. Improved knowledge of content.

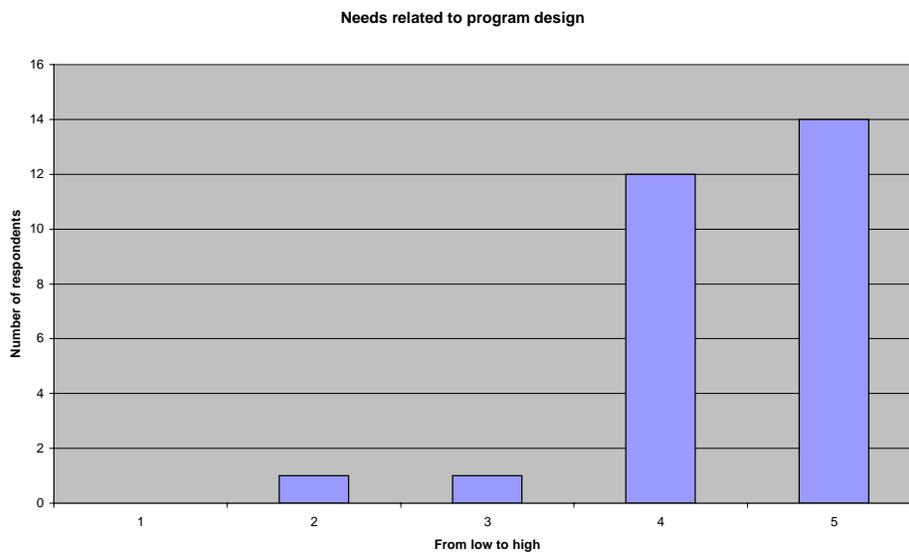


Felt needs related to designing effective programs.

Needs relating to program design was raised directly and without prompting by almost all key informants. It was seen as the area where most impact could be gained from an effective professional development program.

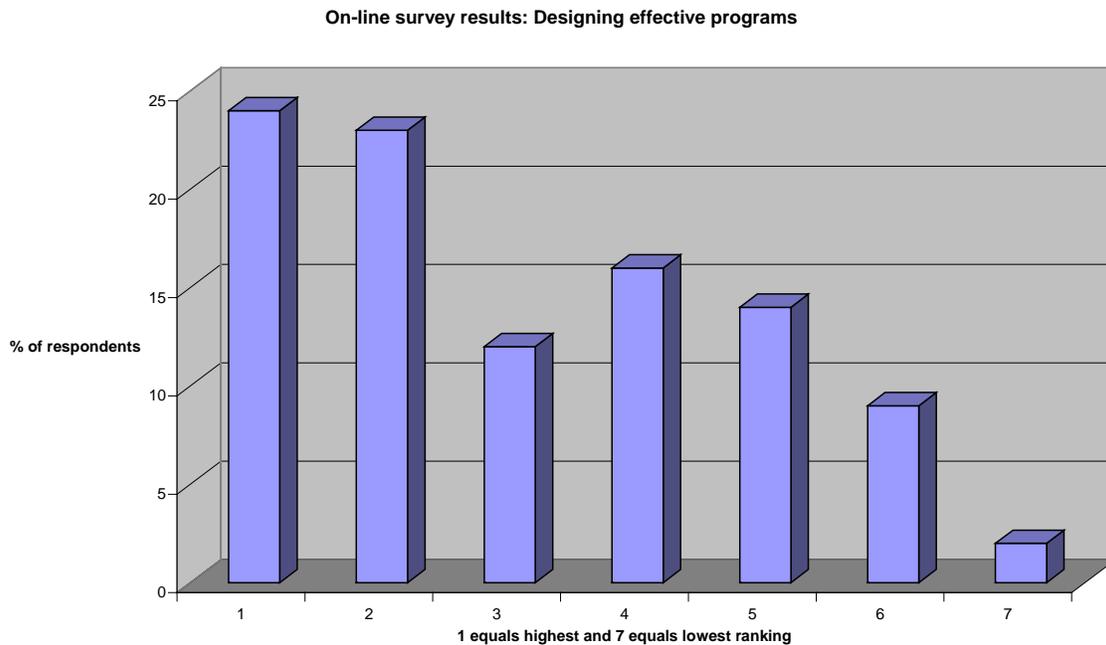
The highest area of need expressed by key informants and the respondents to the online survey was the availability of professional development opportunities to further develop skills related to program design. This is clearly depicted below in Table 11 below.

Table 11. Program design needs [Key informants]



The online survey results [Table 12 below] confirm that design skills are a high priority felt need. 24% of respondents indicated that this need was the most important of all those prompted by the survey. A further 35% ranked this in the top three needs and only 11% in total rated it in the bottom two needs.

Table 12 Designing effective programs



In a telling observation about design, one experienced respondent noted that: *“Over time I have noticed that the level of activity is higher but the impact is lower because of sloppy design.”*

Some significant issues about the problem of poor design were raised during the consultation:

- A university academic who has worked extensively in the community sector said that: *“The primary need is problem identification in the design element of the program. Environmental Educators are too quick to jump into target and tools.... Much education program design just reinstitutes the same old approach.”*
- The issue of *“preaching to the converted”* was raised by a number of people: *“We need programs that get to the next level of the community – beyond those that have made changes already. It was noted that this was a substantial issue in working within culturally and linguistically diverse communities.”*

The literature review process indicates strong support for professional learning opportunities which focus on program design skills. For example, the Waste Education review [Appendix 1. 7] indicates that there are needs for:

- assistance in precise targeting during program design, especially for industry and community programs
- improved understanding, case studies and resources about general sustainability and solid waste issues

- assistance in integrating waste education into broader learning for sustainability.

Similarly, the NCC's EASE project [see appendix 1.8] indicates that *Engaging Communities in Activities* is a high level need to improve the impact of education programs as they find that people *don't listen*. From this we can infer that community organisations require professional learning opportunities which focus engagement skills and techniques as part of the program design process.

Throughout the key informant interviews an important theme emerged about the need for enhanced capacity to design effective programs. This relates to ongoing identification of individual needs via self assessment and how to get assistance in meeting them. This was expressed most clearly by an educator from a state government agency who said: *"what is needed is a self-assessment checklist that every community educator can use to undertake a personal gaps and strengths analysis..... This could be linked to a program identifying where to get help in addressing particular needs."* Another said that educators need to *"see good practice."*

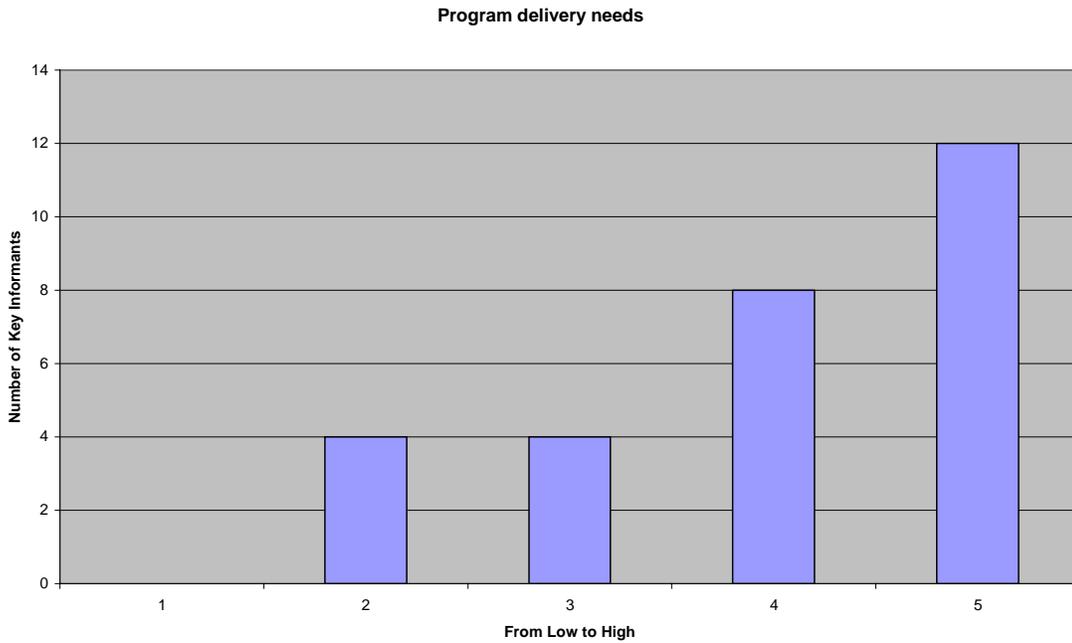
When asked about workshops that they had attended that had been useful and assisted them to design a program effectively; key informants indicated that two DEC sponsored workshops were most helpful. The Stormwater Education workshop held at the Powerhouse Museum in 2004 and the Household Sustainable Living workshop at the Olympic site in 2005. Both of these workshops focused on sharing good practice and local government educators found them to be of particular use.

Felt needs related to delivering effective programs.

While this is an important area of need and one where improvements could always be made, most key informants were of the view that delivery skills of educators were quite reasonable. Notwithstanding, a number of respondents though saw "delivery" skills as especially important because of the credibility factor. *"Educators, especially those out of the metro area are valued more if they have high level delivery skills... there are so few community educators, that everything we do is on display."*

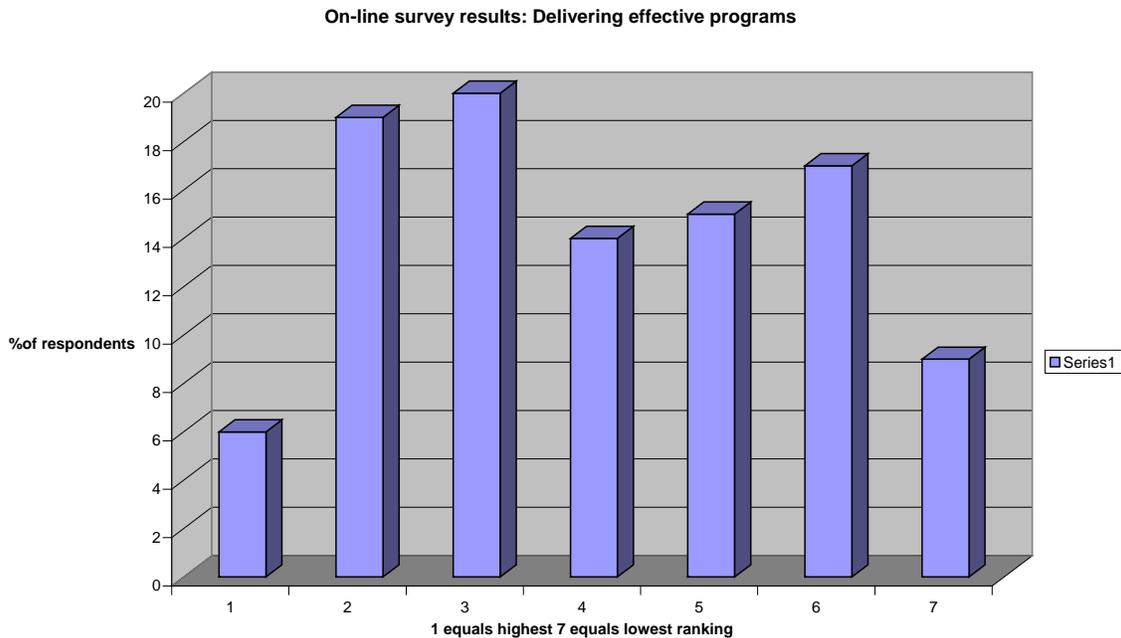
When asked to quantify the important of this need, key informants [see Table 13 below], generally rated delivery skills as an important training need. There was a strong view expressed by some people that this is the area where professional development could have its greatest impact. This diversity might be explained by the fact that most key informants see delivery skills as an integral part of professional development because it is the core educator competency.

Table 13. Program delivery needs [Key informants].



This perspective is confirmed by the online research findings [see table 14 below]. While delivery skills was ranked as the most important professional development by only 6% of respondents, 24% of respondents 39% rated it as either a second or third priority.

Table 14. Delivering effective programs

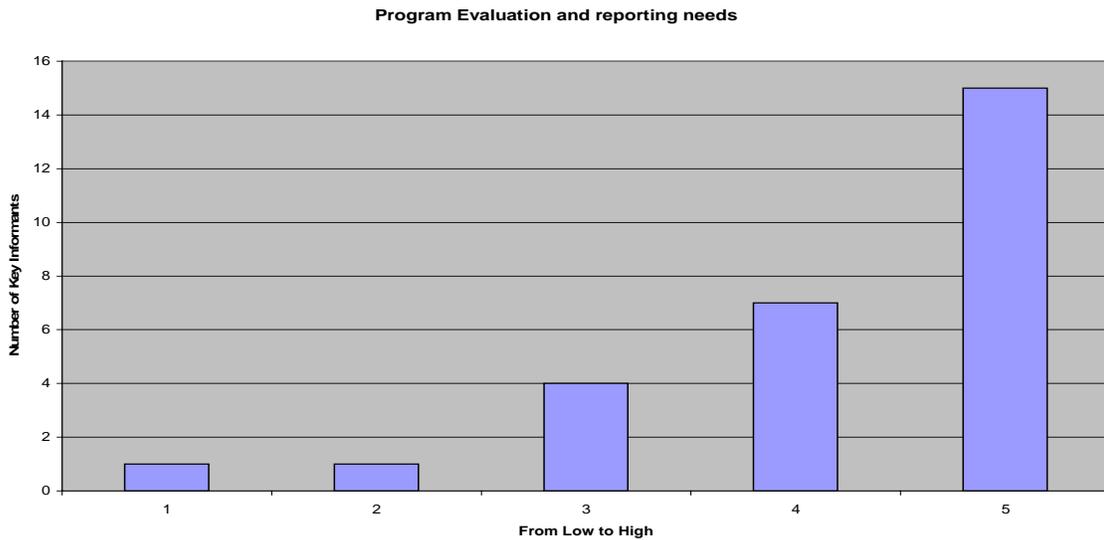


Felt needs related to program evaluation, monitoring and reporting

In general, key respondents when discussing evaluation agreed that: *“Evaluation is the weakest component in every project... is it lack of willingness, lack of competence or lack of budget?... probably all three.”*

The quantitative response to program evaluation and monitoring is somewhat curious however, in that two key informants rated it as a low level need from different perspectives [see table 15 below]. One felt that educators were good at evaluating their programs; the other said that he wanted to concentrate on program design, because he did not want to evaluate poor projects. Otherwise this area of need was very highly ranked by most key informants.

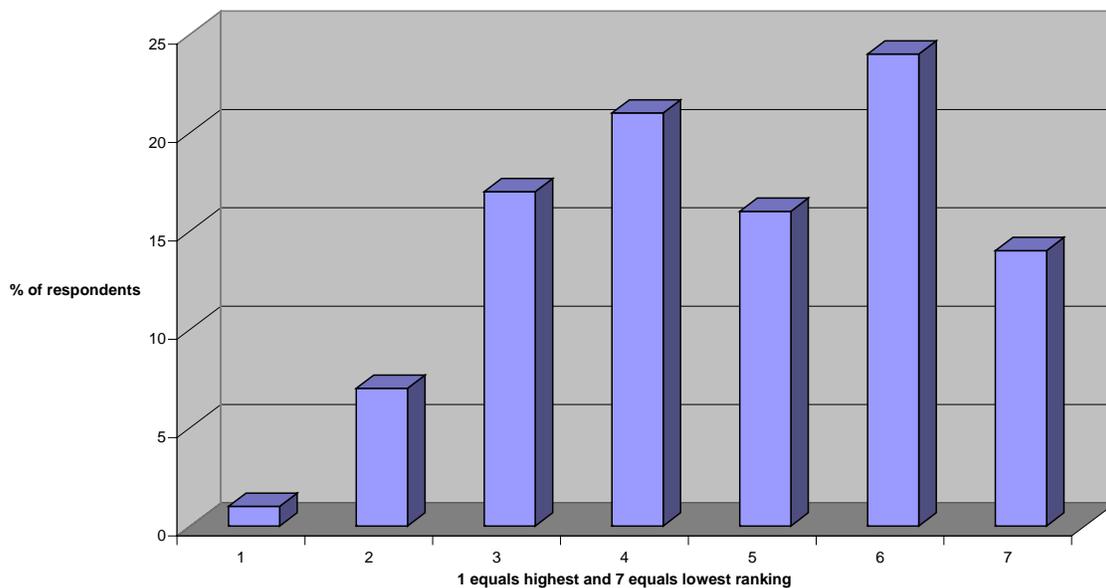
Table 15: Program evaluation and reporting needs [Key informants]



It is of note that only 25 respondents to the online survey indicated that evaluation and monitoring were among the three highest ranking challenges that they faced. And it scored quite low in the ranking of priority needs [see table below]. Significantly 38% rated it as the lowest or the second lowest priority compared to 8% who ranked it one or two.

Table 16. Program evaluation

On-line survey results: Program evaluation, monitoring and reporting



While the need for professional development to improve evaluation and reporting skills was roundly endorsed by almost all of those interviewed in focus groups or one-on-one interviews, this did not correlate with the online findings.

A possible explanation for this is that during the interviews this need was expressed in terms of proving to other people that the program was working rather than from the perspective of a formative or action learning evaluation, i.e. to see how it can be improved. Of course key informants were attracted to the notion of evaluation because they were discussing challenges etc. For those online the responses were much less prompted by the situation. The following quote illustrate various aspects of this issue:

- *“We need to know the answer to the question,” does it work”...but people are struggling with the outcomes hierarchy model.”*
- *“There is a need for more evaluation rigor.... Prove that this \$50,000 will deliver real identifiable benefit to the environment.”*
- *“To be respected in council, education needs hard evidence that it works and that it can progress core business.”*
- *“I need to know that I am getting a return on my time... I don’t need to waste time on EE that does not work”* said one volunteer educator in arguing for specific training for volunteer educators about simple to ways evaluate a program.

A more complete argument was put by one experienced educator who said that: *“educators need time and space for critically reflecting on their work and opportunities to learn from others.”* An essential part of the evaluation process is review, reflection and learning. This is essentially the basis of an action research approach that was strongly promoted by some respondents.

The situation is slightly more complicated when looking at the current literature on the issue. The evaluation of the Effective Sustainability Education Conference [see Appendix 1.9] did not show a significant commitment among education practitioners to the concept that evaluation and research was a high level need. On the other hand

those involved in waste education [see Appendix 1.7] did see it and the responsibility of all educators to evaluate their activities, as well as possible.

Needs and the Style of the Professional Development Program

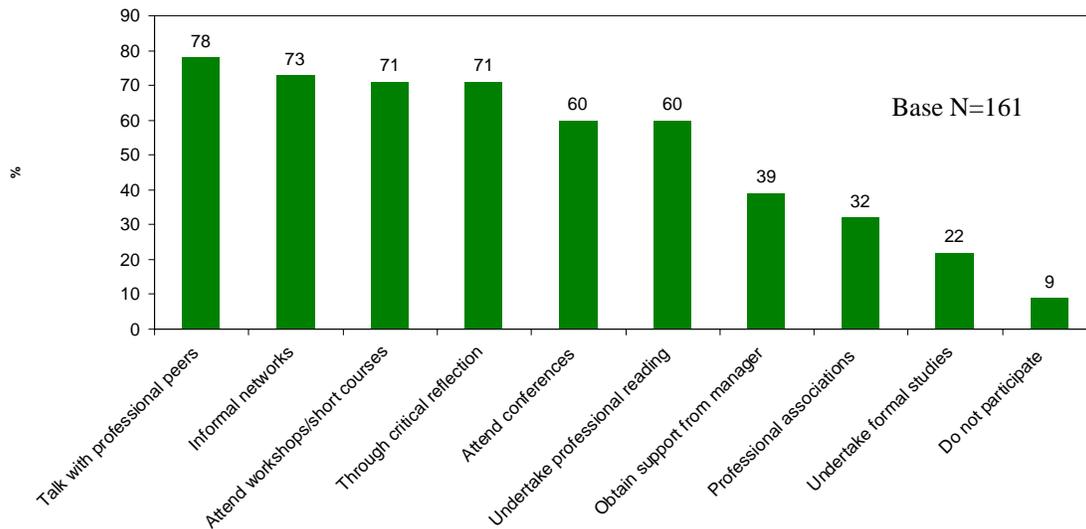
This section draws on findings from the online survey and the key informant’s interviews to provide a snapshot of how professional development needs are currently met and preferences for future professional development offerings.

This section is structured under a number of key questions and summarises findings from key informant interviews and the online survey.

How are needs currently being met?

The online survey [Table 17] below indicated that “less formal channels, including “Talking with professional peers” (78%) and “Informal networks” (73%) were used by the greatest proportion of respondents. Large proportions also attend workshops or short courses (71%) and engage in critical reflection (71%). Only 22% are undertaking formal studies and only 32% are meeting their needs via professional associations.” The response from key informants confirmed these sources. Most respondents failed to mention formal education as a possible sources of professional development, prior to prompting by the interviewer.

Table 17. Ways in which professional development needs are currently being met.



How would educators prefer that their professional development needs be met?

Respondents to the online survey provided significant information about the ways in which they would prefer that their professional development needs be met in the future. Workshops and short courses were the preferred options and an ongoing delivery was rated very highly [see tables 18 and 19, below]. Feedback from key informants was strongly consistent with these findings.

Table 18. Preferred delivery format for professional development programs

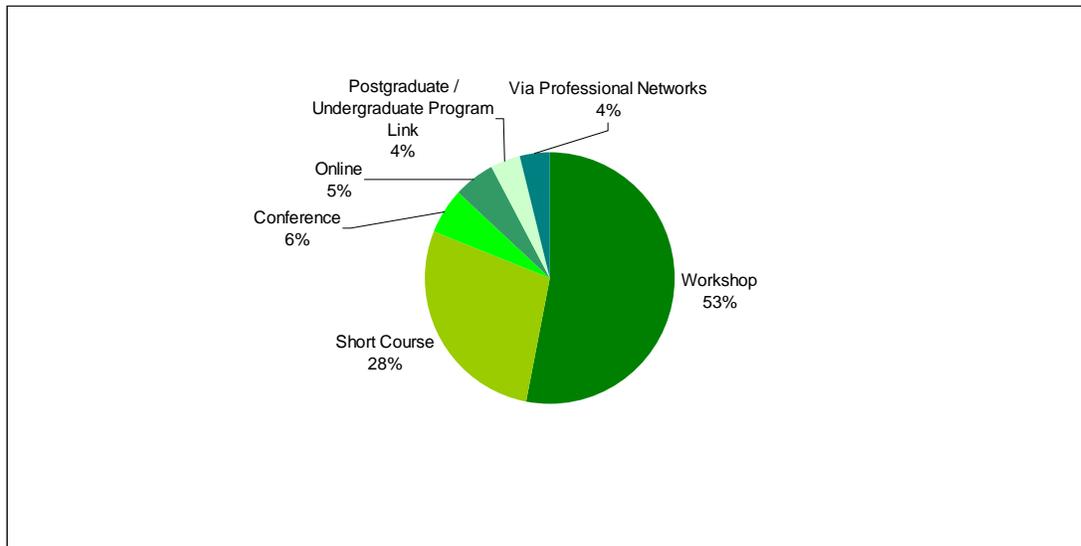
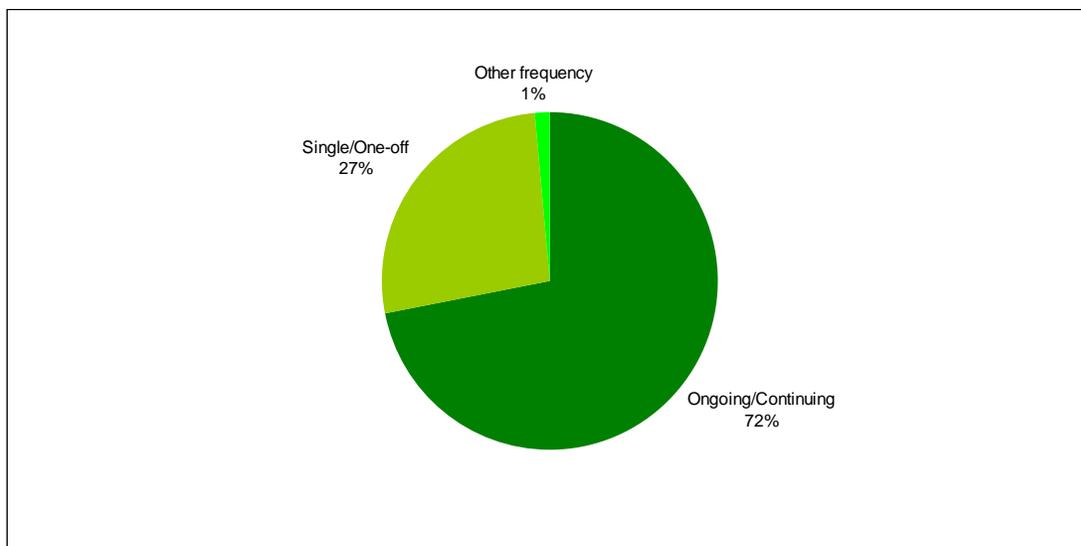


Table 19. Preferred frequency for professional development programs.



What general competencies are needed?

Online survey respondents were prompted with a list of fourteen skills and competencies. For each competence respondents were asked to indicate whether they considered this to be; very important, important, somewhat important, neutral, or not important. The findings are presented in Tables 20.

In summary these indicate that few respondents felt that any of the needs presented were unimportant. Table 21 shows that “Gaining support” (70%) and “designing programs” (66%) and “engagement with stakeholders” (57%) were felt by a majority of respondents to be ‘very important’ to their future professional development. The area of need that emerged as the least important was “Delivery of social marketing activities” with only 23% considering it ‘very important’, followed by “Workshop facilitation” (34% said ‘very important’).

Table 20. The importance of skills and competencies

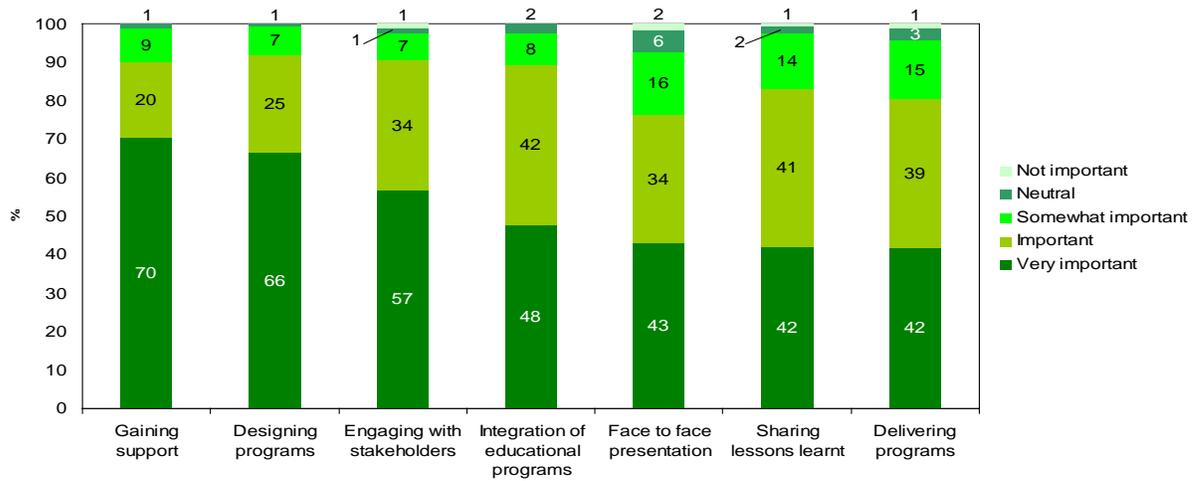
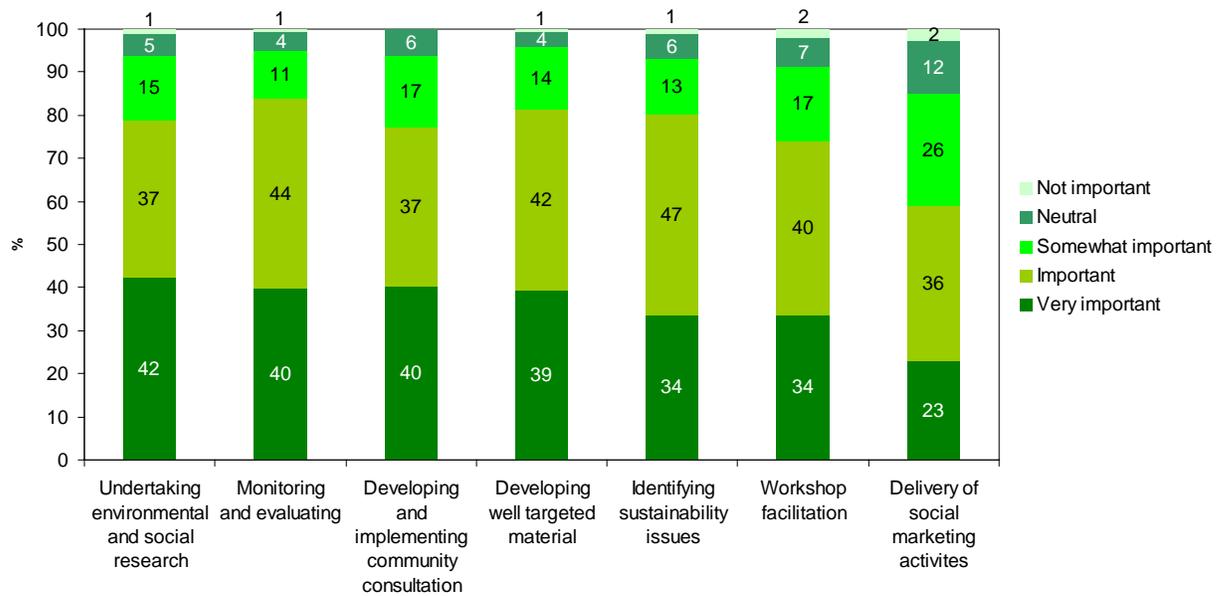


Table 21. The importance of skills and competencies (continued)



PART C: DISCUSSION AND CONCLUSIONS

Needs assessment output provides a significant amount of new information and data about the normative and felt professional development needs of EE/EfS educators in NSW. Based on the output of the needs assessment process, the sketch of current important needs provided in this part of the report, works to inform the future shape of professional development in NSW.

In discussing and distilling both felt and normative needs, two complementary issues emerge from the study.

- *Is there a need for enhanced professional development?*
- *What are the priority needs in relationship to the needs assessment model?*

ENHANCED PROFESSIONAL DEVELOPMENT

There is a high level need for continuing professional development. The felt needs identify that many educators who responded to this study flagged the need for a continuing professional development effort. Most considered current professional development support and opportunities to be uneven and limited by a “*a one-shot-fits all*” approach. Others felt it was not appropriate if the field just “*meandered along*” with individual staff and their managers taking advantage of some limited professional development opportunities every so often.

Key normative needs identified clearly establish that professional development is a high priority. “*There is a need for enhanced professional development for practitioners. Among other things this must assist them to grow EE into EFS [or ESD].*” The NSW Government’s *Learning for Sustainability Plan* highlights this need as a key outcome.

There is a high need for professional development opportunities to be provided more comprehensively and strategically.

This need is impacted upon by a large number of factors that emerged from the felt needs component of the study. These include:

- isolation felt by educators
- the fact that current professional development opportunities are provided through one-off events [conference, workshops etc] that don’t necessarily reflect the specific needs of individual educators
- the extent of the challenge to promote real behavioural, structural, operational and/or policy shift in the NSW community
- diversity of the field, from highly qualified full time professional educators to those providing education as volunteer members of community organisations
- a relatively low level of credibility which educators feel they hold amongst others involved in environmental management
- the sustainability imperative – the need to promote change now.

There was general acknowledgement from the respondents in the felt needs component of the study, that the individual educator and their employer [or agency for which they volunteered] hold the prime responsibility for their professional development. Normative findings indicate that the provision of more comprehensive

and strategic professional development opportunities requires ongoing support from State and Federal government agencies. This support is to be capacity building in nature and may include policy frameworks, opportunities for collaboration and networking, knowledge generation and distribution, ongoing need and demand identification, incentives, program piloting, tools and resources.

Professional development must reflect the diversity of activities and needs of educators.

Professional development should not be a “one size fits all approach.” Given the relative technical isolation in which many educators work or volunteer, there is a need for assistance in determining professional development needs and more knowledge about options that exist to meet these. There is a need to clarify professional development needs and to identify where these might be addressed. This is a significant deficit for the field and can only be assisted by a more comprehensive approach to professional development.

There is a degree of urgency for improved practice of education that promotes real change.

The normative needs expressed in Part B highlight the urgency of the issue and the vital role education plays in progressing society towards sustainability. The draft *Learning for Sustainability Plan 2006 to 2009* points to the urgent need for effective EfS to address environmental challenges. Climate change was cited by a number of respondents as the highest priority contemporary issue that education should be addressing – now. In general educators saw the need to lift their level of impact on real problems and challenges and communicated a sense of urgency about this. Professional development is seen by the field as vital to this process.

Insufficient priority is afforded to professional development and there are limited funds allocated for educators to attend programs.

The felt needs component of this study indicates that while there is a high need for professional development there is little capacity in workplaces to fund attendance at high cost programs. This is especially the case for the non-government volunteer sector and for those involved in working within indigenous and NESB communities.

PRIORITY NEEDS IN RELATIONSHIP TO THE NEEDS ASSESSMENT MODEL

This section provides an in-depth discussion of identified needs in order of priority. The analysis of both felt and normative needs is guided by educators needs as grouped in the model put forward in Part A.

Needs related to gaining organisational and political support for education efforts.

This study identified a key normative need about the level of support required for EE/EfS. *There is an ongoing need for professional development that provides leadership, status and credibility for EE/EfS practitioners and assists them to improve integration and cross-sectoral coordination and partnership.* This underpins a substantial felt need expressed consistently by practitioners. Most key informants interviewed raised lack of status and credibility as a major issue. Many of them felt intimidated by the feeling of continually having to fight for their right to contribute- education as a tool was undervalued and so were they.

For this need, felt and normative needs align to make this a higher order need. Given that this need emerged strongly from the key informant interviews, focus groups and online survey results it needs to be flagged as an imperative strategy consideration for this project and future professional development programs.

In the organisational context, practitioners feel they always have to prove themselves and the value of education as a tool for sustainability. Ultimately, this impinges upon practice, funding available for the development of education programs and the opportunity to access professional development opportunities. Future professional development needs to acknowledge this reality.

Discussion is summarised best by this quote from a state government educator: *“people in other disciplines are just not confident that education works.”* Put another way by a university academic: *“The problem is where we are on the totem pole – environmental issues are still often an add-on or afterthought and education is at the bottom of the ways we think of to deal with them.”*

In addressing the need for enhanced organisational support, status and credibility, a professional development program must provide practitioners with the skills, knowledge and tools to embed education into organisational processes and promote the value and uptake of education as an integrated environmental management tool. Skills in evaluating and reporting are central to this process.

Needs related to designing effective programs.

Both normative and felt needs indicated that improved program design skills were a high priority. In general this was seen as more important than delivery or even than evaluation and reporting. Normative needs spelt out that: *Improved education program planning and delivery and improved understanding of the use of environmental education, communication and training alongside other tools are clear normative needs. Practitioners require the skills to make their programs holistic, values driven, based on critical thinking and problem solving, participatory and locally relevant. They must also have the skills to use a variety of education methods for delivery.* This was reinforced by needs identified in the literature and in the felt needs expressed by educators themselves.

How to design programs that reach those who are not motivated or equipped to live sustainable manner was cited as a major area of need. There is a real need to increase the capacity of the field to focus on behaviour change, and professional development must assist educators to become more *“hard nosed”* about the programs that they deliver. Designing evidence based programs that target specific issues and audiences effectively is a high priority for the field.

There are particular design needs related to working with some disenfranchised groups, for example people for a non-English speaking background and those from Aboriginal communities.

There was a good deal of input from key informants about what should be the focus of the design element of a professional development program:

- A number of respondents indicated that face-to-face programs are the best way to promote behaviour change but that *“educators need help in how to design these programs and engage people in face-to-face education.”*
- For volunteers there are significant professional development needs related to improving program design. One community educator said that learning about how to design a project relied on *“action oriented learning through direct experience and involvement.”* Another noted that: *“quality education programs*

take time... time to design, time to deliver, time to evaluate.” So people need to be encouraged through professional development approaches to have long term goals.

- A high profile academic indicated that we need professional development to assist educators to *“design effective programs that build from the following strategic questions:*
 - *What have you already done?*
 - *What’s stopping you doing more?*
 - *What do you need to help you to do more?*
 - *What can happen?*
 - *What will happen?”*

Needs related to the conceptual understanding of the learning principles within Environmental Education and Education for Sustainability along with associated theory, policy and frameworks that guide good practice.

Both felt and normative findings clearly identify this need as a high priority. Online survey output demonstrates that conceptual understanding is a priority, with 38% of respondents ranking it as the first or second most important professional development need. Overall, online survey results identify this need as the third highest priority.

Views of key informants were mixed about the need for increased conceptual understanding of EE and EfS. The problem appears to centre on the issue of sustainability and how it relates to education about specific environmental media [for example, water quality and water consumption]. Some saw improved conceptual understanding as an area of high need, others said *“we just should get on and do it – stop worrying about what it is called”* [community waste educator].

Any disparity across felt need findings is balanced by the normative needs expressed in public policy and in the various international, national and state based plans. In essence, these indicate that *the concept of ‘sustainability’ is central for the future of EE/EfS. Practitioners need to be able to design and deliver programs about sustainability.* Further, key normative needs point out that *EE/EfS programs needs to be built within the context of equity, poverty, democracy and quality of life; and must address values, behaviours and lifestyles. EE and EfS practitioners need skills in design and delivery to address these challenging contexts.*

Needs assessment output suggests that better communication of concepts and policy frameworks related to sustainability and EfS would be a positive move towards addressing this high order need. There are too few quality case studies and simple explanations that translate education about sustainability into real programs that have measured outcomes. This kind of knowledge building and communication should be done in a way that resonates more with practitioners, giving particular focus to relevance of information and accessibility.

Needs related to improving skills in communication, in order to improve partnerships, collaboration and stakeholder relationships.

Felt and normative needs clearly rate this as a high level need. Whilst there was a general view that most education practitioners were able to communicate effectively, a strong need was identified for improved skills in developing and maintaining stakeholder relationships and partnerships. This need was particularly strong for those working within community organisations and local government. A high regard for partnership was also

identified as a strong normative need in literature [most especially the Inventory - see Appendix 1.5]

Interestingly, there were some mixed views about the relative value that involvement in networks could make to achieve professional development needs. This conclusion is due in part to the multitude of networks that exist, along with the varying objectives of these networks. The complexity of the current network situation is illustrated through online survey results. 161 respondents belonged to over 20 different professional networks. On average each respondent belonged to 2.4 networks.

Online networks were considered to be a valuable tool for problem solving and discussion, particularly by those educators who worked alone or were in regional or rural areas. Others saw networks as face-to-face opportunities for discussion, success sharing, problem solving and perhaps mentoring. The support and extension of networking opportunities does have a significant role in ongoing professional development. In general educators considered professional organisations such as AAEE, local network groups and online networks such as Sustainability Educators to be a vital part of professional learning.

Overall, respondents strongly promoted networking as a possible answer to their professional development needs. The following mix of networking ideas were expressed by various key informants:

- Online networks should focus on information provision and the discussion of issues.
- Networks are an opportunity to just sit and talk with others in a central location once a month.
- Networks should provide regular structured workshops.
- Networks should be structured so that the successes and failures of programs are shared programs.
- Networks should embrace an action learning approach to project design, helping educators to work up projects, reflect on them, and rebuild them based on their reflections and feedback.
- Networks promote and should support mentoring
- Networks should work to build a central community of practice

Needs related to program evaluation, monitoring and reporting.

Taken across the board, respondents generally rated evaluation and reporting as a slightly higher need than skills in program delivery. There was some disparity of views expressed by key informants, but in general, practitioners felt that they lacked evaluation skills and that they could improve both the design of evaluation processes and their capacity to effectively manage and carry out program evaluations.

Normative needs identified a strong need for improved evaluation skills: *Increased use of [and capacity to use] research and evaluation is a clear normative need that can be impacted upon by professional development.*

Also, evaluation is a key outcome identified in the NSW Government's Learning for Sustainability Plan 2006 to 2009 [draft].

Given that hard-edged evaluation is vital to raising the credibility of education as a tool and to impacting on unsustainable behaviour, evaluation skills are an important professional development need.

Even though evaluation skills and competencies had the lowest mean rating [online survey result] of all need groupings identified in the model, overall results indicate that professional development programs need to incorporate specific elements that work to build and improve the capacity of educators to effectively design, manage and conduct evaluations.

In summary, professional development opportunities must give educators access to evaluation training and relevant professional development resources in this area. It is important though, that the approach used is pitched at the appropriate level for practitioners - a level that does not over-complicate the process.

In addition, educators need assistance in how to report evaluation findings in a way that ensures transparency of results and maximizes support for their efforts. It would appear that often evaluation – or social research - is carried out but that it is not reported on effectively at a high enough level within the organisation, nor are is it widely shared with peers outside the organisation.

Needs related to delivering effective programs.

Delivery skills are considered a lower order need because in general it is believed that most educators can present/deliver effectively. It is not that practitioners don't need assistance in improving delivery skills; it is simply considered a lower priority in comparison to other needs. Indeed, this might be true for professional members of the sector but is not necessarily true for all, including volunteers.

Normative needs identified do not directly address delivery skills, but there is an assumption made that delivery will be of high quality. This will not always be the case and professional development programs should incorporate elements to support improved delivery skills.

There is a real emphasis in the felt needs component of this needs assessment on learning from doing – either through formal action research or less formally. Interestingly, volunteer educators interviewed from the community sector did not consider academic qualifications to be important, emphasising the need and value action learning.

Considerations for improved delivery skills put forward by key informants include:

- Workplace learning approaches are an important aspect of professional development about how to deliver programs more effectively. One education professional said that this approach meant that people were *“learning on the job.... acknowledging current skills and building upon them at an appropriate level.”* It is important that those who employ people in an education role conduct high quality in-house training.
- Given that education programs gain their best impact from face-to-face education, there is a need for a significant amount of professional development about face-to-face delivery. All educators need good presentation and facilitation skills.

Needs related to improved knowledge of environmental issues and/or program content and how to find information required for effective program design and delivery.

While knowledge is considered important, it is the view of most practitioners that any professional development can be handled in house by/with their employer. This could occur either in a formal manner through in-service training or by peer communication. For many volunteer educators this is an extremely low priority need because they work in organisations where everyone is aware of the issues and the content. They have much higher needs in design, delivery and/or evaluation skills.

PART D: A NEW PROFESSIONAL LEARNING APPROACH FOR ENVIRONMENTAL EDUCATORS

Accelerated learning for sustainability is required to speed up progress towards a sustainable future for NSW. Increasing the effectiveness of sustainability educators by building on prior knowledge to provide enhanced professional development and support is key to speeding up learning.

Needs assessment output and leading practice as advocated by the IUCN (Hesselink et al 2005) clearly indicates that a new focus and approach for professional learning is required to assist educators in bridging the gap between environmental awareness and pro-environmental behaviour.

User generated solutions are required to support individual and organisational development for sustainability (Hesselink et al 2005). The IUCN recognizes that knowledge and learning for EfS should be planned and managed in response to demand and suggests that this can be facilitated via five major actions:

1. Developing and supporting an online Learner Network
2. Needs identification and pilot projects
3. Mapping professional development opportunities
4. Ongoing assessment
5. Involvement of end users in demand articulations and networking

The Department of Environment and Conservation's (DEC) strategy is consistent with the IUCN approach by building professional development capacity in NSW through two main strategies - *market development and facilitation*.

(i) *The market development* component requires:

- developing educator's understandings of their own professional development needs in relation to EfS and
- developing new professional learning products and programs.

(ii) *Market facilitation* occurs in conjunction with service providers and project partners to:

- align demand and supply of professional development for EfS
- promote awareness of professional learning opportunities for EfS.

In order to provide enhanced professional development to the educators of NSW, the DEC aims to support the uptake and expansion of demand based demand based professional development. This is a new professional learning approach which breaks away from the 'one size fits all' method by engaging with a wide ranged of educators to identify needs and shape learning opportunities around their specific needs.

The Professional Development for Educators project is based around this new approach, laying the foundations for ongoing, demand based professional development across NSW.

PROFESSIONAL DEVELOPMENT FOR ENVIRONMENTAL EDUCATORS - PROJECT APPROACH

In devising a project approach around the identified needs and demands of EfS educators the primary challenge is to deal with a significant number of inter-related issues. These include; the continuity of a professional development opportunities, isolation and support issues, budget availability, the huge diversity of needs and “employment” situations and a diversity in terms of level of community education experience and relevance of qualifications.

The DEC has developed a multifaceted capacity building approach to underpin the design and delivery of project strategy components. This approach involves the development of an online learning network, practical tools and workshops to provide ongoing professional development support and targeted needs based learning opportunities for environmental educators of NSW.

This new approach is centred on *needs based learning and knowledge development* which involves identifying a leverage point for desired change (needs and gaps) and creating knowledge products (solutions) for professional learning, skills improvement, ongoing support and diagnoses.

PROJECT COMPONENTS

Project components outlined below are grounded in findings from the needs assessment and is consistent with leading practice as advocated by the IUCN. A diverse project advisory group, assembled for the *Professional Development for Educators* project, has considered all project components and has expressed full support for the strategy

Project components are expected to be implemented over the next 1 year period by the Community Education Section of the DEC in conjunction with OEILT program partners. It is envisaged that core components of the strategy will become largely self-sustaining after that time.

Professional Development Hub

The Hub is an interactive online ‘one-stop-shop’ learning network designed to facilitate knowledge development, information exchange for professional learning support and knowledge development.

The purpose of the Hub is to build a community of practice and support the provision of ongoing, demand based professional development opportunities for environmental educators. Interconnected objectives include:

- improved understanding of what kinds of PD are consistent with EfS
- Support ongoing diagnoses and learner generated demand articulation of PD needs
- Identify and communicate current gaps in provision of professional development to inform the development of new professional development
- Connect environmental educators with available professional development opportunities and provide a marketplace for PD providers
- Provide a space for ongoing knowledge sharing, networking and professional reflection

Basic elements of the Hub are:

- A Self-assessment Kit that provides (i) Framework of EfS competencies, skills and content (ii) a tool for educators to identify and plan their personalised training and development program
- A calendar of PD opportunities/events in NSW – updated periodically
- A library of resources (eg publications on concepts and characteristics of EfS; best practice principles; policy etc) and links to other EfS resources.

The target audience of the PD Hub spreads across all sectors – government, non-government organisations and private/corporate. Specific target groups include:

- Educators and environmental managers
- Universities and other higher learning institutions
- Professional learning providers across sustainability; education; communication; organisational change
- All those working across the sustainability arena.

The Hub will host the Self-assessment Kit, linking educators to professional learning service providers.

Self-Assessment Kit

The self-assessment kit is a new tool that will assist educators to assess their specific EfS professional needs in the context of their work. The tool is directly connected to the PD Hub, linking needs to learning areas, capabilities and opportunities.

This kit is a form of critical self-reflection, enabling educators to assess their capabilities in EfS and identify individual professional development needs for EfS.

This Kit will incorporate a framework of core competencies in EfS to be used for self-assessment and the development professional learning services and training package developers.

Use of the Kit will enable educators to create a professional growth plan with specific needs, improvement strategies and measurable outcomes to advance personal and organisational learning for EfS.

Key objectives of the self-assessment kit include:

- Diagnostic self-reflection to target specific needs and areas for professional growth
- Develop knowledge about professional competencies and skills for EfS
- Stimulate ideas for professional learning to address identified needs
- Development of a road map (plan) for personal and organisational professional development
- Supports a re-defined approach to professional development, focusing on learner shaped experience
- Integration with PD Hub elements

It is intended that the kit will be used to shape each educators engagement with the PD Hub, enabling educators to:

- Connect with professional learning opportunities and resources aligned with identified needs across key learning areas
- View and enrol in pd opportunities throughout the state to address
- Access online professional learning tools and resources

- Input self-assessment data for ongoing needs assessment and demand articulated learning

Kit and Hub Implementation

Development and implementation of the Kit and Hub is to be supported by:

A: Workshop to pilot material

B: marketing and promotion

C: Workshop series which is likely to include:

- Short seminar to introduce the program and its resources
- Application of the self assessment tool and exploration of links between participants current work and the EfS competencies

Priority professional development programs

The findings of the needs assessment point to the need for new professional development offerings. Programs currently under development are addressing some of these needs, other needs will require the DEC and other service provider to develop new programs. The professional learning areas and new professional development programs that link to the priority training needs identified are outlined below.

NB: Time and budget constraints specifically connected to the lifecycle of this project may limit the extent to which all of the specific offerings outlined below can be developed and implemented.

Gaining organisational/institutional support for education for sustainability

The DEC would develop a framework/guide and associated training designed to support educators in gaining organisational support for EfS, integrating education with other sustainability management activities and embedding EfS into organisational processes and structures.

The guide acts as a practical, process-orientated resource covering topics such as program design, procedures, actions and outputs for educators for EfS.

A model should be developed to promote EfS entrepreneurs. Champions are considered to be integral to organisation wide uptake of EfS and triggering a shift in organisational culture/governance towards sustainability.

The program may also include a complementary workshop in partnership with the LGSA and/or TEC aimed at mid level management. It would highlight the benefits of strategic EfS and organisational support required. Material would be drawn from the Strategic EfS guide and entrepreneur model.

Short Certificate Course in EfS

A short course working to improve participant skills and enable them to design, implement and evaluate EfS programs. The course builds on the previous professional development workshop series carried out in 2002 as part of the OEILT program. It is to be designed around the EfS competency framework developed for the Self-Assessment Kit. It is expected that the course will be aligned with guideline standards and competency standards for sustainability developed under the National Training Framework. The course will also draw on course material from the *Environmental Education Training for Local Government Officers* program developed and piloted in partnership with the NSW Stormwater Trust.

Leading practice education for sustainability

In 2006-07 the OEILT Councils Partnership Program will focus on showcasing leading practice education programs through by funding the documentation and dissemination of NSW council education programs and developing an associated generic guide to leading practice (derived from the meta-evaluation of stormwater education programs).

Mentoring skills development (SCMA-DEC)

The DEC will partner with the Sydney Catchment Management Authority to design and conduct training on mentoring to improve programs. The SCMA has commenced development of this program. The DEC will support the design and statewide rollout of this training in 2006-07 after successful program piloting.

Using research to design effective programs (DEC)

The DEC will lead the development of a guideline and associated training on this topic. This project was proposed by the DEC and approved by the NEEN in December 2005 as a Commonwealth-States partnership program.

Networking and Knowledge Building

In implementing the *Professional Development for Educators* project the DEC will work with the peak professional associations and other relevant bodies to:

- Develop and promote participation in program components
- Develop, pilot and disseminate program resources
- Review and expand the use of networks to support professional development of educators
- Facilitate dialogue and collaboration at regional, state and national levels to strengthen knowledge bases and build a community of practice.

PART E: APPENDICES

APPENDIX 1: FINDINGS FROM THE LITERATURE

CONTENTS

1.1. The Professional Needs of NSW Environmental Educators in the Non-formal Education Sector – 2000 Survey Results

1.2. Australian Water Association – Water Education Network Survey Results - 2006

1.3. Australian Association of Environmental Education – Survey of Local Government Educators – 2006

1.4. Macquarie Graduate School of the Environment. It's a Living Thing Education for Sustainability Professional Development Program: Final Evaluation Report 2004.

1.5. NSW EPA. Inventory of NSW Environmental Education Programs: November 2000.

1.6. ARIES and Australian Government, Department of Environment and Heritage. A National Review of Environmental Education and its Contribution to Sustainability in Australia. Five Volumes:

- Frameworks for Sustainability
- School Education
- Community Education
- Business and Industry Education
- Further and Higher Education

1.7. NSW Waste Educators Needs

1.8. Needs of Community Organisations: The NCC EASE Project

1.9. Effective Sustainability Education Conference 2004

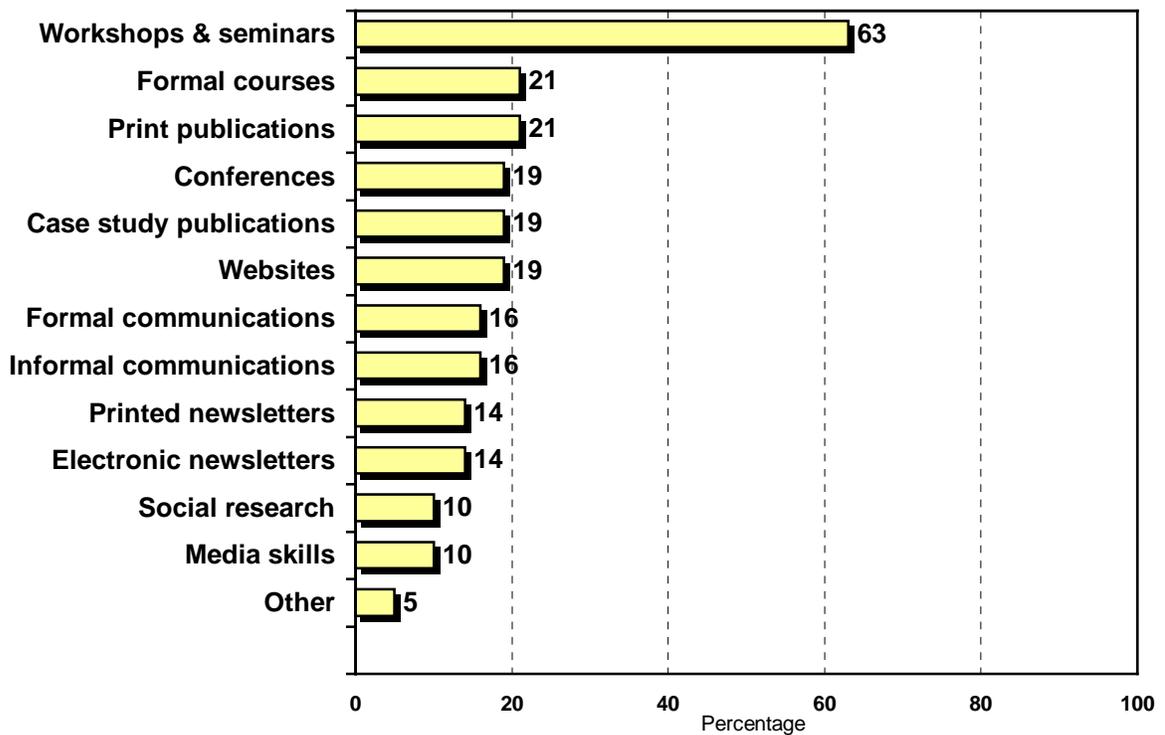
1.1 The Professional Needs of NSW Environmental Educators in the Non-formal Education Sector

Findings of a survey of NSW environmental educators' work, priorities and professional development needs June, 2000. The study provides a picture of the work of environmental educators in sectors other than formal education and industry. In particular, it highlights the needs of environmental educators in these sectors and gives some indication of trends and directions on key issues.

The environmental education workforce surveyed (those working within the community and government sectors) are more likely to be under the age of 45 and less likely to be in middle/senior management positions. Not surprisingly, the findings show that younger environmental educators and those working in environmental education for a short period of time are less likely to know about the services available to them. This profile of environmental educators has implications for the type of support required for environmental educators and for organisations that have environmental education responsibilities.

1. While there is a widely held belief among educators that environmental education is increasing in importance in their organisation, 63% of respondents agreed that environmental education in NSW suffers from a lack of strategic direction.
2. Despite somewhat limited contact to date with the EPA, environmental educators are highly supportive of assistance at the government level and readily agree that their work would be enhanced if they were aware of initiatives others were adopting in environmental education. Only one in three educators (35%) expressed satisfaction with their current level of access to resources relevant to their education role. Overall, one third of educators indicated a feeling of isolation in their work.
3. Responses to the survey suggest that any measures designed to improve communications and information sharing between educators across the state would be welcome. To this end, half the sample would support the idea of local, regional and "area of interest" networks, as well as electronic newsletters.
3. Time constraints and funding issues are perceived as barriers encountered in their environmental educational role. Three in five are aware of funding and grants programs relevant to environmental education. Most educators (75%) would welcome a calendar or website summarising grants programs and timelines, while overall, half would like assistance with identifying grants.

Figure 10. Preferred Forms of Professional Development



Question: For each of these interests please identify what forms of professional development you would prefer?

Base: n=361 (multiple answers accepted)

Workshops and seminars dominate as a preferred method of professional development across all of these key interest areas, with informal communication channels also featuring as important in relation to the areas of ecological sustainability and community education.

Key identified needs to be considered [note needs identified here are based on relatively old data and so it should be considered conservatively. Notwithstanding this the key findings are broadly consistent those in this study.

- Educators need assistance in determining and developing the strategic directions for their projects – putting their work in the bigger picture. Hence there is a need for more professional development in the design of programs.
- Educators have identified that the best way to obtain professional development is via face to face seminars and workshops.
- Networks are an important way of extending educator skills. But there is a limited level of engagement with formal networks.

1.2 Australian Water Association – Water Education Network Survey Results - 2006

The Australian Water Association hosts a national network on water education – the Water Education Network – WEN. This network has over 1200 members nationally and the AWA delivers a monthly newsletter and irregular meetings of the network in major centres as these can be arranged.

The WEN undertook a survey of network members late in 2005. Over 200 responses were received nationally to an online survey. The detailed results of the study nationally were presented at the recent Water Education Conference, *From Waters Edge to Red Centre*, in Alice Springs.

The survey itself did not have a direct relevance to identifying the needs of educators, placing a higher emphasis on collecting information about how the WEN might support its members. For the purpose of this study however, the following information about the NSW response is of interest.

- In NSW forty-nine members of the network responded to the survey.
- Over 80% of these respondents worked in metropolitan areas and most worked specifically in delivering programs with a water focus.
- Over 55% conducted community education programs.
- Respondents indicated that they need additional resources and staff to deliver effective education - 44%.
- Almost 50% indicated that EE/EfS [Water education] was not a priority in their organisation and that they felt that the area lacked credibility and support from management and others.
- Respondents generally felt in need of professional development about content issues related to water management.
- Some respondents noted that behaviour change to deal with reducing water demand was very difficult and required resources and higher order program design skills.

Key identified needs to be considered:

While limited in numbers and depth information from this study is of value to the needs assessment process. The following needs can be identified:

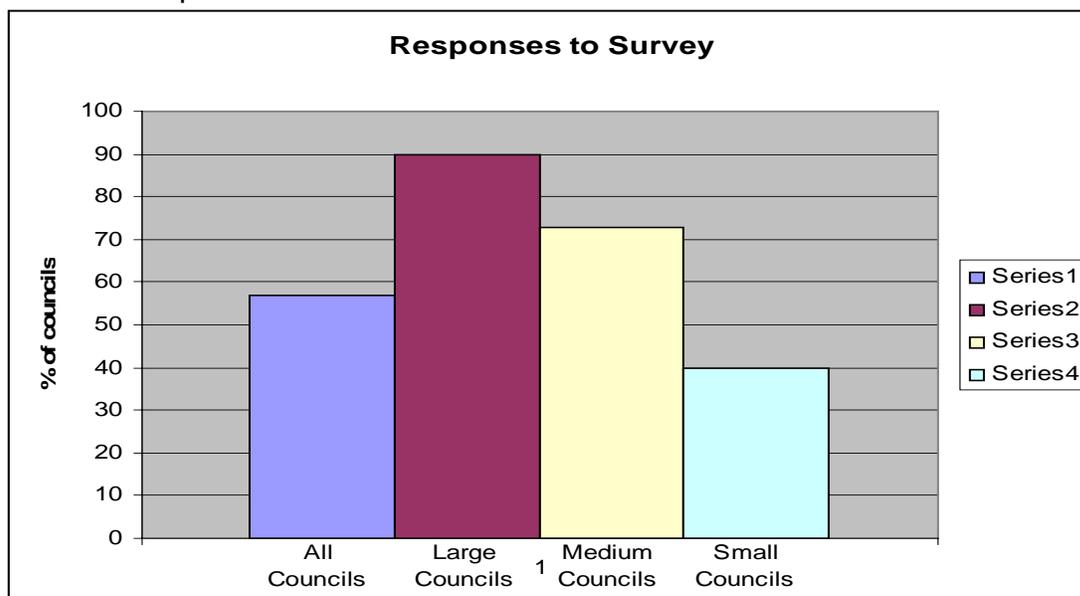
- Professional development needs to be focused on behaviour change and assist educators to design effective programs aimed at reducing water demand. [Program design needs].
- Professional Development needs to help educators address the perceived lack of credibility and status of the field of education

1.3 Australian Association of Environmental Education [NSW Chapter] – Survey of Local Government Educators – 2006

The NSW Chapter of AAE undertook a substantial survey of education conducted in local government. Support was provided in the distribution of the survey by the Local Government and Shires Associations. The findings have not been published to date however the following snapshot of the survey results has been developed so as to identify educator needs.

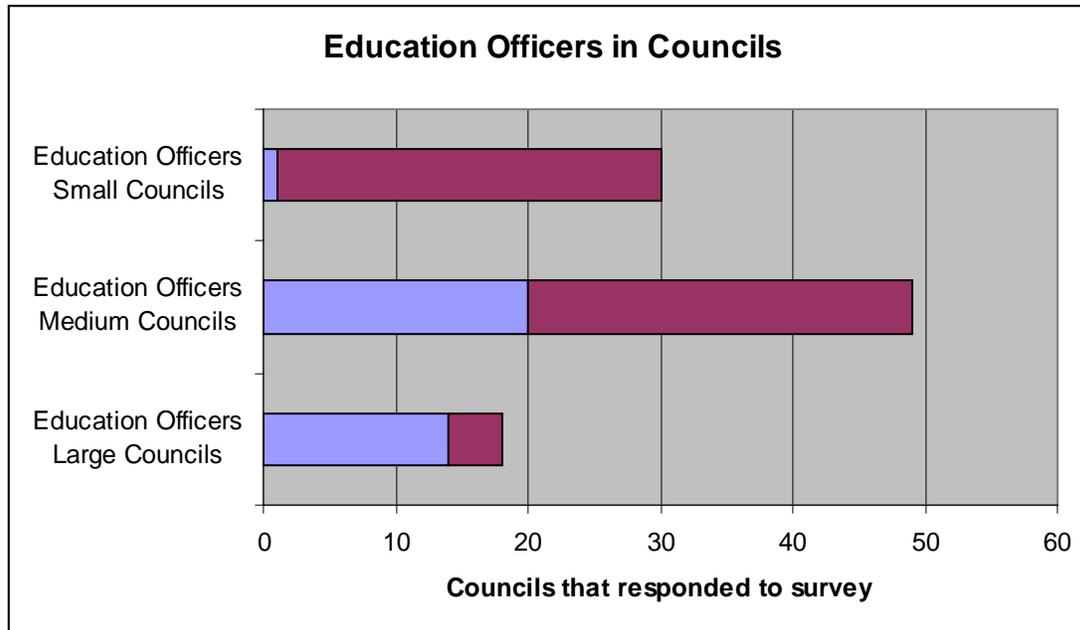
Table 1 indicates an overall response rate of 57% with an over 90% response from Councils with over 100,000 residents. Of concern is the low rate of response from small councils, with a population of less than 30,000. This is explained by the fact that the vast majority of these do not employ an educator [see table 2].

Table 1: Response Rate



Of the Councils that responded to the survey, Table 2 provides information about how many of these employed education officers. Only one of the thirty smaller councils employed an education officer, whereas fourteen of the eighteen large councils employed education staff, often more than one. Of the four that did not employ education staff one indicated that this position would be filled in the near future. It is encouraging to note that twenty of the medium sized councils responded that they employed an education staff member; the remaining sixteen that responded did not employ an educator.

Table 2: Councils with education staff



The following contains a thumbnail sketch of the information gained from Councils relevant to this study. Given the final report has not been published, it is drawn from raw data and so needs to be viewed conservatively.

In **large councils** [more than 50,000 residents] the following findings are relevant to this needs assessment:

- Budgets for education vary substantially with budgets for education ranging from \$8,000 to \$650,000
- Only four of the Councils that responded have developed an education strategy
- All Councils conduct schools programs and seem not to require additional support in the design and delivery of these
- In terms of providing community education eight councils had significant relations with local environment centres [not DET centres]. None of the Councils had shared arrangements with state based or regional programs, including working with local Catchment Management Authorities. Interestingly there was quite significant liaison was reported with universities and TAFE.
- While Agenda 21 committees and other cross council groups were reported, there seemed to be some limitations in Council's capacity to undertake community Education
- All but three of the responding councils reported that they delivered business an industry programs and the majority of these involved the local Chamber of Commerce.
- Fifteen Councils indicated that the status of Environmental Education has been increasing; two indicated that it remained the same, and one reported a decrease in status over the previous five years.
- All Councils reported a significant range of education projects were being conducted

In **medium sized** councils the following findings are relevant

- Medium sized Councils are very diverse in their engagement with and use of education.

- Very few of these councils have designated education staff but some have quite comprehensive education programs
- Most report that the use of education is increasing, but by this they mean that there is increasing use of print information knowledge-based approaches.
- Education though is often print and media based and is focused on providing information to residents; for example about the recycling services that Councils provide.
- There is little technical support for education within these councils. Staff have little access to any professional development about education, except where this is organised by peers and uses visiting experts.

In **smaller councils [less than 10,000 residents]**, from limited data, the following information is relevant.

- Most of these Councils were rural in nature and apart from their small number of residents they generally had a low rate base and thus were hampered by limited funding.
- These councils tended to rely almost exclusively in grant funding for education activity, and yet they are generally not well equipped to write good funding submissions.
- No councils had fully dedicated education functions delivered by education specialists.
- Where education was delivered it tended to be by way of pamphlets and other print material. No face-to-face delivery was evident.
- Council staff who delivered education programs were generally responsible for a vast array of functions. They had little technical understanding of the use of education and limited in-house support or management which made up for this deficiency.
- This study indicates that while there is a need to engage with those non-specialist officers who are providing education, it will be difficult to engage them in this process.

Key identified needs to be considered:

- Local government educators need help doing an EfS/EE strategy; very few Councils have had a strategy adopted formally. [Need for strategic understanding].
- Educators need help in how to empower environmentally aware community so as EE work has a multiplier affect. This could be in running a Local Agenda 21 committee, working with environmentally aware school teachers, environmentally aware Councillors. [Need to deliver effective programs]
- Better integration with regional and state programs [Program design needs]
- Help in conducting education aimed at people who are not the already aware members of the community. There is a need for assistance in designing high quality programs for these people.
- The results show that EE is embedded into the work of the larger Councils but in the smaller councils >10,000 staff struggle to introduce education. How can these smaller organisations get help? [Program design needs].

1.4 Macquarie Graduate School of the Environment. It's a Living Thing Education for Sustainability Professional Development Program: Final Evaluation Report. 2004.

The 'It's a Living Thing' (ILT) Professional Development Program consisted of a series of workshops and workplace support aimed at improving practice in *education for sustainability* across a range of sectors in NSW. The program, which was funded by the NSW Environment Protection Authority (EPA), was led by Macquarie University and delivered jointly with Australian Association for Environmental Education, NSW and the Nature Conservation Council of NSW. The program reached out to over one hundred and twenty five people. It consisted of (a) two sets of two day workshops for each participant and (b) follow-up workplace mentoring for a selected number of participants [twenty only but all places were filled].

The evaluation confirmed initial feedback from participants that the workshops were relevant to the needs of the target group (environmental professionals working with education). It also documented outcomes including:

- a change in participants' understanding of education for sustainability.
- impetus, structure and tools for implementing education for sustainability
- increased skills to promote and deliver education programs for sustainability

It should be noted that this professional development particularly- but not exclusively focused on the need are of increasing practitioner understanding of the nature of education for sustainability and the competencies required for the design and delivery thereof

The following program outcomes were highlighted through the evaluation:

- Developed among educators an enhanced understanding of sustainable development and management.
- Increased the knowledge and skills of educators about ways to effectively deliver and integrate their programs into the context of sustainable living.
- Developed the skills of educators to interpret sustainability for a diverse range of communities
- Increased the skills of educators to promote and deliver education programs about sustainability
- Promoted examples of good practice in sustainable living.

A follow-up evaluation was conducted three months after attendance at the workshop. Most participants indicated that they had made changes to their own programs that incorporated EfS principles and elements. The majority also felt well equipped with appropriate tools and knowledge about EfS.

The mentoring activity was well supported and all of those mentored indicated that this was a highly useful activity that helped them to improve their professional capacity. All those mentored had integrated EfS within the work that they were undertaking and had developed strong support networks within their employing agency.

Key identified needs to be considered:

- Educators still need more depth of exposure to and understanding of education for sustainability. For some this needs to occur at a greater depth than was possible in this series of workshops. For others there remains need at a more basic level. [Needs for professional development about the conceptual underpinnings of EE/EfS]
- The fact that this training did not focus substantially on program evaluation meant that this need continues to be expressed. It is clear from the evaluation of this particular professional development program that educators still require assistance in undertaking or managing the evaluation of their work.
- Many respondents to the evaluation of this program indicated that they still required external and internal support for their efforts. They reported a lack of time and resources in their own workplaces to EfS and hence supported the need for improved credibility and status for EE/EfS. Hence the need for organisational support for their efforts.

1. 5 Inventory of NSW Environmental Education Programs

A survey of NSW environmental education conducted by the NSW EPA on behalf of the NSW Council on Environmental Education in November 2000.

While the information contained in this report is not directly relevant to the identification of needs, it does provide information and what environmental education is being delivered and by whom. It is noted that the information is not particularly current, but it is the best available. The key relevant findings are outlined below:

1. A wide range of sustainability issues is being addressed through NSW environmental education programs. Most programs are focused on biophysical aspects such as land, water and biodiversity. The social and personal dimensions of sustainability, such as culture and values, resource use and planning and decision-making, are being addressed to a lesser extent, most notably by non-government organisations.

Organisations were asked to nominate the main themes or concepts covered by each environmental education program they offered. Respondents were provided with a list of 16 themes and each theme included a number of separate concepts. These concepts are considered further below. The data are provided as a percentage of the total number of programs; note that many programs reported more than one theme. The program themes identified most often were Human Settlement (56%), Land (53%), Water (51%) and Biodiversity (48%). The themes least addressed included International Environmental Issues (15%) and Institutions for Environmental Management (19%). The range of themes for all organisational sectors is shown in Figure 2.

2. State Government, local government and non-government organisations are the main providers of environmental education programs in NSW. The State Government agencies that participated in the inventory deliver almost 50% of the programs reported in this inventory. Local government delivers 24% and non-government organisations deliver 21% of programs listed. Note quantitative data should be viewed with caution as it was affected by a variable response rate and it is over six years old.

3. The main output from environmental education programs is information [knowledge oriented] products and services. These include publications, displays and exhibitions, and online databases and websites.

4. The main target audience for programs is the general community, primary and secondary students, and the government sector. Teachers, preschool students and people of non-English speaking background are being least targeted by the environmental education programs reported in the inventory. It is important to consider here that schools and TAFE were not included in these results.

5. Only a small proportion of environmental education programs have undergone any form of evaluation, although there was large variation among respondents. Quality or performance assessments have been conducted on 11% of programs, and approximately one-third of programs have been

evaluated for effectiveness. This means that in 2000 89% of programs had not been evaluated. It is unlikely that there will have been much variation in 2006, however more recent comparative data is not readily available.

Key identified needs to be considered [it should be noted that this data is now quite old and so the relevance to the current needs assessment process is limited]:

- More professional development is required to assist educators to evaluate programs. [Evaluation Needs]
- There is a need for improved conceptual understanding of sustainability and how it can be built as a significant focus within education activities. Needs related to the conceptual underpinning of the program
- It would appear that there is a need to broaden the target audiences of programs, beyond those in schools. This again points to key needs in the design area.

1.6 ARIES and Australian Government, Department of Environment and Heritage. A National Review of Environmental Education and its Contribution to Sustainability in Australia. A Five volume set

- **Volume 1: Frameworks for Sustainability**
- **Volume 2: School Education**
- **Volume 3: Community Education**
- **Volume 4: Business and Industry Education**
- **Volume 5: Further and Higher Education**

This is a significant review of environmental education and its contribution to sustainability across Australia. Everyone involved in the design, delivery and/or evaluation of EE/EfS programs should read each of the relevant volumes. Of importance to this needs assessment is the information within volumes 1, 3 and 4 of the review, although it should be noted that the objectives of the review were substantially different to the objectives of this study and that the review was conducted on Australia-wide activity. Therefore only general conclusions about needs can be drawn from the ARIES Review for this project.

Space does not permit a detailed analysis of the documents and their contribution to identifying the needs of those delivering Education for Sustainability/Environmental education. However, the following is a very brief summary

Volume 1 outlines the conceptual basis for understanding the contributions of Environmental Education to sustainability. It defines the components of learning for sustainability and differentiates between *“traditional EE practice and the more critical approaches to learning prompted by the sustainability agenda.”*

In this volume recommendations are made to the Commonwealth about activities and directions that should be taken on a national level. Of relevance for the identification of educator needs are recommendations 3, 6 and 8. Recommendations 3 and 6 relate to the need for a “Learning for Sustainability National Strategy”. The report argues that this is required to build the understanding and commitment of educators to the EfS approach. In addition the report indicates in Recommendation 9 that a national educator needs assessment should be undertaken and that this research would inform the development of the strategy.

Volume 3 documents EE programs across community groups that impact on sustainability. It focuses on how community education builds community capacity for decision making, enhances social capital and builds community leaders. It includes an interesting typology of community education in Australia. The recommendation in this volume of the review relate largely to enhancing the nature, focus and extent of community education. Of specific relevance to educator needs are recommendations 1 and 3 which call for enhanced training and mentoring programs for those involved in community education

Volume 4 focuses on business and industry education and documents the need for Vocational Education and Training programs to incorporate sustainability into their curricula. In this volume recommendations are made that identify the significant needs of educators in the VET sector. In particular recommendation 5 promotes the need to training of VET providers and the establishment of informal networks to build the capacity of VET trainers

Key identified needs to be considered:

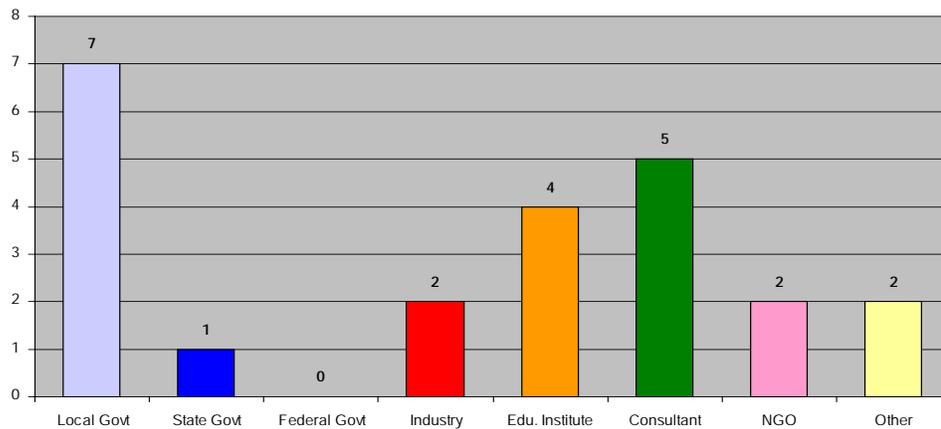
- There is a need for a National Learning for Sustainability Strategy. This would assist in building conceptual understanding and enhance EfS activity.
- A national needs assessment process is required to inform the development of the strategy [note this study forms the NSW part of this process].
- A significant need exists for enhanced training and mentoring programs for those involved in community education.
- There is a need for sustainability training to be developed for VET providers to enhance understanding and integration of sustainability content into curriculum.
- There is also a need to establish of informal networks to build the capacity of VET teachers in integrating sustainability objectives into their teaching.

1.7 NSW Waste Educators Needs

The NSW Waste Educators Working Group (WEWG) is a group of educators working within the waste and environmental management industry who share a common goal of advancing waste education within this industry. The members come from local government, consultancies, waste contractors, educational institutions, state government and regional and metropolitan areas. Membership is on a voluntary basis and all members are invited to take part in WEWG activities. Members must have membership of the Waste Management Association of Australia (WMAA), individual or corporate, to participate. In late 2003 the WEWG surveyed members about member needs. Key findings were

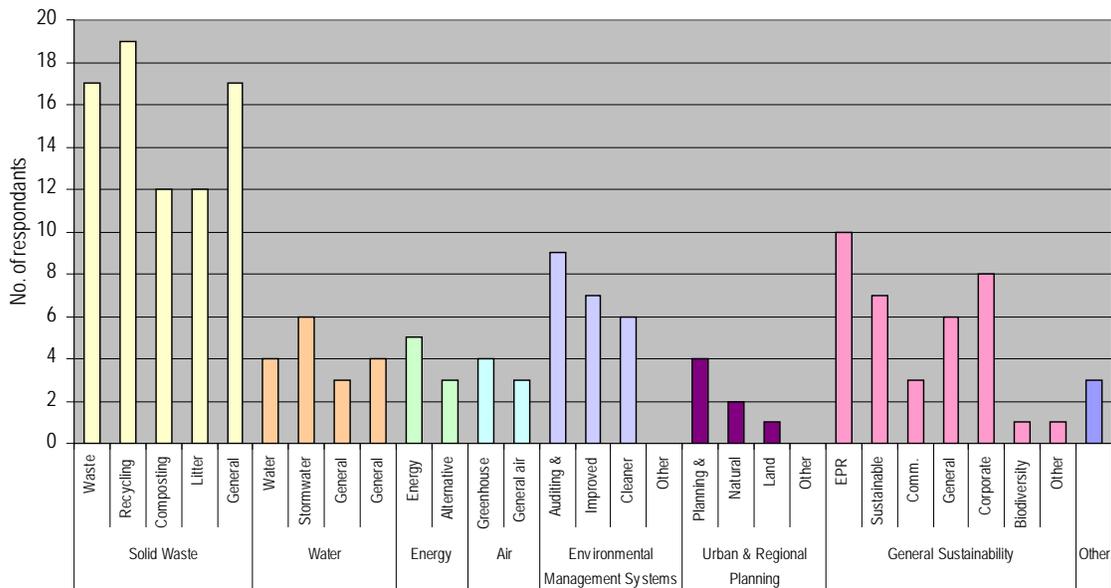
1. Twenty-three educators responded, from a variety of sectors as follows.

Survey Respondants Composition



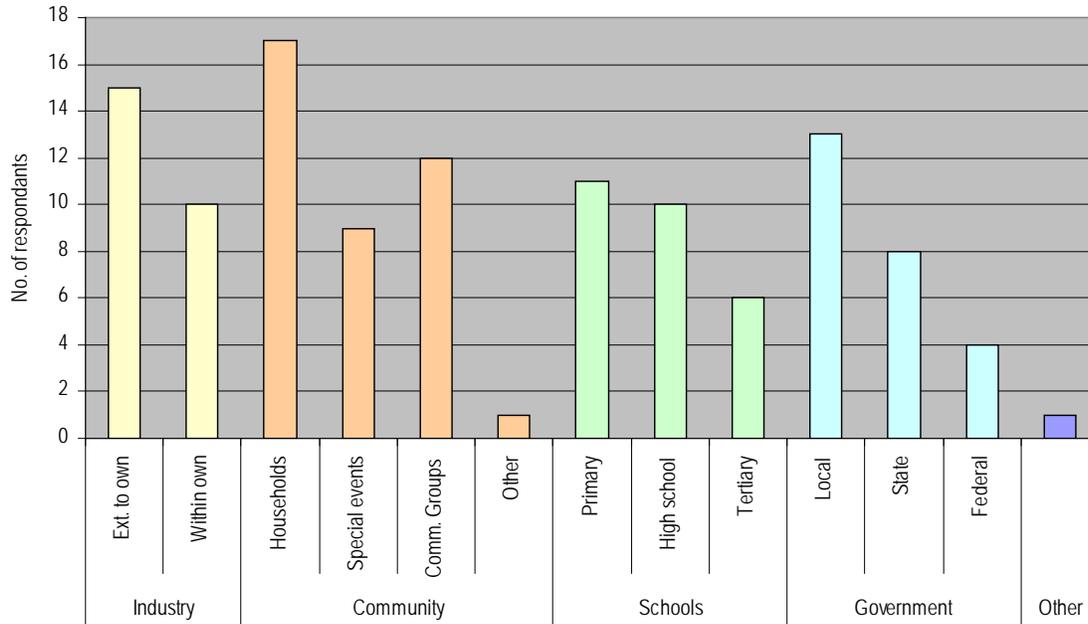
2. The following key content issues

Key Focus for Education Program



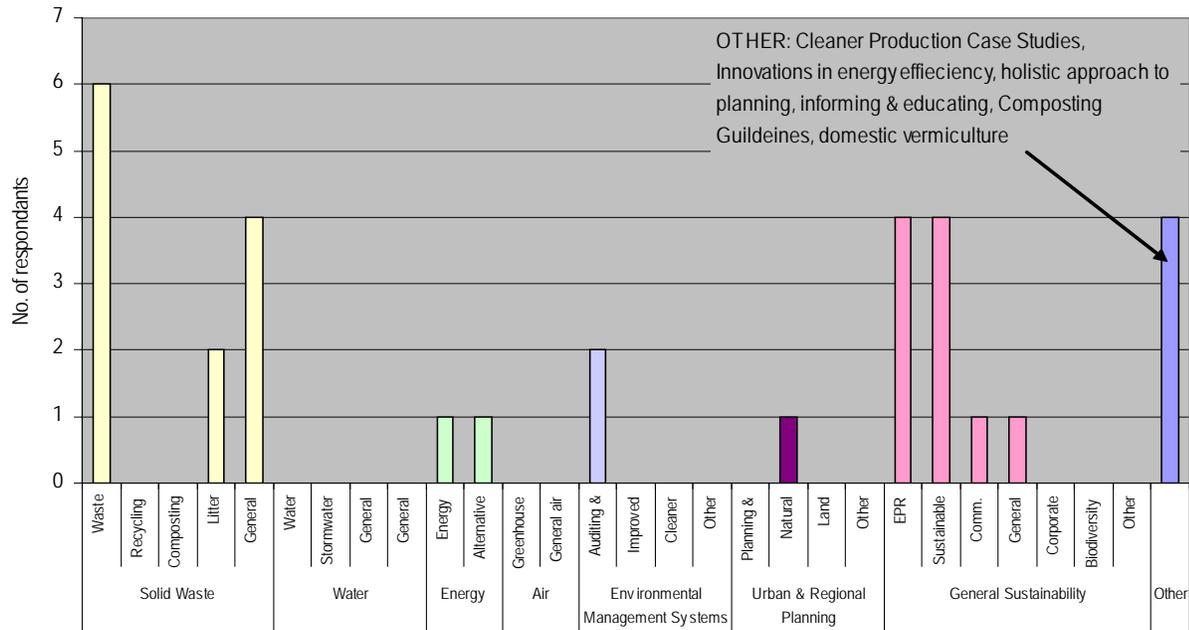
3. The following key targets were identified for education program

Key Target Groups for Education



4. The following areas are where resources are limited

Topics where resources are lacking



Key identified needs to be considered:

- Need for assistance in precise targeting during program design, especially for industry and community programs. This points to a significant level of need for program design skills.
- Needs improved understanding, case studies and resources about general sustainability and solid waste issues. This points to higher order needs in the strategic approach to education.
- Need for assistance in how to integrate waste education into broader learning for sustainability. This points to higher order needs in the strategic approach to education.

1. 8 Needs of Community Organisations: The NCC EASE Project

Education Action Supporting Environment Groups (EASE) is a project being delivered by the Nature Conservation Council of NSW (NCC). The project has been set up in response to the need for more coordination, support and development of environmental education activities delivered by environmental, non-government organisation (ENGO) throughout NSW. NCC will be collaborating with Member Groups across the state to share, teach and learn about effective environmental education practices. Using our own experiences and drawing on internationally recognised education and campaigning principles, we seek to build on current and emerging initiatives to get our messages heard and to change the behaviours of our target audiences and communities.

The project is predominantly being delivered through capacity building workshops with supporting activities such as an E-Group, follow-up evaluations and meetings and web resources. This design has largely been influenced by the results of an extensive survey which was conducted with 82 representatives of NCC's 120 member groups. Some interesting characteristics and needs of ENGOs were discovered as a result of the survey.

Objective 1: Identify levels of interest and activity in Environmental Education

Member Groups were asked about the role of education in their organisations, the types of education activities they ran, who their target audiences are and if they would be interested in finding out more information.

The results suggest that the role of education is not always clearly defined by groups, often because capacity doesn't allow for it. However, it is considered an important and complimentary component of their work, as a result, it follows, that the most common target audience is not clearly defined, i.e. general community.

Objective 2: Identify appropriate resources that Member Groups would like to access

Initially member groups were presented with a list of education topic areas and asked if they would be interested in learning more about these or if there were other topics they could think of. The survey also asked groups to identify what barriers they were facing and how they might be able to overcome these.

A strong call for resources associated to *Connecting with Target Audiences* can be seen from the results with the most popular information topic being *Engaging Communities in Activities* and the most common barrier to delivering messages being *People Not Listening*.

Conclusion

These results show that NCC's member groups are generally issues focused, and that their audiences and strategies are defined by the actions required to achieve a change in the particular issue/s. These findings, within the context of the Australian Environment Movement, suggested that groups are in need of some guidance in thinking strategically about the role that education approaches and other social/environmental change approaches play in achieving their objectives. For NCC to provide support to those that expressed interest in learning more about environmental education (greater than 50%), a variety of mechanisms will need to be considered to match the differing levels of interest and capacity.

The EASE project has been funded as part of a \$3.5 million grant from the NSW Government's Environmental Trust. This initiative brings together a range of organisations to conduct an integrated and collaborative education program, as part of the *Our Environment, it's a Living Thing* program, promoting sustainable living in NSW.

Key identified felt needs to be considered:

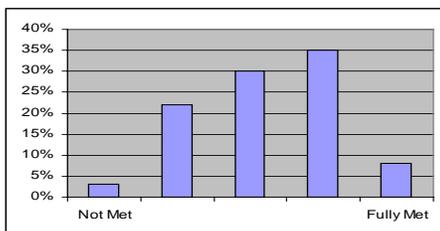
From the EASE project to date the following needs have emerged for Environmental NGOs and especially for volunteer educators

- At an organisational level there is a need for some guidance in thinking strategically about the role that education approaches and other social/environmental change approaches play in achieving the objectives of Environmental NGOs. This points to high needs related to conceptual understanding about what they are doing.
- Education is not always clearly defined by groups as a legitimate, important strategy. This often occurs because they lack the capacity to consider it [either capacity in terms of the resources of the group and its members or because they don't understand education at all well [beyond a school based approach]. This points to high program design needs
- The project to date indicates that *Engaging Communities in Activities* is a high level need and associated with this is that the most common barrier to delivering messages is that *People Not Listening*. This implies that significant professional development needs to occur in helping community organisations to design programs

1.9 Effective Sustainability Education Conference. UNSW Feb 2004.

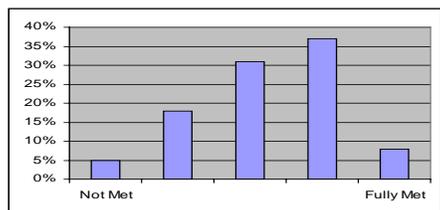
The NSW Council on Environmental Education sponsored the delivery of this conference early in 2004. It attracted well over 300 participants and had the express goal of linking research and practice more closely together. It was developed to address a perceived need within the NSW *Learning for Sustainability Plan 2002 to 2005* that in NSW the practice of Environmental Education/EfS was not linked closely enough to research and evaluation. In essence the NSW Council on Environmental Education who hosted this conference, were acting to address a normative need expressed in the *Learning for Sustainability Plan*.

In terms of this particular study of educator needs the following feedback about how well some of the objectives of the conference were met, adds relevant data. This data is extracted from the final summary report on the conference and is quoted verbatim. It should be noted that not all information contained in the final report is of relevance to this project.



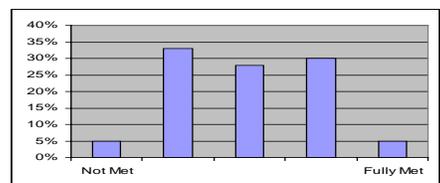
Objective 1: Share existing environmental education research on key factors involved in effective environmental education

Most participants (43%) agreed that the conference substantially met the objective of sharing existing research on key factors, with the mode response being 4/5, and 8% rating it 5/5. About a quarter of respondents did not agree that this objective had been met.



Objective 2: Increase the accessibility of environmental education research for practitioners in NSW and Australia

Most participants (45%) agreed that the conference substantially met the objective. 5% felt it was not met at all.



Objective 3: Improve the links between research and practice in environmental education

There were mixed reactions to this objective with an almost bell curve from 1/5 to 5/5. For some participants the conference worked well in improving the links between research and practice. For approximately the same number however, it failed to meet this objective.

Taken overall it is clear that there were very disparate feelings about whether or the extent to which] the conference met its objectives. Many of those who attended expressed significant doubt about the fact that improved links were made between education and research. It could be argued that this was because a significant number

did not see why such links were necessary. While this conference evaluation does not add a great deal to our understanding of what educators need, it does help in that it could be argued that, for many educators there is no real need expressed about linking practice and research.

Key Felt Needs to be considered.

The evaluation of this activity demonstrated that there remained a significant gap between the practice of EE and the research. For many involved in the delivery of EE/EfS there was little evidence that they saw the conference as addressing a felt need. For those involved in research, they continued to perceive a gap between the normative need and the felt needs of those delivering programs.

Therefore, while this particular project does not add to our understanding of the needs of the sector, it does point to an area of disparity between felt and normative needs and therefore is worthy of inclusion and further consideration.

APPENDIX 2: METHODOLOGY AND STAKEHOLDERS WHO PROVIDED INPUT INTO THE NEEDS ASSESSMENT

Apart for the review of the literature contained in appendix 1, two major data collection activities were undertaken. There involved an on-line survey and a series of focus groups/personal interviews.

1. On-Line Survey

The on-line survey was an important data collection method. The complete results will be separately published and a summary only of the demographics of the study is outlined below. Key findings about needs have been included in the Felt Needs Findings Section [7b], above.

- The survey was on-line on the DEC website for a period of two weeks
- It was broadly promoted through a variety of networks and sent directly by the DEC to educators on their data base
- 161 educators responded to the survey
- Of these people
 - 62% of these were under forty years of age
 - 71% were female
 - 92% were graduates from university
 - 95% spoke English at home
 - Only 38% worked in EE or EfS 75% or more of the time, hence many of the respondents were not fully engaged in education
 - 17% worked in EE/EfS less than 25% of the time
 - 69% were employed full-time. The remainder work part-time or as volunteers
 - 41% work [volunteer] for councils, 39% for state government agencies. The remainder work [volunteer] for non-government agencies, in formal education, universities or as consultants. It is of note that only 1% of respondents worked in an unpaid role.
 - 50% of respondents had worked in EE/EfS for six years or more
 - More than 55% of respondents were employed in metropolitan areas. The remainder of the respondents were employed in rural/regional NSW.

Full details of the demographic breakdown and results are provided in the report to the DEC from Eureka Strategic Research.

2. Focus Groups and Personal Interviews

One hundred and fifteen people provided direct verbal input as part of the data collection process for this assessment. Input occurred in one of two ways, either through involvement in a focus group or through direct one-on-one interviews. It should be noted that some of these people followed up with written input.

Six focus groups were held as indicated in the following table:

Name of Group	Comprising
NSW Environmental Educators who attend NSW AEE Conference	Time negotiated with conference organisers
Education staff of DEC*	Members of DEC Community Education Section
Waste Educators Working Group*	The executive of the Waste Educators

	Working Group – Waste Management Association
Local government and key state government agency staff*	Invited list of specific people
OEILT Partners*	Scheduled time into regular meeting
Project Reference Group inc members of the NSW Council on Environmental Education*	Invited members. DEC established membership

AEE Conference Focus Group. Warilla: 10 March 2006

One shorter focus group was held at the NSW AEE Conference in Warilla in March 2006. This session was well attended [forty-eight people] and a lively discussion ensued despite time constraints. Time limitations and the large number of participants made it difficult to ensure that everyone had sufficient opportunity for input. It is notable that 11 of those who attended followed up in writing.

NB: a number of workshop participants also provided input as an interviewee.

APPENDIX 3: DISCUSSION GUIDE FOR FOCUS GROUPS AND ON-ON-ONE INTERVIEWS

Introduction of the interview

- Refer to task and correspondence so far. Outline data collection steps
- Discuss confidentiality. Views will be public unless specifically stated that the interviewee wants them to remain confidential
- Explain that the term "environmental educators" is used throughout and includes those who are educating for sustainability.

Discussion Guide Questions

- 1 Thinking about the current context for those working in the area of Environmental Education/Education for Sustainability, what do think are the key professional challenges?
- 2 If you had the resources, what is the one thing you would do for/with educators to assist them to impact on sustainability?
- 3 In your view what are the three primary needs of environmental educators?
- 4 Are you aware of ways in which environmental educators are currently expressing their needs?
- 5 Are you aware of ways in which environmental educators are currently meeting their needs
- 6 Please rate the following areas of need from very important [5] to not important [1] and discuss each in turn
 - *Needs related to the conceptual understanding of Environmental Education and Education for Sustainability.*
 - *Needs related to improving collaboration and working effectively with stakeholders.*
 - *Needs related to designing effective programs [for example program planning/using social research/target definition].*
 - *Needs related to program delivery [for example: face to face programs/ facilitation/ social marketing activities/written material.*
 - *Needs related to program evaluation and reporting.*
 - *Needs related to improved knowledge of program content.*
- 7 Indicate specific needs that you have not mentioned before in relation to the categories in question 6 above. Do you want to say more about educator needs?

Additional question for education training providers

- 8 Can you provide information and web material etc that indicates the professional development/ training that you [or your organisation] currently provides to assist educators to meet their needs?

APPENDIX 4. ON-LINE RESEARCH SURVEY

PDF supplied separately

REFERENCES

References for this project are divided into two categories. The first contains references about needs assessment; the second contains references that identify – or shed light on the needs of environmental educators in NSW.

This list of references contains published work only. In addition, Appendix 1 draws on a number of unpublished reports, a number of which are not listed below.

Needs Assessment

Bradshaw, J. (1972) *The Concept of Social Need*. New Society

Funnell, S. (1997) *Program Logic: An Adaptable Tool for Designing and Evaluating Programs*. In *Evaluation News and Comment*, Vol 6, number 1, July 1997, Australasian Evaluation Society, ACT.

Hawe, P. Degeling, D. & Hall, J. (1990) *Evaluating Health Promotion: A Health Workers Guide*. MacLennan and Petty Publishers, Sydney.

Hodges, B. C. (2005) *Assessment and Planning in Health Programs*. Jones and Bartlett.

Lazenbatt, A. (2002) *The Evaluation Handbook for Health Professionals*. Routledge, London.

Levin-Rozalis, M (2003) *Evaluation and Research: Differences and Similarities* The Canadian Journal of Program Evaluation Vol 18 No 2 pp1-31.

Listarli, J.A. (2001). *Environmental Health - Bridging the Gaps*. World Bank.

McArdle, G. (1998) *Conducting a Needs Analysis*. Crisp Publications Inc.

Neuber, K. A. (1980) *Needs Assessment- A Model for Community Planning*. Sage Publishing Inc.

Owen J. with Rogers P (1999) *Program Evaluation Forms and Approaches* 2nd Edition, Allen and Unwin, St Leonards NSW.

Tobey, D. (2005) *Needs Assessment Basics*. Pearson Education Australia.

Wadsworth Y (1997). *Everyday Evaluation on the Run*. 2nd Edition. Allen & Unwin.

Needs of Environmental Educators in NSW

ARIES and Australian Government, Department of Environment and Heritage. (2005) *A National Review of Environmental Education and its Contribution to Sustainability in Australia. Five Volumes:*

- *Frameworks for Sustainability*
- *School Education*
- *Community Education*
- *Business and Industry Education*
- *Further and Higher Education.*

Australian Association of Environmental Education (NSW Chapter) - unpublished (2006) *Results of Survey of Local Government educators in NSW.*

Australian Water Association - unpublished (2006) *Results of Water Education Network Member survey.*

Bennett, M. et al (Eds) (1999) *Sustainable Measures: Evaluation and Reporting of Environmental and Social Performance.* Greenleaf Publishing.

Carpenter V (2004) *Educating for Sustainability - Community Needs and Engagement Strategies.* University of NSW Institute of Environmental Studies (for North Sydney Council).

Fensham, J. (1990) Developments and challenges in Australian environmental education. *Australian Journal of Environmental Education* 6, 15-27.

Hesselink F, Pretorius C, Wheeler K (2005) *Redefining Capacity Development for the 21st Century: New Learning for Sustainable Solutions.* Commission on Education and Communication, IUCN, Burlington – Utrecht – Gland.

Gough, A. (1997) *Education and the Environment: Policy, Trends and the Problems of Marginalisation* (Melbourne, Victoria: Australian Council for Educational Research).

Macquarie Graduate School of the Environment (2004). *It's a Living Thing Education for Sustainability Professional Development Program: Final Evaluation Report.*

NSW Department of Environment and Conservation (2003). *The professional needs of NSW environmental educators in the non-formal education sector.*

NSW Department of Environment and Conservation. (2005) *Learning for Sustainability Draft NSW Environmental Education Plan 2006-09.*

NSW Environment Protection Authority (2000) *Inventory of NSW Environmental Education Programs: A survey of NSW environmental education conducted by the NSW EPA on behalf of the NSW Council on Environmental Education.*

NSW Environment Protection Authority. (2001) *Learning for Sustainability NSW Environmental Education Plan 2002-05.*

NSW Environment Protection Authority (4 documents 1994, 1997, 2000 and 2003). *Who cares about the environment?*

UNESCO (2005) *Initiating the United Nations Decade of Education for Sustainable Development in Australia.* Report of a National Symposium Melbourne 7 July 2005.

UNESCO. (2004) *United Nations Decade of Education for Sustainable Development Draft Plan of Implementation.*

