

# **Enjoying Our Backyard Buddies – Social Research Informing the Practice of Mainstream Community Education for the Conservation of Urban Wildlife**

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## **Abstract**

Supporting urban communities to make changes that contribute to sustainable living is a challenge that many environment and conservation organisations embrace. However, many community education and involvement initiatives to date have tended to appeal mostly to those with knowledge and enthusiasm for protection and conservation of the environment, leaving the majority of the community relatively unengaged. In a NSW Environmental Trust supported initiative seeking to enhance the protection and conservation of wildlife in urban environments, a major social research project was undertaken to investigate community understandings of wildlife conservation, for application to urban community education programs. The research incorporated both qualitative and quantitative methodologies to gain insights that practitioners can use to develop, monitor and evaluate urban environment and conservation initiatives that engage and involve the wider community. This paper presents some key findings of the research and provides case examples of environmental education initiatives bringing this research into practice. The research indicates that community understandings of conservation are broad ranging. The research reveals that prominent conservation language and concepts, well understood by keen and knowledgeable environmental educators, have little relevance to mainstream audiences. Other findings identify how conservation can have high relevance and meaning for the broader community as an integral part of their everyday life.

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## **Introduction**

Many areas within the cities, suburbs and towns of NSW provide habitat for a diversity of native plants and animals to sustain a living environment. With careful management and greater community cooperation and support, wildlife has the potential not only to survive, but thrive.

Environmental educators are constantly searching for concepts that can be used to motivate the urban community to help sustain their local environment. The conventional approach to community education and involvement in urban biodiversity

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conservation has been to promote the message: “conserve biodiversity at home”. However, this concept appeared to be a relatively narrow and weak message in terms of seeking to engage the broader community.

Supported by the NSW Environmental Trust, the Urban Wildlife Project was initiated to meet growing enthusiasm within the community and recognition of the need to protect and enhance native biodiversity in the urban environment. The Urban Wildlife Project required researching and developing a comprehensive community education program in partnership with key environmental education and wildlife management stakeholders. This initiative aimed to engage the mainstream community in taking simple steps to help protect and conserve local native animals and plants in backyards, streets and parks as an integral part of everyday life.

### **Designing Effective Environmental Education Programs and Initiatives**

Biodiversity education is about enabling communities to act to protect, conserve or restore natural environments. Robinson (in Robinson & Glanzig, 2003) identifies seven elements common to effective behaviour change programs:

1. Visions and norms - strong visions that connect the changes in behaviour with peoples hopes aspirations, values and norms;
2. Understanding why - clear costs, benefits, reasons, causes and effects that are understood by people;
3. Skills - a chance for people to look, feel, experience, play;
4. Convenient Systems - accessible systems, products and services that facilitate action;
5. Trusted Others - connecting with credible, passionate people;
6. Change Moments – out-of-ordinary-life times and places where new connections can be made and comfort zones safely challenged; and
7. Reinforcement – celebrations, rewards and acknowledgment for people who have acted.

Important insights into communities are needed to successfully bring together the seven elements in designing effective change programs. This requires an understanding of peoples’ aspirations, their reasons for choosing to behave in certain ways, their capability to act and the factors they consider in choosing to act. Put another way, it requires current insights into people’s needs, motivations, knowledge, attitudes and behaviours so that programs can be relevant, meaningful and engaging for people.

Credible, rigorous, applied sociological research has not always been available to help practitioners inform their work in urban biodiversity education. To a large extent environmental educators intending to engage the wider community have had to rely on assumptions about target audiences based largely on anecdotal experience. Much information about community attitudes, behaviour and capacity has come from ad-hoc, informal interactions between organisations and individuals from the community. For example, many conservation and wildlife organisations have extensive experience meeting community requests for advice and assistance in dealing with wildlife issues. Customer service and information officers spend most of their days responding to callers who seem to fall into one of two categories: those who value wildlife and those who find wildlife disrupts their urban lifestyle.

Behaviours and attitudes towards urban wildlife follow a “normal” distribution (Figure 1). The shaded area beneath the right hand end of the curve (C) represents the proportion of the community with positive attitudes and behaviours towards wildlife. These people readily become engaged in actively conserving wildlife in urban areas. The shaded area beneath the left hand end of the curve (A) represents

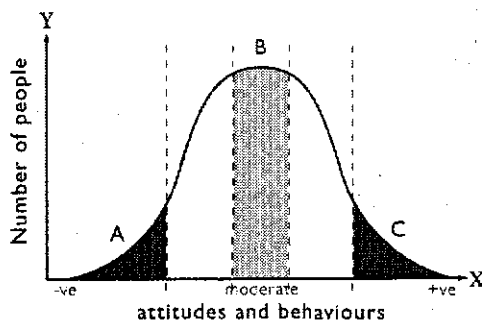


FIGURE 1: A schematic representation of conservation attitudes and behaviours in the NSW adult population

the proportion of the community that have somewhat negative attitudes and behaviours. They may become involved in wildlife issues, seeking advice or action to help them resolve a wildlife “problem”. The “community norm”, shown as a lightly shaded zone at the middle of the curve (B), is the set of attitudes and behaviours most commonly held in the population. This group would be expected have relatively moderate and indifferent attitudes and behaviours in relation to urban wildlife, with no strong drivers to engage on “urban wildlife issues”. The lack of engagement means that environmental education

practitioners have little exposure to their attitudes and behaviours regarding the conservation of urban wildlife.

Open consultation and participatory processes are likely to address the needs of people in communities and are also more likely to avoid imposing inappropriate solutions. However, environmental education and behaviour change campaigns are often undertaken in circumstances where the opportunity for direct and individual personal engagement is limited. A lack of broad consultation and the resulting gulf of understanding about communities’ needs, attitudes and behaviours presents a significant risk to effective design, implementation and evaluation of community education for the conservation of native wildlife in urban areas.

### Social Research Informing Environmental Education Practice

In 2001–2002, the National Parks and Wildlife Service (now part of the Department of Environment and Conservation NSW) undertook a major social research project to investigate urban community understandings of wildlife protection and conservation in urban environments (NSW National Parks and Wildlife Service, 2002). This research was the first of its kind in New South Wales (<http://www.nationalparks.nsw.gov.au/urbanwildliferesearch>).

This research sought to overcome a “knowledge gap” for practitioners in understanding urban community needs, motivations, knowledge, attitudes and behaviours in relation to wildlife protection and conservation in urban environments. The research was approached from an ethical stance of working with people and communities to find better ways to support them through improved programs and services, rather than doing research on or about people.

The research was undertaken in order to inform and improve the design, development, implementation, monitoring and evaluation of wildlife protection and conservation programs in urban environments. The research sought to underpin efforts to take conservation attitudes and behaviours into the mainstream community, and to establish a baseline to evaluate the effectiveness of education for the protection and conservation of wildlife in urban environments.

To ensure the research produced actionable findings for practitioners a wide range of stakeholders, who were the intended users of the research, were consulted. A reference group, including over 20 organisations, and a research steering committee, comprising government and non-government stakeholders, was convened. These stakeholder consultations enabled researchers to gain a picture of information needs and a clear sense of the operating environments and associated challenges in which

research findings would be applied. During the research the steering committee were also able to request that researchers make further analyses of findings that had relevance to particular contexts and applications.

**Methods**

The research was conducted in two phases among urban residents of NSW, using both qualitative and quantitative methods, to understand and appreciate the range and “norm” of community knowledge, beliefs, attitudes and behaviours with respect to the conservation of urban wildlife.

Qualitative research emphasises and builds on several interconnected themes (Patton 1990, p39), and focus on real world situations with an openness to what emerges in the course of analysis (Guba, 1978). Inductive analysis enables the discovery of important categories, dimensions and inter-relationships rather than testing theoretically derived hypotheses (Glaser and Strauss, 1967). Qualitative methods seek to reflect peoples’ perspectives and experiences, building a “rich picture” of the situation. A holistic perspective seeks to appreciate the complexities of the system rather than to reduce understanding to a few discrete variables and linear cause-effect relationships (Dewey, 1956; Deustcher, 1970).

The qualitative phase comprised a series of 20 in-depth interviews and 10 focus group discussions. This established the ‘lie of the land’ in relation to community understandings of urban biodiversity issues. A semi-structured interview guide was used to ensure the discussion ranged widely across the issues, but at the same time allowed a focussed and deep discussion of each issue.

Participants were recruited to the focus groups and depth interviews to create an opportunity to discover the widest possible range of understandings from a broad cross section of the community (Figure 2). To capture a range of dispositions towards wildlife participants were recruited from residential settings defined by density of dwelling. Sampling effort focussed on the moderate/indifferent participants who infrequently engage with conservation organisations.

Attitudes to Fauna and Native Plants Conservation	SEGMENTS						
	High Density City	Medium Density City	¼ Acre City	City Fringe	Large Town	Medium Town	Small Town
Positive	-	-	1 group & 2 depths	1 group & 2 depths	1 group & 2 depths	-	-
Moderate/indifferent	-	1 group & 2 depths	1 group & 2 depths	1 group & 2 depths	1 group & 2 depths	1 group & 2 depths	-
Negative	-	1 group & 2 depths	1 group & 2 depths	-	1 group & 2 depths	-	-

FIGURE 2: Matrix guiding recruitments to the focus groups and depth interviews



Quantitative research methods require the use of standardised measures to enable peoples' varying perspectives and experiences to fit a limited number of predetermined response categories to which numbers are assigned (Patton, 1990 p14). Quantitative research provides evidence of the existence of significant themes and trends identified in the qualitative phase.

The qualitative research findings informed the preparation of reliable and intelligible survey questions by identifying language and concepts readily used and understood by the mainstream community in discussing urban wildlife. In turn, the qualitative findings provided a context for interpreting the subsequent quantitative survey results.

The quantitative research phase used telephone interviews of 20-30 minutes duration conducted among 1000 residents in urban NSW. The survey used quotas to ensure a representative sample of age, gender and residential location with the survey sample compared to Census information to confirm its representativeness. This allowed statistically valid generalisations to be made about the population from which the sample was drawn. The research included gathering demographic criteria such as pet ownership, preferred outdoor recreation activity, level of concern for the environment, type of dwelling, type of outdoor areas around the home and postcode to support analysis.

### **Key Research Findings**

The key findings presented here provide an abridged form of the social research project: *Urban Wildlife Renewal: growing conservation in urban communities* (NSW National Parks and Wildlife Service, 2002).

#### *Urban Community Understanding of Conservation Language and Concepts*

Qualitative research indicated that terminology that is well understood and frequently used by those keen and knowledgeable about conservation is unlikely to be used or readily understood by people in the mainstream community. The meanings assigned to concepts by the research participants were as follows:

**Wildlife** – this term was thought to refer solely to animals rather than include plants; to larger animals and birds rather than insects. In a sense, the term “wildlife” was seen to be just as pertinent and as strongly associated to places other than Australia (eg: African wildlife). However, it did have clear connotations of animals roaming free in their natural environment. In comparison, under the National Parks and Wildlife Act 1974, “wildlife” is defined as both Australian native animals (fauna) and native plants (flora). “Fauna” means any mammal, bird, reptile or amphibian. “Animal” under the National Parks and Wildlife Act 1974 includes vertebrate and invertebrate animals in its definition. The term “urban wildlife” was seen as a contradiction on the basis that wildlife belongs in the natural environment and is at risk when in urban areas. Urban areas, designed as they are for people, were often seen as inhospitable to wildlife.

**Natural Environment** – this was seen to be all about untouched, unspoilt areas of the world where plants and animals live together without humans affecting them or their habitat. In fact, the natural environment and the term “wildlife” had strong associations with each other in the minds of research participants.

**Biodiversity** – was a term for which most research participants struggled to provide a definition or description. Words and language around concepts such as biodiversity was seen to be primarily the domain of experts or “boffins”. Some “positive” research participants did however describe it as a rich array of different plant and animal life, which could enable a complex ecosystem to be fully sustainable. In comparison, “biodiversity” is defined in the NSW Biodiversity Strategy (NSW Government 2000) as

“the variety of life forms, the different plants, animals and micro-organisms, the genes they contain and the ecosystems they form”.

Ecosystem – was thought to be an environment consisting of a range of plants and animals. Again, words and language around concepts such as ecosystem was seen to be primarily the domain of experts or “boffins”.

Native – meant Australian or not introduced.

Overall, with the exception of “natural”, “natural environment”, and “native”, the above terms were rarely used by interviewees during discussions. Speciality language such as “biodiversity” and “ecosystem” were terms which tended to be “dismissed” as information relevant to “experts”, and most research participants had given little thought to their real meaning. Consequently they were quite poorly defined within research participants minds and not well understood. Against this backdrop, the specifics of urban wildlife conservation lacked personal relevance for many participants in the focus groups and in-depth interviews.

*Community Concepts of Wildlife in Urban Environments*

Qualitative findings demonstrated that people currently have a partitioned concept of the world when considering the relationship between people and wildlife in particular areas. There were four main increments along this continuum with areas considered “right for humans” and areas considered “right for native animals” at the extremes. In focus groups researchers identified that a partitioned view of the world seemed to underpin the attitudes and behaviours of research participants.

For example, research participants described their neighbourhood, yard and streets as the part of the environment that was constructed for human habitation. Some respondents were positive about the idea of having certain types of wildlife in this “urban space”. Other group members saw this as inappropriate arguing that in this human-oriented environment native animals appeared to be out of place. Some participants pointed out the dangers faced by an animal that roams free in these areas, from threats such as motor vehicles, cats and dogs.

Maintained local parks with mown grass and planted trees were viewed primarily as people-oriented leisure spaces. This “urban naturalness” was thought to be there for

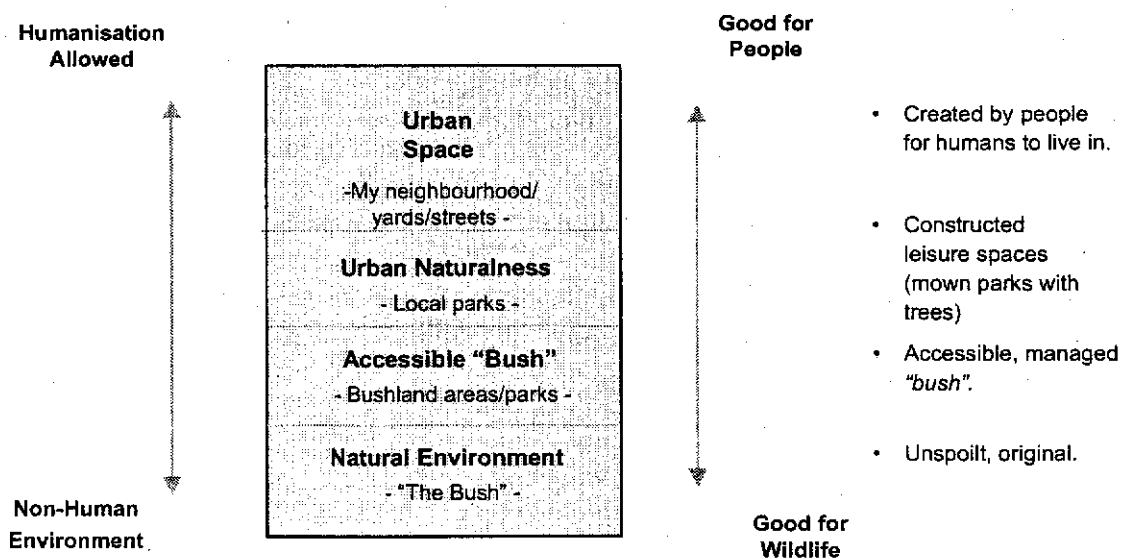


FIGURE 3: Perceptual continuum of “nature”

the enjoyment of people and therefore had to be safe for people. Providing a home for native animals was seen as a lower order function of this space.

Managed native parkland areas with tracks and trails were thought of as places where it is appropriate for wildlife to roam and for people to enjoy themselves. The concept of “accessible bush” includes urban bushland areas and the more formal managed tracks that radiate from car parks in bushland reserves and national parks. Some participants believed that nature in these areas is being managed to maintain an environment suitable to people.

In contrast, participants considered that the natural bush is not managed or controlled by people. The “natural environment” encompasses unspoilt and original areas which provide a home to our native plants and animals.

The tendency of participants to partition the world into these four different types of spaces appeared to underpin a number of attitudes and behaviours. In particular the underlying principles for managing urban spaces appear to be primarily influenced by considerations of what is “right” and best for the human inhabitants. Among people who see such clear distinction between areas that are “right for humans” and “right for animals” there is a reduced sense that there are wildlife conservation issues within urban spaces.

A quantitative survey question was designed to verify the existence of this partitioned view of the world and to determine the extent to which such a partitioned view could affect people’s capacity to contribute to wildlife conservation in urban areas. This question asked: “I’d like you to tell me to what extent you personally believe that the community should try to encourage native animals to live in different types of environment or areas. Do you think native animals should be definitely encouraged, encouraged to some extent, or not encouraged at all to live here?”

The extent to which people had a partitioned view of the world around them was examined in this survey question by gauging responses to the concept of “encouraging native animals” into each of the four types of environment or area. Most people responded in a way that is consistent with a partitioned view of the world, as described in the qualitative phase. The results outlined in Figure 4 show that a majority of people thought that wildlife should be encouraged to some extent in backyards (50%) and local parks (52%). This confirms that while people are concerned that wildlife may be out of place in the “urban space”, most appreciate the presence of some wildlife in urban areas.

*Living in Harmony with Urban Wildlife*

A key theme that emerged from the in-depth interviews and focus groups related to people’s behaviour being oriented toward satisfying underlying needs. Behaviour that

	Definitely Encouraged %	Encouraged to Some Extent %	Not Encouraged At All %
Suburban backyards	14	50	36
Local parks	23	52	25
Local bushland	65	28	7
Unspoilt bushland	87	12	1

FIGURE 4: Results from Question A10: to what extent the community should encourage native animals to live in different types of environment

supports urban wildlife and biodiversity was seen by some as integral to them meeting their needs and by others as challenging their needs. The research revealed that most important needs tended to concentrate around the need for independence and freedom of choice (39%), and the need for safety and security around their home and neighbourhood (25%). Considering other needs, those on acreages (larger land areas) were more likely to rate the need for nurturing, self-actualisation; recognition and status as “extremely important” in comparison with their counterparts in apartments, townhouses and houses.

In a qualitative sense, participants in focus groups tended to group native fauna into three categories, primarily based on their perceived ability to “happily co-exist” with people. This provided some insight into the sort of wildlife to be “encouraged to some extent”. The first group comprised animals that were described as “cute”, “harmless” and “attractive” and were generally thought by respondents to be desirable and appropriate for an urban space: small and attractive birds, ladybirds, blue tongue lizards, kookaburras, frogs, butterflies, and worms. The second group comprised “attractive” fauna that was thought to be desirable but inappropriate for an urban environment principally because they might come to harm: koalas, wombats, echidna, platypus, tortoise, kangaroos (city participants only). The third group comprised fauna that was considered to be “destructive”, “annoying”, “threatening” and generally thought to be undesirable: spiders, snakes, cockroaches, caterpillars, possums, bats, wasps, bees, flies, mosquitos, moths, magpies, cockatoos and kangaroos (in country areas). The quantitative phase confirmed this perspective, as outlined in Table 1.

### **Using Research To Develop An Overarching Framework For Urban Wildlife Conservation**

The research findings discussed above were used to develop an overarching campaign concept that encapsulates the opportunities to grow conservation of urban wildlife in mainstream urban communities. A professional campaign design team was commissioned to develop a brand “look and feel”. The design team were given a detailed briefing on the research findings and the need to relate the campaign to the NSW Government’s environmental education campaign *Our Environment: It’s a Living Thing*. This environmental education campaign seeks to provoke and sustain a movement of the people of NSW to adopt an approach to sustainable living that will enhance their lives and benefit their environment, and to educate the people of NSW on how best to sustain and encourage native plants and animals in their local neighbourhoods.

As a result, a campaign brand was required that encapsulated the notion: “enjoy our native flora and fauna - it’s the natural thing to do.” The final design covering the key proposition was *Backyard Buddies: Get more enjoyment from our native plants and animals*.

The brand “look and feel” was pre-tested with people randomly recruited from a mainstream audience to establish the impact and effectiveness. Focus groups exposed to sample artwork, and sample text from proposed educational materials responded very positively. Participants in the pre-test focus groups were progressively shown the brand name, the tagline and the graphical elements, allowed time to respond to and comment on each element. The evaluation of the pre-test of campaign materials was very positive and indicated that *Backyard Buddies* had tapped into ideas of people working together to improve their backyards for their personal benefit and to benefit native plants and animals. The program reminds people that they are part of, and not separate from the living urban environment.



TABLE 1: Answers to Question 5: “[...] how much would you like to have this type of animal in your backyard?”

Animal	A Lot %	A Little %	Not Like at All %
Small birds (like finches)	80	17	3
Butterflies	77	18	5
Lorikeets	69	22	9
Earth worms	66	21	13
Kookaburras	66	26	8
Koalas	55	28	17
Blue tongue lizard	50	29	21
Frogs	43	32	25
Cockatoos	41	37	22
Magpies	31	30	39
Possums	26	35	39
Catepillars	22	39	39
Bats	16	22	62
Moths	11	28	61
Spiders	10	31	59
Snakes	5	16	79

### Applying Research To Local Sustainability Education Initiatives

The research findings were promoted to the wider community of stakeholders in environmental education. The findings and implications for program design were presented and discussed at a series of seminar/workshops conducted in 2003 for NSW local Councils around the state and at numerous conferences. This detailed exposure facilitated the application of research into practice. Councils, unable to devote significant resources to research of this kind, enthusiastically took up the challenge of applying the findings to develop innovative programs to involve wider sections of the community, based on evidence from the social research. The research informed the design and implementation of a range of innovative initiatives addressing a range of householder activities that contribute to the conservation of urban wildlife.

The design of initiatives addressed the seven elements common to effective behaviour change programs developed by Robinson (Robinson and Glanzig 2003). The research provided particular insight into community norms, satisfying underlying needs, and the most effective channels for credible information access.

For example, Albury City Council developed the “Garden Guide for Albury Wodonga”. Environmental weeds are an increasing problem in the area, hastened by the sale of weedy species in garden centres and nurseries. Informed by the research, the guide took a ‘lifestyle’ approach to garden advice rather than emphasising environmental messages. Gosford City Council and Wyong Shire Council also implemented a wildlife survey activity for all households – “What can you find in your backyard?” In working towards an integrated approach to managing threats to wildlife in their area, these councils recognised the need to address peoples’ perceptions of the loss of native animals in urban areas, seen by many as an inevitable consequence of urbanisation. A householder survey form was developed as an interactive educational activity that

could also gather community wildlife records, and community priorities for wildlife protection. The survey activity enabled householders to reflect on the contribution local native animals make to the quality of life people enjoy on the Central Coast. This awareness is an important precursor to their protection of local wildlife.

### **Informing Development of Urban Wildlife Management Policies**

Environmental education, especially within environmental organisations, tends to be driven by policy that seeks to address an identified environmental issue. There is a potential impediment with policy driven environmental education which relates to the disposition for change in the target audience. Policy that has no overlap with people's aspirations is unlikely to be successfully implemented. While education is critical in achieving positive changes to individuals' attitudes and behaviours which impact the environmental issue, it is essential that change initiatives find the intersection between the outcomes sought by people themselves and the outcomes prescribed by policy. Research is valuable to identify these areas of overlap.

To this end, a Wildlife Issues Advisory Panel (WIAP) has been formed as part of the Backyard Buddies program. The WIAP involves a variety of key government, industry and community stakeholder groups with wildlife management and education expertise and experience. The panel seeks to address interactions between people and wildlife, foster stakeholder integration to improve wildlife management, and generate advice to the NPWS on wildlife management policy, strategies and procedures, education and information programs and resources needed. WIAP considers social research in the process of looking for an alignment between policy and the aspirations of the people and communities that it intends to influence. To date, the panel has contributed advice on dealing with magpies, urban possums, and wildlife feeding as a factor in wildlife problems.

### **Conclusion**

Social research is a mode of community consultation that can provide an informed evidence basis for the design, development, implementation and evaluation of community education and involvement initiatives. Qualitative and quantitative social research is a powerful tool to gain insights that help to improve the effectiveness of environmental education initiatives.

The urban wildlife social research study discussed in this paper provided insights that assisted environmental educators to understand the ways that communities find meaning and motivation for their participation in conservation endeavours. Using this research to inform environmental education programs and initiatives can enhance engagement and involvement of communities beyond the "keen and knowledgeable". In addition, such research can contribute to building institutional and organisational capacity among partners for effective environmental education in terms of research, design and evaluation, and recognise the importance of mutual learning between researchers and practitioners who use the research outcomes.

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