enabling ECOACTION

a handbook for anyone working with the public on conservation

Les Robinson & Andreas Glanznig

Environmental TRUST

This project has been assisted by the New South Wales Government through its Environmental Trust.

IUCN The World Conservation Union

CEC Commission on Education and Communication

HUMANE SOCIETY INTERNATIONAL

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about the authors

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Les started his environmental career campaigning against a sand mine on the NSW south coast. He joined Social Change Media in Sydney as a campaign manager and spent the next 10 years running 'hard' campaigns against megatips, the Waterloo Incinerator, and other issues, before shifting to 'soft' social marketing programs on waste, water and 'eco-living'.

He now runs his own consultancy which advises and trains council staff, agencies and activists on the design of community participation and change programs.

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He is a past member of a United Nations expert group that developed a global biodiversity education and public awareness initiative under the Convention on Biological Diversity, and is currently the Oceania Chair of the World Conservation Union Commission on Education and Communication.

Andreas now works as the Biodiversity Policy Manager for WWF Australia.

"Knowledge alone doesn't harm or help the environment. Human attitudes don't harm or help the environment. Human behaviours, on the other hand, have greatly harmed, yet hold a great deal of hope for helping, the environment. Those of us who work for environmental sustainability must learn to address human behaviour."[1]

preface

Protecting and restoring biodiversity depends on sustained public sympathy, understanding and action. We all need to act or change our behaviours – often in quite small ways – to protect and repair life's complexity.

These social changes will depend on opening a sustained conversation with the public about the nature of everyday living, and the system of consumption and production that pervade modern life.

As communicators, educators, and facilitators, you are vital agents in this process. This handbook aims to capture the best in Australian and international contemporary thinking and practice to guide your work. It also draws on nearly 10 years of effort to increase understanding and involvement in biodiversity conservation.

GOOD LUCK !!

1. *Martha Monroe, Brian Day, and Mona Grieser,* Environmental Education and Communication for a Sustainable World, *GreenCom, 2000.*

introduction

This handbook aims to be a road map for anyone working with the community to achieve environmental change, including environmental educators and managers, Bushcare or Landcare coordinators, local government environment officers, and community development officers. It is especially designed for the many people with natural science backgrounds now involved in community projects to conserve species, habitats and ecosystems.

It attempts to bring together useful ideas on social change from fields as diverse as health promotion and adult learning. Although the obvious focus is on biodiversity, the concepts and approaches will be useful for many types of community-based environmental work.

Community education is much more than simply producing a brochure and poster. An important purpose of this handbook is to re-position community education away from narrow 'informational' and natural science approaches – primarily concerned with transferring knowledge and skills – towards participative, community-driven approaches which focus on enabling collective action for change.

This guide should assist you to design new projects, and also to redirect and sharpen existing projects. The tools should be useful for planning almost any form of communication activity.

NOTE: For the sake of consistency we use the term 'educator' in this handbook. We acknowledge that it's often an inappropriate title, however it is in wide use and accepted by funders and managers. A better term might be 'sustainability facilitator' but that has yet to come into widespread use.

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part

A

Reaching the public

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1 ON GOOD *practice*

In this handbook we define **'biodiversity education'** as:

Enabling communities to act to conserve or restore nature.

This definition reflects a vision of informed and inspired groups and individuals working in a variety of ways to restore ecological balance on the earth.

©WWF Australia

Social factors underpin successful community projects. Behind every good project are facilitators that bring people together and create experiences that motivate them to act.

The word **'enabling'** is an important guide to our role. Traditionally, the educator was seen as a source of expert knowledge and the educational process was complete when that knowledge was passed on. Instead, an **'enabler'** does whatever is required to bring people together and make possible collective learning and self-directed action. In this sense, the educator is a facilitator who depends as much upon their people-skills as upon ecological knowledge.

The word **'communities'** reminds us that humans are social animals and that the most meaningful and sustained action is done by groups of people working in unison. Empowerment, in particular, is never a quality of individuals – it comes from people working together to achieve a common vision.

The word **'act'** implies that the goal is active participation by people in change. We'll talk more about action as a strategic concept below.

The word **'nature'** is defined widely to include ecological systems wherever they are found in the backyard, on a balcony, in a canalised creek, in a park, as well as 'natural areas', local and far away.

CHECKLIST - STEPS TO GOOD PRACTICE[2]

In this handbook we'll be emphasising principles of good practice in the design of community programs. The checklist below summarises these principles:

1) Have you understood the problem and critically reflected on your proposed solution?

Have you talked to experts, and members of the intended audience, about the nature of the problem? Is the solution achievable? Have you examined alternative solutions?

2) Have you researched similar programs?

Have you (at the very least) done an internet search to find out about similar programs? Have you contacted other educators, agency staff or academics to locate relevant social research? Have you checked out academic journals?

3) Have specific target audiences been identified?

Who needs to act? Have clear target audiences been defined?

4) Are your behavioural objectives actionable?

Are these objectives realistic? Are the audiences reachable? Are the actions measurable?

5) Have you *really* understood the situations, current practices and needs of your audience?

Have members of your audience participated in refining the target behaviours and designing the program? Does the program offer ways to meet their practical needs, as well as yours? Do you understand the practical obstacles to the behaviour? Do you have answers for the doubters?

6) Is the solution compatible with your audience's personal values and norms?

Does your audience perceive the same problem? Have you explored the 'common ground' between your proposed solution and audience values, perceptions and needs?

7) Have you planned how to collect evidence?

Consider how you will capture evidence about the impact and results of your program. Have you planned for time to reflect on the evidence? How will you report back to the community?

8) Will it be fun?

Check that your activities will excite and stimulate. Does it involve tactile, experiential and interactive learning? Could there be a more fun way to do things?

9) Will it be social?

Check that your project will encourage good inter-personal relationships. Is there food? Is there time to socialise? Are there group activities? Have you created ways for diverse players to share views, including activists, councillors, managers, business-people, and planners.

10) Have your pre-tested your communications?

Is your message presented in a vivid and interesting way? Have you pre-tested messages and materials on the audience?

11) Have you thought about access?

Have you offered a range of opportunities suitable for different audiences? – both sexes; all ages; people from non-English speaking backgrounds; people with disabilities.

12) Have you approached partners?

What other organisations, agencies, and businesses have similar goals? Who could you collaborate with? Don't think you have to do it all alone – build local networks and share ideas.

13) Do you practice what you preach?

Have you thought about the environmental impact of your program? Is your operation an exemplar of environmental responsibility?

14) Will you leave something behind?

How will you build the capacity of your community to act after your program is over? Have you helped existing groups to grow stronger? Have you facilitated new relationships? Have people practiced new skills? How could you support a sustained program? Have you developed new knowledge? If so, how can you share it?

2. *Adapted from* Education for life – guidelines for biodiversity education, *UK Council for Environmental Education, 1997.*

2 THE DIVERSITY OF BIODIVERSITY *education*

Communities around Australia have designed and put in place some fantastic projects that mirror the principles of good practice on the previous pages. The five examples below show different solutions to various problems.

CASE STUDY 1
National Threatened Species Day, South Australia

CASE STUDY 2
Mackay Shorebirds project, Queensland

CASE STUDY 3
Greenweb program, Sutherland Shire, New South Wales

CASE STUDY 4
Garden Guide for Albury Wodonga, New South Wales

CASE STUDY 5
Frogs project, The Wetland Centre, Newcastle, New South Wales

CASE STUDY 1
National Threatened Species Day, South Australia


©Reefwatch SA, CCSA

Problem
The number of threatened species in Australia continues to grow, and more community support and involvement in on-ground conservation projects is needed.

Approach
The Threatened Species Network (TSN) facilitates community action to conserve threatened species yearly on 7 September, the date the last known Tasmanian Tiger died. Each year different flagship species are used to rally community support. Groups are encouraged to view the day as their own and use it as a platform to promote what they are doing to help conserve threatened species. All activities are social, and line up well with the interests of the audience.

Actions
In South Australia, a recent National Threatened Species Day aimed to highlight the need for better understanding and conservation of the leafy sea dragon and its sea grass habitat. This unusual and beautiful flagship species was used to focus community attention on marine conservation.

- The TSN promoted the Day well in advance, arranged State level media, and encouraged community groups in the Network and schools to take part
- A guide on how to help conserve sea dragons was produced and distributed through major outlets including The Body Shop

Results
- 35 groups, including dive clubs, bush-, fish- and dune-care groups and coastal schools, staged over 50 community activities over the month of September. Activities included seadragon searches, presentations, art shows and displays, beach clean-ups and on-ground vegetation works in coastal dunes
- Over 30 education and media activities. The Day is part of the on-going efforts of the TSN to get communities engaged in threatened species conservation.

More information - Contact your State Threatened Species Network Coordinator or ring 1800 032 551

CASE STUDY 2

Mackay Shorebirds project, Queensland

©Maureen Cooper

Problem

The wetlands and intertidal areas in the Mackay region are coming under increasing pressure.

Approach

The Queensland Wader Studies Group (QWSG) aimed to increase community support and conservation of shorebird habitat through its Mackay shorebird project. The broader Mackay community were engaged by providing social opportunities to see and learn about shorebirds, and how to identify them. People that participated in the initial surveys were encouraged to regularly monitor the number and type of shorebirds in important sites in the area.

Actions

The project identified important shorebird areas in and around Mackay. The QWSG promoted the project through the local newspaper and radio media.

©Maureen Cooper

- Introductory hands-on shorebird surveys were held at key shorebird habitats
- A follow-up wader identification training session was staged at a high tide roost in central Mackay, followed by a presentation on shorebirds at the local surf life saving club. Follow-up events after other surveys include slide shows and a barbeque to allow local residents to meet and mix.

Results

Attendance at both the survey and identification sessions were excellent

More information
WWF Shorebirds Project, www.wwf.org.au

CASE STUDY 3

Greenweb program, Sutherland Shire, New South Wales

Problem

Sydney's bushland is diminishing and fragmented preventing the movement of native animals along habitat corridors.

Approach

©Geoff Doret

The Sutherland Shire, located on the southern outskirts of Sydney, developed its Greenweb program as part of a regional approach to the conservation of the Sydney basin's remaining biodiversity. The Greenweb program aims to protect and enhance native plant and animal populations by identifying key areas of bush-land habitat and then working to link these habitats in order to make it easier for animals to move between habitats. The program uses various incentives to encourage people to take part.

Actions

The Shire promoted the program through media releases, displays and presentations (including a video).

- The Greenweb officer provided free inspections of resident's property, including a free "Garden Consultation" that identified suitable native plant species for the area, landscaping that encourages native animals, identified weed species and answered any questions. This personal face-to-face contact is crucial to mobilise interest and involvement in the program.

©Geoff Doret

- Follow up newsletter.
- Participating residents were able to access free native tube plants from the Council's nursery and in some instances a second greenwaste bin and/or bush regeneration bags for free weed collection. They also received a free Greenweb sign to acknowledge their efforts.

Results

The response have been overwhelming. In 6 months, over 100 property inspections were held with residents wanting to take part in the program

More information - Greenweb Officer,
Sutherland Shire Council, (02) 9710 0463

CASE STUDY 4

Garden Guide for Albury Wodonga

Problem

Environmental weeds are an increasing problem in the area, hastened by the sale of weedy species by local garden nurseries.

Approach

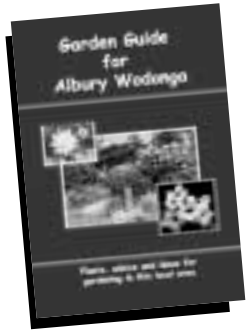
AlburyCity Council aimed to encourage nurseries to remove environmental weeds from sale, and increase consumer interest in buying non-weedy native and exotic plants. Initial efforts to convince nurseries to stop selling environmental weeds in exchange for free merchandising and marketing was unsuccessful. An alternative approach was to work with nurseries to implement a community education initiative.

The communication strategy was strongly influenced by National Parks Service social research that showed the promotion of lifestyle choices is more likely to produce results than marketing environmental messages.

The project is an example of a Council working through intermediary groups to reach an audience, providing multiple access points, and aligning with audience values.

Actions

- Nursery Support Program where the Council's Noxious Weeds Officer and a nursery expert engaged 14 nursery managers on environmental weed issues. This effort was underpinned by a garden guide, information about noxious weeds, local native plant wholesalers and further contacts. Nurseries were encouraged to sell the guide at cost, receive free merchandising and use of a 'helpline' for six months. This worked.
- Production and distribution of the Garden Guide for Albury Wodonga. The guide was promoted in papers and at festivals. Radio and television ads were also aired.



Results

- 12 local nurseries are interested in the program
- Over 150 guides have been sold in the first 2 months of the program

More information
Environmental Planner, AlburyCity
(02) 6023 8111 or www.alburycity.nsw.gov.au

CASE STUDY 5

Frogs Project, The Wetland Centre, Newcastle, New South Wales


©Mike Swan

Problem

Lack of suitable habitat for the threatened Green and Golden Bell Frog

Approach

The Wetlands Centre aimed to build three enclosed ponds to provide habitat for Green and Golden Bell Frogs. The project relied on the good will of many people and organisations, and excellent leadership skills to mobilise volunteers.

Actions

The project is a testimony to how a range of partners pooled their expertise and efforts:

- the National Parks Service provided plant and crew to dig the ponds
- Paddy, a long-time member of the Australian Plants Society (APS) and supervisor of the local Landcare group, persuaded APS members to donate the plants that were needed to vegetate the ponds. His Landcare group planted them.


©Louise Duff

- the Newcastle Rotary Club came to the Wetlands Centre looking for a project, and built the frog-proof fence. Centre staff held a briefing meeting and provided a sausage sizzle and a case of beer for the workers. And of course a thank-you letter afterwards.
- the good people from the Society of Frogs and Reptiles gave lots of advice and practical help
- a frog specialist from the University of Newcastle managed the reintroduction of the frogs.

Results

- Three enclosed ponds with a thriving Green and Golden Bell Frog colony, and a lot of satisfied people

More information
The Wetlands Centre, www.wetlands.org.au

3 GETTING IN TOUCH WITH PEOPLE'S *values*

© Les Robinson

A key to successful projects is matching your approach and messages to the values and aspirations of the people you will be working with.

The starting point in involving people is to find ways to speak about the natural world which reflect the values and aspirations of that particular community or group.

All people have aspirations for a better life, for dignity, for well-being, for healthy families, for safer communities, for security and so on.

These aspirations combine with valued experiences, places and qualities, to make sets of values which are common to a particular community or group.

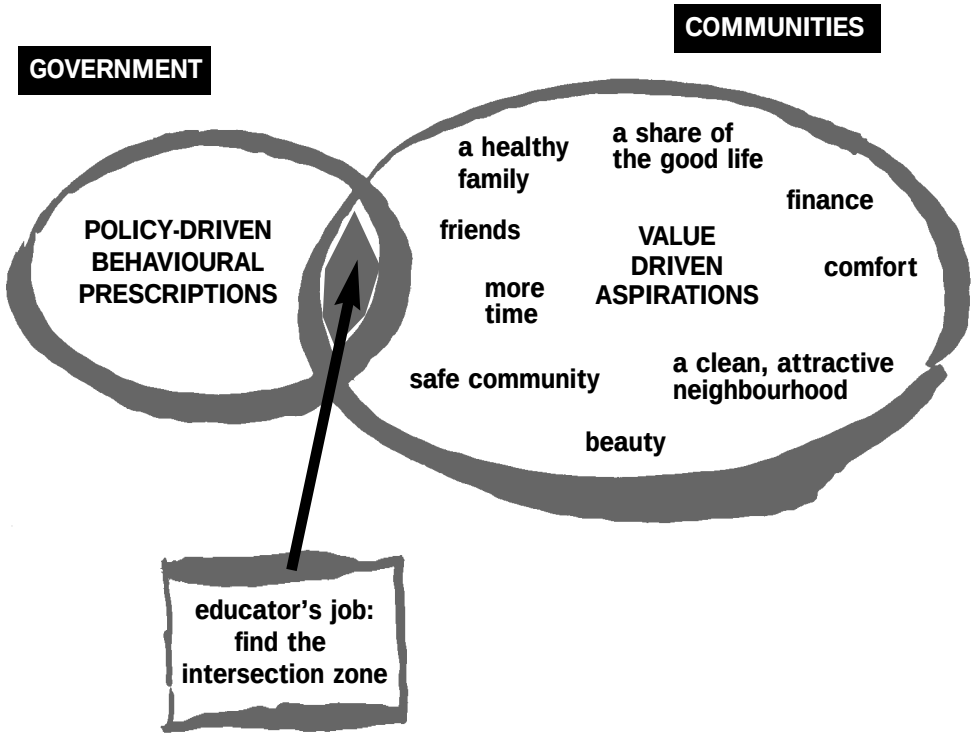
Meanwhile, policies are developed by managers, scientists and politicians to protect the natural environment.

Values and policies often seem to inhabit different universes and speak different languages. Values tend to be human-centred and holistic *('I value my memories of that lake', 'I value the health of my family')*, whereas policies tend to be abstract, neutral, passionless, universal *('the enhancement of biodiversity', 'the protection of endangered habitat')*.

The language of policy tends to be bloodless, managerial and scientific.

The role of the educator starts with searching for the common ground between the funding agency's policy framework, and the values of real people living in real places.

One way to imagine this is with overlapping circles.



The educator's job is to discover and find words for what lies in the intersection zone between the funder's policies and the values of an audience.

How do you explore this intersection zone? The only sure way is to have face-to-face conversations with members of your community, either in focus groups, or through a Participatory Action Research approach (see more on chapters 11 and 12).

For instance, you may wish to involve a particular neighourhood community in restoring biodiversity in a local creek. However if you find that the neighbours perceive the creek as dangerous, polluted and unhealthy, and only useful as a dumping-ground, then these people may oppose the project. Instead you may need to define the project as about creating family-friendly outdoor spaces for healthy recreation, or about neighbourhood beautification. Once the project begins and people are working together you can begin to ask the participants to imagine ways the creek could be made more natural. Only then is it appropriate to introduce ecological concepts into the discussion.

Albury City Council educators discovered this when they sought to encourage people to purchase non-weedy garden plants. They found lifestyle choice messages were more persuasive than environmental ones.

Locating your project within the existing strongly-held values and aspirations of your audience is the first step in sound program design.

4 using THE WORD BIODIVERSITY

'Biodiversity' is a powerful organising concept for policy-makers, however the term has proven to be a poor mobilising concept for the public.

Despite considerable educational effort over several years, 'biodiversity' continues to be poorly known and even more poorly understood.

The evidence from many sources is that technical terms such as biodiversity and sustainability are abstract and remote from most people's lives. They lack the 'flesh and blood' associations which motivate passion and commitment.

This handbook takes a different approach to conventional educational efforts. We propose that 'biodiversity' is a term which can best be understood through personal experience of nature, and through conversations which connect experiences to ecological realities and values. Biodiversity education is therefore about bringing people together to experience nature in the company of their peers and experts, and about designing situations that allow for discussion and reflection. Simply writing or talking about biodiversity will not work.

Once people are participating in projects, we can explain 'biodiversity' to them and respond to their questions. A conversation may result where people have a chance to interpret ecological concepts into their own lives.

A consequence of this approach is that we believe 'biodiversity' should be avoided in the 'top line' of mass media communications like news stories, advertising or letterboxing. Instead

mass communications should focus on concrete events and images which people can immediately relate to.

So, try to avoid headlines like:

'Protecting our biodiversity'
'Celebrating biodiversity'
'Protecting the web of life'
'It's biodiversity month'

Instead try to be imaginative, intriguing, relevant or useful.

A simple test is: *Is my message about things people can see and touch?*

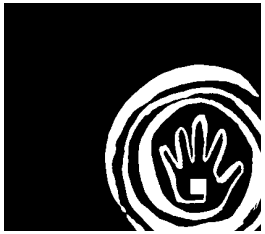
Here are some examples of non-ideological biodiversity headlines which have been used in real-life projects.

'Mollymook rainforest harbours rare beauty'
'Come to the tree planting at Spooneys Bay'
'Attract birds to your garden'
'Take a walk on the wild side this Saturday'
'Keep your garden wildlife-friendly'
'Swamp's abuzz with life'
'Students go green for a day'
'Hear tales from the trees'
'Bush reserve reveals its secrets'
'Sanctuaries in the suburbs'
'Green farmers hit pay dirt'
'The secret of life'
'Saving wildlife starts in your backyard'
'Family tree planting day'
'Survey of natural wealth'
'It's a bug's life'
'Take a leaf out of our book'
'Jurassic bark a lark in the park'

A FORMAL DEFINITION OF BIODIVERSITY

The National Biodiversity Strategy describes biodiversity as the variety of all living things; the different plants, animals and micro-organisms, the genetic information they contain and the ecosystems they form. It is usually considered at three interconnected levels: genetic diversity, species diversity and ecosystem diversity. Biodiversity stresses the connectedness of the living world.

For more on the language of biodiversity, see *'Tips for talking about biodiversity'* at the end of this book. (Appendix 1)



5 MAKING THE LEAP FROM *awareness* TO ACTION

©Alison Colyer

"Research in the field of environmental education and in commercial marketing has shown that there is no cause-and-effect progression from knowledge to attitude to behavior as educators have long believed."

Martha Monroe, Brian Day, and Mona Grieser, Environmental Education and Communication for a Sustainable World, *GreenCom, 2000.*

Research tells us that awareness and attitudes alone do not lead people to undertake voluntary actions or change their behaviour. Nowadays most people who are capable of acting positively for the environment probably know enough about the costs and benefits of their actions to make the necessary personal changes. And yet the damaging behaviour continues.

There is obviously much more to the ecology of personal change than merely possessing knowledge. Focus group respondents often say 'advertising will never get me to change'. Even advertisers doubt their work leads to changed behaviour.[3] Our work as educators therefore needs to focus on the enabling actions or behaviours by our audiences, rather than simply transfering knowledge.

As researchers have noted, there is no necessary cause-and-effect progression from knowledge to attitudes to action. The relationship between these elements remains mysterious. There is also evidence from studies into 'cognitive dissonance' that the progression may often be exactly the reverse: actions help form attitudes, which then encourage knowledge-seeking.[4]

As we will see *actions* can be both an end and a means to personal and social change.

3. Advertising is mostly not about changing behaviours; it is about changing brands. Many advertisers even doubt the ability of advertising to achieve that. For instance: 'Most marketers confuse brand building with brand maintenance. While a hefty advertising budget might be needed to maintain high-flying brands like McDonald's and Coca-Cola, advertising generally will not get a new brand off the ground.' – Al Ries and Laura Ries, The 22 Immutable Laws of Branding, *HarperBusiness, 1998, pg.25.*

4. Leon Festinger and James Carlsmith, Cognitive Consequences of Forced Compliance, *Journal of Abnormal and Social Psychology, 1959, Vol. 58, pg.203.*

Actions are vital because they are what make a difference for the environment. Secondly, actions are measurable, so we can observe the impact of our work. Thirdly, and even more importantly, people learn best by acting: hence our most effective work as environmental educators will be when we facilitate experiential learning by the participants in our programs: learning by doing.

NOTE:
Experiential learning lets us, too, as educators, enjoy the enthusiasm of people who are inspired by their involvement with nature – and that strengthens us in our own work.

FOCUS ON SPECIFIC REALISTIC BEHAVIOURS

Probably the single most important step in designing an effective change program is choosing specific, action-oriented, realistic and achievable behavioural objectives. This handbook includes some practical tools to ensure your objectives are achievable (see pages 98-103).

It's vital to ask: How feasible is a desired behaviour likely to be from the point-of-view of the particular audience? The answer depends on that audience and it's situation.

Experienced educators recommend carrying out research with 'doers' (people who are currently performing the action) and with 'non-doers' (those who aren't). The aim is to figure out if the behaviour makes sense in people's lives and what the obstacles may be. In effect, we often need to negotiate the behaviour with the people we expect to do it.[5]

5. Booth, E.M. 1996. Starting With Behaviour: A Participatory Process for Selecting Target Behaviours in Environmental Programs, *GreenCom*.

One-on-one conversations with members of the intended audience or an informal focus group may be enough to help you focus on a feasible behaviour. A more powerful approach is **Participatory Action Research** (see pages 86-97).

In practice, typical 'environmental' behaviours are deceptively complex. A direction to 'remove fruit from introduced plants in your garden' may mystify and confuse many people. They may reasonably ask: *'What about my nectarines and lemons?', 'How should I dispose of the old fruit?', 'Are berries fruit?' 'What time of year should I do it?' 'Why not just chop down my tree – but is that legal?'* or *'I just don't understand the point of this practice'.*

When we negotiate this behaviour with an audience, we may discover that it's far more practical to break down fuzzy poorly-defined behaviours into a simple, specific behaviour that makes common sense to real people. For instance, after talking to members of your audience, you may decide to narrow your message to simply asking people to remove Privet and Cotoneaster shrubs. You could back this up with step-by-step instructions and use an interesting theme like *'Chop 'em before they drop 'em'.* The action is narrower, but it is more likely to be taken up, and it's likely that people will extend the principle to other introduced berry species.

Privet and cotoneaster shrubs are bushland weeds, whose seeds are spread by birds. Additionally, the availability of winter fruit is contributing to an increase in the number of currawongs in some urban areas, which leads to their increased predation of small native birds.

The next sections of this book focus on change models and tools for designing programs that inspire action.

A LIST OF BIODIVERSITY-RELATED BEHAVIOURS[6]

Here are some typical biodiversity-related behaviours. But note that behaviours should never be imposed on a community. They should always be careful tailoring to local needs and values in consultation with members of the target audience.

In the home:

- Plant lots of native trees, shrubs and grasses to attract and feed native birds
- Remove weeds and garden plants that could invade native bushland
- Remove fruit from Privet and Cotoneaster shrubs in your garden if you don't want to remove the plants
- Install a cat-safe bird bath
- Keep your cat safe by keeping it indoors from dusk to dawn
- Train your kitten to be an 'indoor cat'
- Get your cat desexed
- Provide a safe 'cat park' enclosure for your cat
- Switch to natural gas or slow combustion heaters (to avoid using native firewood)
- Replace some of your open lawn with garden beds which use natural mulch. Make hiding and sunning spots for lizards
- Create a frog-friendly habitat in your garden
- Recycle paper (to save trees)
- Attract butterflies and native bees by planting bottle brushes, banksias and other plants that produce nectar
- Create shelter and nesting sites for small native birds
- Install a nest-box for native birds and possums
- Plant a native tree on National Tree Day (July).

In the community:

- Come to a tree-planting day
- Join a Landcare, Bushcare, or Coastcare group
- Participate in biodiversity-related events
- Enjoy the outdoors - visit a national park and go bushwalking or have a picnic
- Stick to tracks when walking in the bush
- When fishing, stick to size and catch limits
- Report illegally dumped rubbish

On the land:

- Leave dead and fallen timber to provide homes for reptiles and other animals.
- Plan tree corridors and wood lots
- Protect wetlands
- Fence stream bank vegetation
- Use Integrated Pest Management techniques
- Retain pesticide-affected water on-site
- Apply fertilisers at recommended rates
- Carry out regular soil testing.

6.These are taken mostly from Earth Alive! Action Guide, *a publication of the Community Biodiversity Network/Humane Society International, 2001.*

6 WHY *people* DO, OR DON'T, ACT

Many voluntary changes happen through conversations with people they trust – friends, family or neighbours.

©Natasha English

Since you are an agent of change, it's important to know that change is a process with stages. Theories of change give us valuable insights into how we can influence this process for individuals, communities and society.

Try this do-it-yourself change experiment.

Start with a simple exercise. Pause for a moment and think about a positive change you've made in your life sometime in the past year. For instance: taking up bicycling, recycling, changing your job, spending more time with your family, joining an environment group.

Now answer these questions:

- What hopes or aspirations did you need to have before you could even think about making the change?
- What frustrations were you experiencing about your life?
- What skills did you need?
- What information?
- What services or products?
- Was there a trigger moment?
- What people were involved?
- What words were spoken?
- What unexpected benefits did you discover afterwards?

When we ask people about how they come to adopt voluntary changes in their own lives, we find some common themes:

1) People were dissatisfied

People were experiencing frustration between their ideals and the realities of their lives. A working mother realised she was not spending enough time connecting to others, a young woman realised she was doing nothing to improve her household environmental impact, a young man realised he could not face the destruction of nearby bushland for a freeway.

In other words, the participants saw a yawning gap between their visions of life as they dreamed it (ie. their personal norm), and life as it was. This gap caused a nagging psychological discomfort.

This reminds us of the importance of norms, visions and aspirations in the ecology of change. It may not be enough, or even necessary, for people to know rationally why they should change. But people definitely need desirable, holistic models of how their lives could be better lived. People's fantasies need to be engaged!

A change agent therefore needs to address people's dissatisfactions.

2) People were in a time of change

Many people adopt positive new behaviours during major changes in their lives: leaving work, shifting home, becoming ill, being divorced, having children, starting a new job or business.

This may explains why only small numbers of people are ready for change at any given time. A seismic shift is often necessary to open spaces for change in our lives. This is one reason why population-wide changes appear to be very slow, unless they are driven by events that are experienced by many people simultaneously. For instance the Chernobyl explosion and the disastrous Sandoz chemical fire on the Rhine in 1986 are often credited with driving a society-wide shift in environmental values that eventually led to The Greens sharing power in Germany. Other social changes are cumulative and slow. The gradual adoption of sustainable living practices may be an example.

A change agent therefore needs to focus on people who are moving home, changing jobs or experiencing other changes in their lives.

3) Trusted others were involved

A great many voluntary changes are triggered by conversations with other people – usually 'trusted others' like friends, family or neighbours. *'A friend sat me down and told me I was working*

too hard.' 'Talking to my children I realised they loved enjoying nature with me.' 'My wife talked to me about the pesticides we were using.'

This reminds us that so many of our decisions are socially-based. Face-to-face conversations with credible people seem to be how we formulate and test many of our views and values. It appears that face-to-face interactions or conversations are an essential ingredient of personal change.

A change agent therefore needs to be an introduction service.

4) The right skills, tools and knowledge were available

There are many other background factors which enable people to change: the possession of skills, knowledge to weigh the costs and benefits, and having access to convenient products and services that facilitate the change.

In appears that change needs an infrastructure – a convenient train service to reduce car use, a course in organic gardening to increase our confidence, a low Phosphorus detergent, a plant nursery that explains how to grow native species. When this vital infrastructure is absent, all the communication in the world may make little difference.

A change agent therefore needs to be a broker of convenient products and services.

THE 7 ELEMENTS OF AN EFFECTIVE PROGRAM

It's possible to collect all these elements into a checklist which reminds us that our work as change agents involves much more than simply communicating information.

The concepts in this diagram may prove useful when designing your action projects. You should use it as a checklist to make sure that you have included all the ingredients of change.

THE 7 ELEMENTS OF AN EFFECTIVE CHANGE PROGRAM

7 SOME USEFUL CHANGE *models*

©*Queensland* Tourism Queensland

Connecting people to nature can be helped by understanding several social change models, particularly the Stages of Change model, and the Diffusion of Innovations model.

It's good to be aware of some of the current thinking in social change and communication. These models suggest a staged approach that first focuses on innovators followed by more mainstream audiences.

1) THE STAGES OF CHANGE MODEL

The most popular current theory of voluntary change is the Stages of Change or Transtheoretical model.[7]

This model assumes that people act intentionally according to their perception of the balance of costs and benefits in a decision. As we saw from the change cycle on page 37, the 'ecology of change' can be much more complicated than this, but in terms of large populations, this is a widely used and accepted theoretical model.

This model suggests that we pass through a sequence of four stages as we adopt voluntary changes in our lives.

7. Prochaska, J.O. and DiClemente, C.C., 1984. Stages and process of self-change of smoking: Towards an integrative model of change, *Journal of Consulting and Clinical Psychology, Vol.51, pp.390-395.*

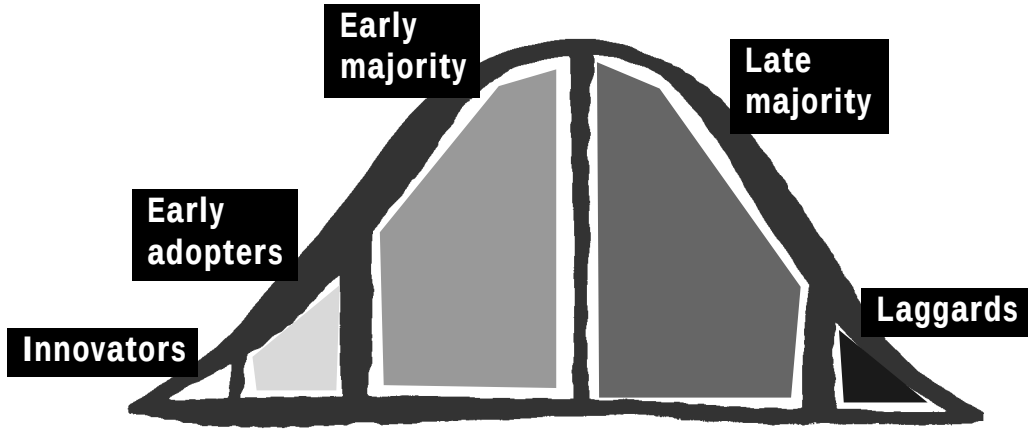
Stage	The educator's role
1) Pre-contemplation	● Education.
2) Contemplation	● Increase benefits (esp. immediate, short-term, personal benefits) ● Decrease costs (benefits must outweigh costs in minds of audience) ● Increase the positive influence of trusted others ● Increase self-efficacy (skills and confidence) ● Decrease influence of competing messages ● Clarify your promise: ie. if you do this, you'll get these immediate benefits, and we'll be there to support you
3) Trial action	● Reward the action ● Improve the ability to act (convenience, gaps in skills)
4) Maintenance	● Reward ● Reduce negative consequences ● Remind

2) THE DIFFUSION OF INNOVATIONS MODEL

Another valuable thinking tool is the ***Diffusion of Innovations*** theory, popularised by Everett Rogers, which treats change like a wave passing through society.

Rogers' model looks at the way innovations are taken up in a population. An innovation is an idea, practice, or object that is perceived as new by its audience.

Diffusion researchers found that, for any given behaviour, an audience could be broken down into 5 segments, based on their propensity to accept the new idea or behaviour. Adoption begins with visionary, imaginative innovators, attracts experimental early adopters, and eventually sweeps in majority audiences, with laggards holding out to the bitter end.



Segment	The educator's role
Innovators – these are committed *'global visionaries'*, often imaginative and evangelical. They lead the way for others and are the test-bed for original environmental innovations. Their ideological approach often frightens off pragmatic people, and yet no environmental education program can thrive without their energy and commitment. They are the ones who have already personally adopted the new behaviour, often investing a great deal of time and effort.	● Directly involve innovators in the design of the program through Participatory Action Research. ● Recruit and train innovators as peer educators.
Early adopters – these are '*private visionaries'*: imaginative people who are open to new ideas that provide personal benefits. They are often on the lookout for a strategic leap forward in their lives or businesses and are quick to make connections between clever innovations and their personal needs. They have no time for 'ideological purity' – they want real results. They are fashion-setters. They may have big egos and need a lot of personal support. They are less cost-sensitive than other groups – seeing their time and money as an investment rather than a cost. They are open to risks and like to hear "state-of-the-art".	● Promote your program through face-to-face methods, such as information nights and peer education. ● Create opportunities for experimentation, e.g. demonstration events. ● Offer strong face-to-face support for a limited number of early adopters to trial the new idea. ● Study the trials carefully to discover how to make the idea more convenient, low cost and marketable. ● Reward participants' egos, esp. through media coverage. ● Promote early adopters as fashion-leaders (beginning with the cultish end of the media market). ● Maintain relationships through regular feedback.

Segment	The educator's role
Early majority – these are *pragmatists*, comfortable with moderate environmental ideas, but they will not act without solid proof of benefits. They are influenced by other pragmatists and by mainstream fashions and fads. They have no time for risks, but will accept simple, proven, better ways of doing what they already do. They need easy solutions with minimum discontinuity and like to hear '*industry standard*'.	● Offer free give-aways or competitions to initiate a first trial. ● Use mainstream advertising and media stories featuring endorsements from credible, respected, conservative players. ● Guarantee performance. ● Provide strong customer service and support.
Late majority – these are environmentally *conservative pragmatists*, uncomfortable with green ideas. They hate risk but don't want to be left behind, hence they will follow the mainstream and established standards. They are often influenced by laggards.	● Refine the product to increase convenience and reduce costs. ● Diversify the product to satisfy niche needs. ● Respond to criticisms from laggards.
Laggards – Sceptics or 'brown bombers' will act to block progressive change. Their arguments need to be taken seriously – often they identify real problems which need to be solved before the majority segments can accept the innovation.	● Regulate compliance. ● Actively enforce regulations. ● Publicise prosecutions.

Rather freely adapted from Rogers, E. 1995. The Diffusion of Innovations, *The Free Press, New York, 4th edition.*

This model suggests that social change is a process, which begins with the most imaginative and committed people, and then diffuses through society.

One of the most valuable aspects of Rogers' theory is it's advice about the design of successful innovations.

Why do certain innovations spread more quickly than others?
Why do others fail altogether?

©Viewfinder Australia

To ensure a project leaps to mainstream credibility, it must fulfil real needs, not be expensive or risky, and be fashionable.

WHAT MAKES AN INNOVATION ADOPTABLE?

According to Rogers and his followers, the rate of adoption of an innovation depends on the following qualities (as perceived by its audience):

1) Relative advantage

This is the degree to which an innovation is subjectively perceived as better than the idea it supersedes – measured in economic terms, social prestige, convenience, and satisfaction. The greater the perceived relative advantage of an innovation, the more rapid its rate of adoption is likely to be.

2) Compatibility with existing values and practices

This is the degree to which an innovation is perceived as being consistent with the existing values, past experiences, and needs of potential adopters. An idea that is incompatible with the values and norms of a social system will not be adopted as rapidly as an innovation that is compatible.

3) Simplicity and ease of use

This is the degree to which an innovation is perceived as difficult to understand and use. New ideas that are simpler to understand are adopted more rapidly than innovations that require the adopter to develop new skills and understandings.

4) Trialability

This is the degree to which an innovation may be experimented with on a limited basis. An innovation that is trialable represents less uncertainty to the individual who is considering it for adoption, who can learn by doing.

5) Observable results

The easier it is for individuals to see the results of an innovation, the more likely they are to adopt it. Such visibility stimulates peer discussion of a new idea, as friends and neighbours of an adopter often request innovation-evaluation information about it.

The progress is not inevitable, however. There are two yawning 'chasms' which every new idea or product must bridge:

a) The challenge of supporting early adopters

Early adopters will often seek out new ideas, so contacting them can be easy. But the challenge is to provide the adequate one-on-one support that early adopters expect and the recognition they crave.

There is also a challenge for the program managers to see this as a development phase, in which ideology must give way to flexible, practical solutions. We need to remember that people adopt things for their own reasons, not ours.

Early adopters will often tell us how to change our product to make it marketable to majorities – our challenge is to respond.

b) Winning mainstream credibility

The second stage, one where most new ideas fail, is making the leap from experimental to mainstream.

- Firstly, the 'product' must beat it's competition at answering genuine public needs.
- Secondly, mainstream audiences are cost sensitive and hate risk. They require guaranteed off-the-shelf performance, minimum disruption, minimum commitment of time, minimum learning, endorsement from conservative leaders, and either cost neutrality or rapid payback periods.
- Thirdly, 'take-off' depends on word-of-mouth promotion. Your new idea must become, for a period at least, a fashion item.

THE ROLE OF FASHION

Don't forget that most successful ideas start as a trendy fashion item. An example is native plants, which became a fad in the early 1990s, before achieving mainstream acceptance.

The same is true of recycling. Currently, organic foods are becoming fashionable, meanwhile mobile phones have passed through high fashion into mainstream acceptance.

Many pundits have tried to figure out the underlying principles of fashionability.

A fascinating attempt is **Faith Popcorn's 16 Trends**
http://www.brainreserve.com/trends/trends.htm

If you have a hankering for social change theories you could look at **Theory at a Glance**
http://oc.nci.nih.gov/services/Theory_at_glance/PART_1.html
It's rather dry, but it's a good compendium of social marketing models.

COMFY ZONES – an important concept

The Theory of Cognitive Dissonance was devised by a psychologist, Leon Festinger, in 1957. The concept is that people experience discomfort when presented with ideas or demands outside their usual experiences.

When testing the theory he found that when people did take small voluntary steps outside their comfort zones, they could experience dramatic shifts in attitude in favour of the new behaviour or thinking, making further steps easier.

The theory suggests that people are best led to new behaviours by small steps which don't challenge their basic self-image or world view.

It also suggests that attitudes may often be the result of actions, not vice versa.

8 THE *human* TOUCH

To fly, successful projects rely on human touches such as gentle facilitation and leadship.

©Andrew Ley

Most environmentalists come from a biology or environmental management background. Hence it can be easy to neglect the human element.

The danger of focusing on the natural environment is that we emphasise the problems but not the solutions. Environmental damage is a symptom of human choices, human behaviours and human-created systems.

To 'save the planet' we therefore need to focus our understanding and professional skills on human beings, human society, and its economic and political systems.

In fact, to effect change, our human skills and understandings are probably more important than our ecological or scientific knowledge.

These kinds of 'people skills' come under a few headings:

- Team-building: A good starting point is to buy a book on leadership[8] or teams.
- Group facilitation
- Conflict resolution and negotiation
- Change facilitation

8. James M. Kouzes and Barry Z. Posner, 1996 The Leadership Challenge, *Jossey-Bass Publishers..*

For environmentalists there is an excellent guide that brings this knowledge together: *In the Tiger's Mouth - an empowerment guide to social action* by Katrina Shields. Katrina lives in Byron Bay, but her book is published by New Society Press in Canada. You can order it through their website.[9]

In the Tiger's Mouth focuses on sustaining change by sustaining ourselves and the people we work with. It's full of practical exercises for bringing people together, exploring experiences and concerns, listening, leadership, communicating, becoming empowered, organising, and planning and sustaining collective action. Its best aspect is that it is illuminated by a hopeful ethic of self-care, which is vital if we are to last long enough to repair the earth.

Perhaps the most important human skill of the biodiversity educator is effective facilitation, so let's look at what makes a good facilitator.

9. http://www.newsociety.com/
The cost is US$19.95 plus postage.

GOOD FACILITATION

At some time you may find yourself working with a group of peers or citizens to achieve change. You may be organising a community garden or a tree-planting day. You may be part of a lobbying campaign. You may be coordinating a peer education team.

These people will expect to be treated like competent, interested, motivated adults who have as much to say and offer as the 'leaders' or trainers. They will include highly skilled and experienced people, as well as naîve and energetic ones. There will, inevitably, be one or two eccentrics or 'prophets'. You will need to treat all these people with respect and provide structured avenues for their ideas and energy to make a difference to the work of the group.

Facilitation means 'to make easy'. Facilitation is the glue – often invisible – that holds a group together. It's different to leadership, although good leaders are invariably good facilitators.

Facilitation is an aquired skill.
It can be worthwhile taking some training in facilitation.

A good facilitator is an 'introduction agency' – they bring people together and help good interpersonal relationships to bud.

- They establish an atmosphere that supports respectful, informed, equal exchange and discussion.
- They take responsibility for monitoring the collective health and energy level of the group.
- They ensure that efforts are rewarded and achievements celebrated.
- They support the expression of new knowledge and points of view.
- They call for time out in cases of conflict.
- They recognise burn-out and encourage exhausted people to move off the front line.
- They may do these things without being the obvious 'leader' of the group.

Facilitation can be almost invisible. It can be shared between a number of people, yet a group where no one takes these responsibilities is doomed to a short and difficult life.

©Les Robinson

Facilitators ensure that individual efforts are rewarded and team achievements celebrated.

Most visibly, a facilitator may organise meetings and activities, especially in the early phases of a group. They make sure they, or someone else reliable, takes responsibility for:

1) Ensuring that venues are suitable, with disabled access, food and drink, toilets, shelter, access by public transport etc. (Checking the seating arrangements to make sure they encourages easy discussion.)

2) Conducting introductions, presentations and ice-breaking exercises, so people are put at ease.

3) Seeing that agendas are formed and agreed upon – including time allocations for each item and realistic finishing times.

4) Making sure members are identified by name tags, or by frequently addressing them by name.

5) Ensuring that other roles, e.g. Chair, scribe, timekeeper, spokesperson, activity or sub-committee leaders, are filled.

6) Ensuring that all have an opportunity to speak and no one dominates the discussion.

7) Maintaining focused discussion – don't let the group be distracted. Move the agenda along so people don't feel time is being wasted.

8) Ensuring all decisions are actionable, that is, someone is allocated to perform each one by a certain deadline – and commitments are followed-up!

9) Offering interesting discussion tools, such as brainstorms, mapping, small group discussion.

10) Optimistically summing up and set the time for the next meeting or activity.

11) After the meeting, circulating the minutes, following-up and making sure decisions are acted upon.

THE QUALITIES OF A GOOD FACILITATOR

Katrina Shields[10] suggests these desirable qualities for a good facilitator:

Neutrality. Though you may contribute to the discussion and make suggestions, you should not manipulate the meeting to bring about a particular outcome.

Good listening skills. Including reflective listening and strategic questioning. Respect for the participants and confidence that consensus can be reached and good solutions found.

Interest in what people have to offer.

Assertiveness that is not overbearing – to know when to intervene decisively and give some direction to the meeting.

Clear thinking and observation of the whole group. This requires a split attention to the discussion and the process (ie. how this is affecting group members).

An understanding of the overall objectives of the group.

Facilitators are the 'glue' of social change. They create safe face-to-face encounters where real personal change is most likely. Most importantly they can also create empowerment by bringing people together to work to a common vision and experience success. If you are a newcomer facilitation may seem rather intimidating. But the important thing is just to start. It's best learnt by practice.

10. Katrina Shields, In the Tiger's Mouth – an empowerment guide to social action, *New Society Publishers,1994, pg.95.*

THINKING ABOUT LEADERSHIP

Environmental groups often become unstuck over conflicting notions of leadership. 'Leadership' is not one person's job. It's something the whole team does. In fact the oft quoted definition of good leadership is that every member of the group is able to say 'we did that'.

Centralised, directive, charismatic models of leadership are probably not suitable in any situation these days, but they are certainly wrong when dealing with environmental volunteers.

Good leaders spend time negotiating a common vision and purpose with all members of a team.

It's worth keeping in mind the qualities of good leadership. This list is broadly adapted from Kouzes and Poster's survey into hundreds of leadership situations:[11]

An ideal leader:

- Is honest and open.
- Is willing to challenge the status quo and pioneer new approaches to doing things. Is an early adopter of innovation. Values experimentation and risk-taking.
- Is passionate, enthusiastic and optimistic.
- Is imaginative. Encourages other people to imagine. Builds other people's ideas into an inclusive vision.
- Listens. Understands the hopes, dreams, and aspirations of the people they want to enlist.
- Is an enabler. Lets the people own the process. 'We' not 'me'. Builds confidence. Delegates. Trusts people.
- Rewards creativity and initiative.
- Celebrates success.
- Loves people. Is kind. Puts the people before the vision.
- Is humble. They are there to serve and support.

11. James M. Kouzes and Barry Z. Posner, 199. The Leadership Challenge, *Jossey-Bass Publishers: San Francisco.*

Good leaders make supportive and rewarding environments where people can grow in the skills, knowledge and confidence required for their roles.

As you can see, these qualities could apply to every member of a team.

Notice that all this is the opposite of 'management' which is often top-down, aloof, analytical, risk-averse, focused on control, and so on.

9 THE *natural* TOUCH

©Mike Swan

The Green and Golden Bell Frog wears the Australian colours, is threatened, and lives at Homebush – a perfect flagship species to communicate the green Sydney Olympics.

Images of the green and golden bell frog heralding the successful rehabilitation of the Sydney Olympics site is but one of many great examples of how organisations have used "flagship species" to promote their conservation work.

The flagship species approach uses appealing species to create a rallying point for wildlife conservation. Some, such as the panda bear, whales, elephants, tigers and rhinos are now international wildlife icons, and have become potent symbols for conservation.

Flagship species tend to be big, beautiful, cute, powerful or much loved. Research has confirmed that people mostly appreciate big, charismatic wildlife,[12] so it's important to recognise the power of this tactic.

People also have sympathy for big, round, baby-like eyes, used to great effect by conservation organisations to promote the conservation of numerous mammal species, ranging from baby gorillas to threatened Australian marsupials.

12. Kellert, S.R., 1985. Public perceptions of predators, particularly the wolf and coyote. *Biological Conservation, Vol 31, pp.167-189.*

The flagship species approach is a useful means to communicate broader biodiversity conservation. The key is to select a flagship species whose individuals have a wide range that embraces the habitat of many other species. Many of these flagships tend to be top order predators. Messages should strongly relate the survival of the flagship species to the protection of their habitat, and be used as stepping stones to communicate broader arguments for habitat protection. A good example is how the conservation movement used the powerful owl as a flagship species to promote forest conservation in New South Wales.

Additionally, the flagship approach is increasingly being applied to promote invertebrates, which make up nearly all of the Earth's species diversity but tend to be forgotten in many conservation efforts. Research has shown that people favour invertebrates that have unusual aesthetic or practical value, such as butterflies and bees.[13]

For more information, see Appendix 7.

13. Kellert, S.R., 1993. Values and perceptions of invertebrates. Conservation Biology, *Vol.4, pp.845-855.*

Examples of flagship species used to promote habitat conservation

Species / Species Group	Habitat
Whales	Oceans
Sea turtles	Tropical beaches and oceans
Cassowary	North Queensland rainforest
Richmond birdwing butterfly	Rainforest
Koalas	Forests and woodlands
Powerful Owl	Forests
Murray/Mary Cod	Rivers
Frogs	Wetlands
Lyrebird	Temperate forests
Flame robin	Woodlands

Summing up

Flagship species can be a potent tool to promote the protection of a broader ecosystem.

Mallee fowl conservation has rallied landholders to conserve this threatened species through fox control and other measures.

10 WHAT. *social* RESEARCH TELLS US

Opinion polls and social research provide valuable guidance in designing a communication or action program.

Here are some findings from research, with their implications for biodiversity educators.[14]

14. The following section draws heavily from research sources quoted in David Bidwell and Susan C, Barrow, Roadblocks to Understanding Biodiversity, *Chicago Region Biodiversity Council: Chicago.*

MOST PEOPLE DON'T UNDERSTAND WHAT 'BIODIVERSITY' MEANS

Australians still have a very low awareness of the term, biodiversity, and a poor understanding of the concept.[15] A national AC Nielson phone poll undertaken in 1999 found that while about 4 in 10 Australians thought they had heard of the term, only 1 in 10 understood the concept. The remainder thought the term was concerned with financial planning (buy-diversity) or an alternative lifestyle (bi-diversity).[16] Recent focus group research suggests that most of those who understood the biodiversity concept had learnt about it through the school or university system.

This 1 in 10 awareness rate has remained static since the early 1990's when a major national quantitative study found that the term, biodiversity, was virtually unknown.[17] Additional social research undertaken in 1993 found that where there is awareness, it tends to be associated with conservation. This qualitative study found that most participants thought that biodiversity was vaguely related to plants and animals, with a stronger association with animals. Insects and bacteria, either as species or as part of an ecosystem, were rarely raised, even after prompting.[18]

This is consistent with various US sources that suggest only 1% to 30% of people know what biodiversity means.

15. Consumer Contact. 1998. Biodiversity Communication Campaign: Market Research Report. *Commissioned by Environment Australia.*

16. AC Nielson. 2000. Phone poll to gauge awareness of the term, biodiversity. *Commissioned by Environment Australia.*

17. ANOP (Australian National Opinion Polls). 1993. Community Attitudes to Environmental Issues. *ANOP Report on 1993 National Research Program prepared for the Department of Environment, Sport and Territories. DEST: Canberra.*

18. Michael Gill and Associates Pty Ltd. 1993. Community perspectives on biological diversity: a qualitative report. *Report prepared for the Commonwealth Scientific and Industrial Research Organisation (CSIRO). CSIRO: Canberra.*

A 1995 analysis of 10 focus groups in four US cities concluded that:

> "the public's real concern over habitat or species extinction is paper-thin and public understanding of biodiversity is superficial…initial lip service to the importance of the 'circle of life' or of not breaking a chain quickly disintegrated when any number of other issues entered the discussion. The participants showed themselves to be poorly informed about biodiversity and unconvinced of it's importance."[19]

This was confirmed in a 1996 Biodiversity poll of US citizens.[20] Only about 20% of people had heard of 'biodiversity'. However the majority were concerned about loss of species and saw humans as the primary cause. When the term was explained 87% said that maintaining biodiversity was personally important to them.

But this support proved shallow when competing issues such as jobs, property rights, comfort and convenience were introduced. For example, 48% said protecting jobs was more important than saving habitat, and 49% agreed it was acceptable to eliminate some species of plants and animals, especially pests. Hence, for about half the public, conserving nature is highly conditional.

19. Belden and Russonello, Research and Communications, 1995. Communicating Biodiversity: Focus Group Findings, *Washington DC.*

20. Elder, J., Coffin, C. and Farrior, M., 1998. Engaging the Public On Biodiversity – A Road Map for Education and Communication Strategies, *The Biodiversity Project: Madison, Wisconsin, 1996, pg.19.*

What this means for educators

These findings suggest we should try to avoid using the term 'Biodiversity' when badging or promoting programs in public. Rather the term should be introduced and explained once participants are involved in a program.

While biodiversity links to public values, it is clearly not a meaningful value in itself - hence 'biodiversity' needs to be translated into terms which are more compelling to ordinary people e.g. *"a healthy river", "a rich native bushland", "sustained fish catches", "sources of new medicines".*

By the mid 1990s, social marketing approaches and cognitive research was emphasising the limits of the science and environment education approaches used to date. In 1995, for example, Raymond Chipeniuk challenged the lasting value of educating the public about a complex scientific concept such as biodiversity:

> …little evidence suggests that teaching biology to lay citizens actually transfers lasting concepts, much less that it is the best way to equip lay people with the ability to think appropriately about biodiversity. On the contrary, cognitive scientists are starting to find that, for purposes of daily life, folk-generated common-sense ideas about the environment can be superior to those half-learned from the sciences.[21]

21. Chipeniuk, R., 1995. Educating the public about biodiversity. Global Biodiversity, *Vol. 5, No. 2, pp.24-26.*

While most government agencies were designing their environmental education programs based on the assumption that increased knowledge will lead to a change in attitudes and behaviour, the poor relationship between information driven campaigns and behavioural change led environmental marketing experts, such as David Said of the Environmental Marketing Unit, to critique this approach:

Because Australians invariably register a high level of environmental concern, we tend to assume there is a groundswell of popular support just waiting to be tapped. All the evidence is, however, that peer group pressure, stand out advertising and a catchy jingle may be more effective than the kind of sensitive, information-rich campaigns government bodies like to run.[22]

Biodiversity is best appreciated through personal experiences than as an abstract concept.

©WWF Australia

22. Said, D 1996. The True Identity of the Green Market. Australian Environment Review. *Vol 11, No.1, pg.11.*

AUSTRALIANS RESPOND STRONGLY TO 'QUALITY OF LIFE' ISSUES

Most Australians are concerned about the environment (69% in 1999) and this level of concerns has varied little over time (75% in 1992; 69% in 1994; 68% in 1996; 71% in 1998).[23]

However, when compared to other concerns, the environment has a relatively low priority (of people nominated as 'most important issue' in 1999):

- Health 30%
- Crime 26%
- Education 17%
- Unemployment 13%
- Environment 9%[24]

Amongst environmental issues, Australians appear focus on those which directly affect their wellbeing and the economy. The 1999 ABS research found that freshwater pollution was the main concern nominated by people living in non-metropolitan areas, while air pollution wad the greatest concern of those in metropolitan areas.

The NSW EPA's 2000 *Who Cares About the Environment* [25]survey provides a more detailed snapshot.

23. Australian Bureau of Statistics. 1999. Environmental Issues – People's Views and Practices, March 1998. *ABS Catalogue No. 46020.0. ABS: Canberra.*

24. Australian Bureau of Statistics. 1999. Environmental Issues – People's Views and Practices, March 1998. *ABS Catalogue No. 46020.0. ABS: Canberra.*

25. NSW Environment Protection Authority, Who Cares about the Environment – Environmental knowledge, attitudes and behaviours in NSW, *EPA Social Research Series, 1994, 1997 and 2000.*

When NSW residents were asked what they thought was the single most important environmental issue they responded:

- Water quality - 27%
- Air quality - 22%
- Land degradation, soil erosion etc - 10%
- Waste - 9%
- **Protection of trees, forests, bushland - 5%**
- Pollution generally - 3%
- Urban sprawl/development - 3%
- Logging/wood chipping - 2%
- Noise - 1%
- Other - 4%
- Not stated/not sure - 9%

Land degradation is increasing in prominence, jumping from 2% recognition in 1994 and 1997 to 10% in 2000.

The EPA's 2000 survey then asked respondents to rank 5 issues of concern about the environment. The responses were:

- Concern for future generations - 29%
- Quality of life - 20%
- Health - 18%
- **Sustainability of ecosystems - 17%**
- Long-term economic sustainability - 15%

What this means for educators

Australians are clearly more concerned about tangible issues which immediately affect their lives.

When framing messages it therefore makes sense to make links between biodiversity and health, economic and quality of life issues.

Examples of such messages could include:

- Giving rural communities a bright future.
- Keeping families on the land.
- Sustaining our local fishing industry.
- Sustainable farmers bank on biodiversity.

Australians are most concerned about issues that affect them directly. Messages should motivate people to action by linking biodiversity to the future of our children, quality of life, health, and economic issues.

ENVIRONMENTAL ATTITUDES DO NOT NECESSARILY LEAD TO BEHAVIOURS

One way statisticians value people's environmental knowledge and attitudes is through a composite measure called the New Environmental Paradigm (NEP). Analysis of the NEP results from the *Who Cares 1994* survey found that people with the highest NEPS were better educated, came from higher income households, were young adults of both sexes, and came from large regional towns or rural areas.[26]

However when the *Who Cares* results were later analysed there was found to be no provable correlation between NEP scores and behaviour and vice versa.[27]

This suggests that vague appeals to 'the environment' or 'ecosystems' are unlikely to motivate many people. Instead we need to focus on the genuine personal advantages offered by specific actions such as tree planting or creek preservation - things like getting to know like-minded people, having healthy family activities, and learning new skills (not to mention food, fun and prizes!).

The Who Cares researchers did find that the relationship between attitudes and behaviour was stronger when the attitude was highly specific, ie. it amounted to an intention to perform exactly that behaviour. This reinforces the idea that we should be promoting specific eco-actions, rather than making general environmental appeals.

26. TAVERNER Research Company. 2000. Who Cares About the Environment in 2000? *NSW Environment Protection Authority: Sydney. pg.74.*

27. Black, A.W. and Reeve, I. 1994. The relevant importance of various factors in explaining or predicting environmentally responsible behaviour. *Prepared for the NSW Environment Protection Authority. The University of New England: Armidale. pp.14-15.*

What this means for educators

The implication is that the primary aim of the educator is to get people performing the desired behaviour, irrespective of their reasons. In the beginning it matters little why people recycle, join a Bushcare group, pick up litter, or go bush walking. The act of performing these things is what is important. It amounts to a personal commitment. People then seek rationalisations for their behaviour, and if the educator is present with a strong set of reasons, some of these reasons may be adopted by the actor as the justification for the action. The learning follows the action.

The educator is then freed from having to constantly 'ram the environment down people's throats'. Instead we can promote events to meet people's immediate tangible needs. For instance a tree planting day could be promoted as *'free fun for kids'*, *'free B-B-Q'*, *'meet your neighbours'*, or *'learn about bush foods'*. Once people are engaged, they are then more likely to be open to ideas about species protection, biodiversity and the needs of future generations.

HOW DO PEOPLE LEARN ABOUT BIODIVERSITY?

Raymond Chipenuik believes that 'childhood foraging', that is, informal childhood rambles and playful, accidental explorations of nature, is how many people learn sympathy and understanding for biodiversity in their home region.

> *"In fact, research indicates that it is direct, informal experience of nature that attunes individuals to biodiversity in the bioregions they actually inhabit..."*[28]

Another researcher looked at the personal histories of 40 people working for environment groups. He concluded that a conservation ethic is encouraged by solitary exploration in natural places, and that small groups of children should be allowed to explore nature in an unstructured way.[29]

City dwellers, however, often have limited opportunities to experience nature directly. Instead they rely on television, newspapers, magazines, books and visits to the zoo, botanical gardens or a natural history museums. None of these mediums are likely to have the power or immediacy of time spent in natural environments with expert guides or informed peers. A combination or structured activity and free exploration of the environment is also strongly encouraged.

28. Raymond Chipeniuk, 1995. Childhood foraging as a means of acquiring competent cognition about biodiversity. *Environment and Behaviour.Vol. 27, No.4, pp.491-512.*

29. Tanner,T, 1980. Significant life experiences: A new research area in environmental education. *Journal of Environmental Education.Vol. 11, No.4, pp.20-24.*

What this means for educators

It means that at the heart of our programs should be the direct experience of nature: tree planting days, tours and walks, family-friendly picnics beside the creek, outdoor games in nature.

> "Using people's existing relationship to nature - even if it is an urban, humanly constructed and controlled 'nature' – may help connect them to the biodiversity issue. For instance using a garden as an example of the larger ecosystem is a convenient, understandable way for persuading gardeners who already think of themselves as stewards of their own little plots…"[30]

While much of our communications work inevitably involves printed materials or mass media, the purpose of those materials should nevertheless be to promote real-life experiences in the environment.

Remember that nature need not be pristine – the same lessons about interconnectedness and complexity can be found in a suburban backyard, a vacant lot, a football field, a farm, a school landscape, even a crack in the sidewalk.

30. Belden and Russonello, Research and Communications, 1995. Communicating Biodiversity: Focus Group Findings, Washington DC. pg.18.

MOST AUSTRALIANS THINK THAT BIODIVERSITY LOSS IS A RURAL ISSUE

Most Australians consider that biodiversity loss is a rural problem. Focus group research found that biodiversity does not clearly relate to the urban environment, except in association with protecting urban remnant vegetation.[31] This is consistent with the general perception that most biodiversity loss is due to land clearing and loss of trees in rural Australia.

What this means for educators

Many Australians living in cities and towns believe nature conservation is an 'out there' issue. As such, educators need to make a strong association between the importance of local natural heritage and local actions that can be taken to conserve it. Once this association is made, such as the need to restore local bushland, broader issues such as on-going loss of native vegetation can be made.

Piggy-backing biodiversity on big picture issues like salinity, clean air or forest conservation may have limited success. For people living in urban areas, appeals to these issues as a spring board to a biodiversity campaign is likely to simply place biological diversity as yet another background issue.[32]

31. Michael Gill and Associates Pty Ltd. 1993. Community perspectives on biological diversity: a qualitative report. *Report prepared for the Commonwealth Scientific and Industrial Research Organisation (CSIRO). CSIRO: Canberra.*

32. Michael Gill and Associates Pty Ltd. 1993. Community perspectives on biological diversity: a qualitative report. *Report prepared for the Commonwealth Scientific and Industrial Research Organisation (CSIRO). CSIRO: Canberra.*

HOW DO PEOPLE RESPOND TO CONSERVATION CLOSE TO HOME?

Recent research commissioned by the NSW National Parks Service[33] suggests that people tend to mentally 'construct' four natural realms:

1) Urban spaces – neighbourhoods, yards, streets.
These are places made by humans for humans to live in. Only attractive, beneficial or harmless forms of wildlife are considered appropriate here – small/attractive birds, ladybugs, blue tongue lizards, kookaburras, frogs, butterflies, earthworms.

2) Urban nature – local parks and gardens.
These are constructed leisure places, with lawns and manicured trees. Their purpose is human recreation. A wider range of wildlife is appropriate here, but needs to make room for humans.

3) Accessible 'bush' - urban bushland, bush parks.
These are accessible, managed 'bush' areas which should be reasonably safe for humans to visit. Nevertheless they are basically there for wildlife.

4) The natural environment – unspoilt, original nature.
Not really meant for people. Visits may involve discomfort and a degree of danger (snakes, spiders, wasps).

33. Woolcott Research. 2002. Urban Wildlife Renewal "Growing Conservation Urban Communities", *Prepared for the NSW National Parks and Wildlife Service: Sydney.*

What this means for educators

It may be worthwhile keeping these 'constructs' in mind when developing programs. Mixing inappropriate messages may cause incomprehension or hostility from a local community, especially in urban bush regeneration or creek restoration projects. You may want to restore natural creek bank vegetation, whereas neighbours might want to dump dirt on it to make a better place for swings and picnic tables. This may make perfect sense if residents see the creek as part of 'urban nature' - a place whose purpose is human recreation. Overcoming such pre-conceptions can be a gradual process which takes a great deal of listening, sensitivity, compromise, not to mention local champions.

WHY DO SOME PEOPLE EXHIBIT SKEPTICISM WHEN PRESENTED WITH INFORMATION ABOUT LOSS OF BIODIVERSITY?

Most Australians live in cities and many have no regular direct experience with nature, nor the threats affecting native species and ecosystems. On top of this, nearly all Australians don't have a good understanding of basic ecological principles, which undermines a sound understanding of how threats relate first to the decline and finally to the extinction of a species.

Unlike an oil spill event, it is far more difficult to see biodiversity loss. The process of extinction is subtle and can take decades or even centuries before a species disappears forever. The death of the last individual of a species is normally not witnessed but detected years later when a plant or animal can no longer be found.

These factors, sometimes combined with a frontier mentality, can lead to skepticism.

Recommended reading

If you are designing a conservation communication program we strongly recommend that you read Engaging the Public on Biodiversity, an accessible US publication which discusses issues in public communication of biodiversity in depth.
See Further reading pp.156-157.

part

B

Implementing a successful project

enabling ECOACTION

11 FORMATIVE *research*

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Failure to reality test your work through formative research greatly increases the risk that your project will end up being a dud.

No one knows for sure whether a particular promotion or program will work. All our work is essentially experimental. So it makes sense to write our 'change strategy' as a hypothesis.

"If we offer [these proposed benefits], then [this specific audience] will respond by [the desired action]."

For instance, for promotions:

- If we offer a fun Family Tree Planting Day in South Creek, at least 50 families will participate, and 5 people will sign up for our creek rehabilitation project.

- If we provide a Sustainable Farming training course to farmers around Dubbo, at least 50 farmers will attend, and at least 5 will be recruited into our low-chemical farming program.

Once you have a hypothesis, you need to reality-test it. That is the role of formative research.

Formative research means talking to experts about the nature of the problem and the workability of proposed solutions. And it means talking to members of the intended audience about the workability of the solution and barriers to participation. It also means doing desk research to check on similar programs or relevant academic studies.

Formative research may tell you, for instance, that no individual action could affect the problem. There may be nothing an individual or group could do because the issue is beyond individual control, e.g. regulation of toxic substances. You may need to put other elements in place before you think about communicating with the public, for instance, changing the policies and funding priorities of the local council. Your communication strategies might better be targeted at internal managers and policy-makers than the public.

We've included the Achievability Test (page 84), as a guide to the questions you need to ask in the formative stage.

Once your have reality-tested your hypothesis, and feel it is achievable, it becomes your program goal (see page 121).

TO CARRY OUT FORMATIVE RESEARCH

1) Talk to experts.

- 'Experts' means others who have struggled with the problem – scientists, academics, agency staff, and 'expert' members of the community.
- Use the phone or call a special advisory meeting.

2) Talk to members of the intended audience.

- Focus groups are an effective tool. Don't be afraid to run your own (see page 114). An even better tool is Participative Action Research (described in the next chapter).

3) Do desk research.

- Do an internet search, especially to check for similar programs. There's no need to reinvent the wheel.
- If you can, go to a major research library, and look up the online serials catalogue. There is an amazing world of academic research out there, and much of it can be freely downloaded.
- Good databases to start at are Sociological Abstracts and Web of Science.

THE ACHIEVABILITY TEST

Is the proposed solution achievable?
Ideally, your targeted behaviour(s)
should meet all of the following tests.[34]

1) Is it likely to impact on the problem? **Yes / No**

Ask: do your behaviours attack the real problem? It's no good asking people to weed local bushland when the locals are routinely dumping garden waste all over it. Experts can often be out-of-touch with conditions on the ground. So it's usually best to test the idea with members of the audience, to test whether it really makes a difference.

Your audience are practical people – getting something this basic wrong will seriously damage your credibility.

2) Will it have immediate and obvious consequences? **Yes / No**

Behaviours with immediate tangible benefits are more likely to be adopted than those with distant vague benefits. For example, if water is expensive, water conservation measures may significantly lower the water bill, but if electricity is cheap, energy conservation measures may produce little benefit, except for the far-off, benefits of reducing climate change.

34. This test is adapted from Environmental Education and Communication for a Sustainable World – Handbook for International Practitioners, *Brian A. Day and Martha C. Monroe, Eds, GreenCom, 2000. pg.10.*

3) Is it compatible with cultural norms and current practices? **Yes / No**

Behaviours need to make socio-cultural sense. For instance, in middle class western cultures, electricity consumption is virtually synonymous with success and comfort. People have worked hard to achieve a certain income, and gadgets and climate control are the benefits from that income. They may see electricity conservation as incompatible with accepted social norms.

4) Is it cost-effective? **Yes / No**

Avoid behaviours which are costly in time, money or effort. Small businesses, for instance, have no time to carry out complex environmental audits. Nor do they have the surplus cash for expensive environmental purchases. Any surplus money or time is sure to be spent on higher priorities than improving the environment. Innovations suitable for small business need to be cost-neutral and very simple to implement.

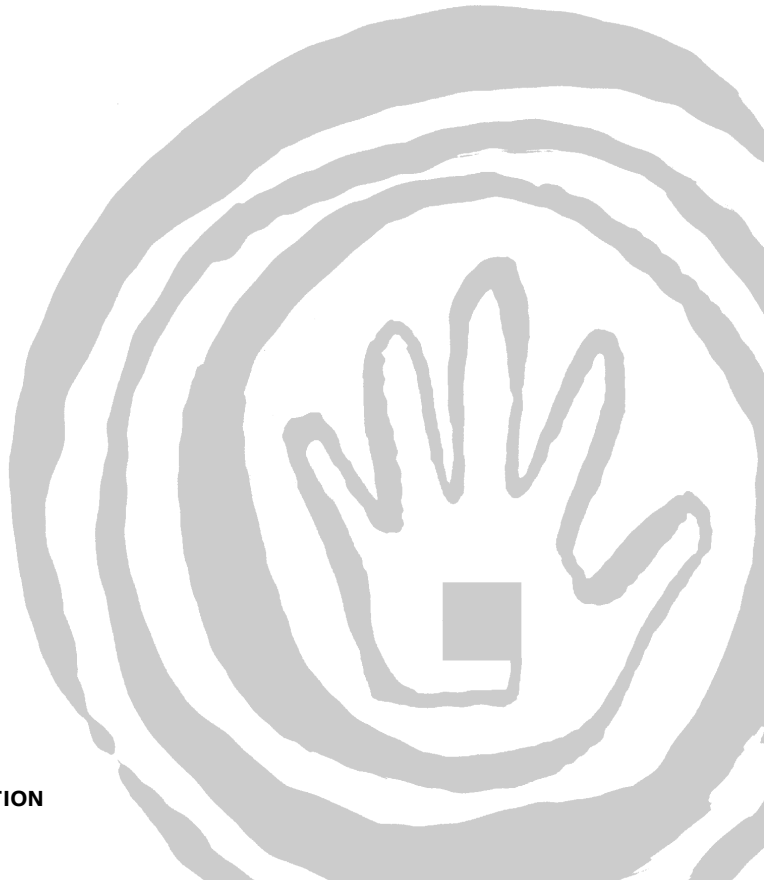
5) Is it simple to do ? **Yes / No**

Keep proposed behaviours simple to explain and easy to do. Why is recycling effective? Because the collection services make it easy and convenient to do. Why is home composting lagging? Perhaps because the more you learn about it, the more complicated it sounds.

The best way to answer these questions with confidence is to involve members of the target audience in identifying the desired behaviour (see Action Research on pages 89-91).

12 audience PARTICIPATION IN DESIGN

When is the right time to involve the public in your programs? The answer is – from the very start. In fact, there are good reasons for involving members of the intended audience in the design of your program.



Involving the audience in design is a great way to inject local knowledge, local flavour and imagination into a project. It also ensures that we sensitively address a community's own perceived needs – not simply the funders. It may also allow us to facilitate a powerful kind of communication – one where a community effectively has a conversation with itself about what it means to be leading a responsible life, looking after the health of both present and future generations.

Another advantage of such partnerships is that they can generate greatly increased legitimacy for the council or agency that initiates them.

It's important to recognise that the most sustained kinds of environmental learning occur when we facilitate others to discover their own truths, to learn new skills, and to work together to experience success. This truth has long been understood by adult educators.

Adult education draws part of it's inspiration from the work of Brazilian educator, Paulo Freire, who in the 1970's challenged the top-down, control-oriented, technological model in Western education. For Freire, adult education was inherently about empowerment. It involved groups of people working together, sharing and questioning their own experiences and exploring the foundations of economic and social systems that made manipulation and exploitation possible.

It's valuable to keep in mind the principles of adult learning when designing your program (see page 94).

Freire's ideas fit in well with the concept of Participative Action Research (PAR). This is a general term for many techniques which directly involve members of an intended audience in the design of a strategy or program. PAR is now a mainstream practice in fields such as health service planning, architecture, urban planning and rural sustainability.

This philosophical shift away from purely top-down design is based on the realisation that local people know better than anyone else what their problems are and what solutions might work. Also, professionals in many disciplines now recognise that projects can only be sustained when local people have the commitment that comes from genuinely owning a project.

If you are interested in learning more on Participative Action Research, a good resource is Southern Cross University's Action Research Resources web site at www.scu.edu.au/schools/gcm/ar/arhome.html

PLANNING AN ACTION RESEARCH PROGRAM

The essential features of a PAR project are:

- reasonably representative participants;
- participants define the 'problem' and possible solutions through reflection their own experiences, knowledge and research;
- the group commissions or carries out additional research;
- the group reports back to it's larger community.

Although the group should have a high degree of control over the PAR process, it's important to start with a detailed plan. Of course it can be later amended by the group – provided it stays true to the project's purpose.

Good participation should happen way before people get their hands dirty – it should start from the earliest stages of project design.

Here is an example of a typical plan for a conservation-based Participatory Action Research project:

1) Invite members of the local community to a B-B-Q, together with local leaders, experts, councillors and council staff.

2) Graphically describe the issue, with presentations from experts and local residents.

3) Invite members of the audience to nominate for an 'action research team' (or 'steering committee' or similar name). Also advertise for nominations.

4) Select a balanced group that is relatively representative of the affected community (including both sexes, youth, elders, indigenous people, the disabled). Involve experts as technical advisers. Don't be afraid of one or two mild eccentrics – provided the group is well facilitated, they can be the spice in the stew!

5) Obtain agreement on the purpose of the group and the process to be followed. It's important that the group guides the process to be followed.

6) A typical action research process may involve:

Clarifying the problem
Site tour, review environmental statistics, experts discuss natural processes.

Exploring the causes
Use sketch maps on butchers paper to map community behaviours, the make-up of the community; the source of impacts. Use timelines to capture historical changes like droughts, floods, land clearing, urbanisation. With the assistance from experts, the group may design a community survey or carry out additional research to fill gaps in knowledge.

Exploring and testing possible solutions
The group researches solutions, then discusses advantages and disadvantages of each solution. Use a simple effort-versus-impact matrix to prioritise solutions (see Appendix 6 for the priority matrix).

Forming an action plan
Test and prioritise interventions; develop a practical campaign plan (who does what, when, with what resources); decide how the program will be monitored and evaluated: who will collect evidence of progress? Report back to the community on progress.

7) The group meets regularly to review progress on the action plan.

8) The community receives feedback on progress, through letterboxing and media stories.

9) Celebrate each milestone - preferably with the whole community. Offer rewards to the hardest working members – they've put in a lot of work and deserve the recognition.

10) Collect evidence at every stage. That's how you measure your success, report to others, and prove that the project was worthwhile.

A participatory process depends on skillful facilitation. If you feel unconfident in this area, you may consider having some training or involving a professional facilitator, at least as an adviser.

CHECKLIST FOR A SUCCESSFUL PARTICIPATORY PROJECT

PAR is an example of a deliberative participation project. That is, members of the public are involved in deliberating on solutions to problems – just as a jury or parliament does.

There are innumerable models for public deliberation - including progress indicator projects, citizens juries, consensus conferences, deliberative polls, and stakeholder forums.

Don't be intimidated by these different models. The choice of model is far less important than three factors:

a) good facilitation

b) the genuineness of the organisers

c) the underlying qualities.

©Big Scrub Rainforest Landcare Group/WWF Australia

Here is a checklist for the underlying qualities of an effective participation project, as identified by participants.[35]

- ❑ Do the participants represent all significant sectors of the community?
- ❑ Does the process focus on the common good?
- ❑ Do the participants communicate in person, face to face?
- ❑ Does the process involve citizens, as opposed to individuals hired to represent citizens?
- ❑ Do participants have genuine power to influence the process, agenda and outcomes?
- ❑ Does the process encourage dialogue?
- ❑ Does the process encourage good inter-personal relations and respect civic virtue ie. openness, honesty, understanding, listening and trust?
- ❑ Is there a friendly atmosphere: e.g. food, neutral facilitator, sensitive seating arrangement.
- ❑ Is there good physical access at times and places that suit the participants.
- ❑ Is there good access to information, ie. participant requests for information are satisfied.
- ❑ Are there resources for new research and adequate analysis ie. moving beyond assertions to empirically test and verify facts.
- ❑ Does the process promote a sense of place?
- ❑ Does the process engender reflection of the values underlying the discussion?

35. This list brings together lists from two studies: Poisner, J., 1996. A civic republican perspective on the National Environment Policy Act's process of citizen participation. Environmental Law, Vol. 26, pp.53-94. Tuler, S. and Webler, T., 1999. Voices from the Forest: What Participants Expect of a Public Participation Process. *Society & Natural Resources, Vol. 12, pp.437-535.*

PRINCIPLES OF ADULT LEARNING[36]

- **Involve learners in planning and implementing learning activities**
- **Draw upon learners' experiences as a resource**
- **Cultivate self-direction in learners[37]**
- **Create a climate of trust and mutual respect that encourages and supports learning**
- **Foster a spirit of collaboration in the learning setting**
- **Use small groups**

36. Reproduced from Susan Imel, 1998. Using Adult Learning Principles in Adult Basic and Literacy Education. *www.ericacve.org/docgen.asp?tbl=pab&ID=88*

37. Brookfield, S.D., 1991. Understanding and Facilitating Adult Learning*:* A Comprhensive Analysis of Principles and Effective Practices*, Jossey-Bass Publishers: San Francisco.*

38. Based on *Allen W., Kilvington, M., and Horn C., 2002.* Using Participatory and Learning-Based Approaches for Environmental Management to Help Achieve Constructive Behaviour Change*, Landcare Research, New Zealand, pg.44.*

THE ROLE OF A FACILITOR IN GROUP DEVELOPMENT[38]

Although all groups are different, some distinct stages of group development have been noted by researchers. They begin with 'getting started' and 'getting to work' followed by 'maturity' and 'ending' where the group has reached a point of fulfilment. This process has been referred to as forming, storming, norming/performing and dorming.

A supportive facilitator helps a group to move through these stages. They help define a clear purpose, to support the group to identifying action steps, and maintain motivation. Without facilitation and support a group may to flounder midway, losing its initial enthusiasm. Loss of purpose can lead to conflict and division. The following table suggests the role of a facilitator at each stage.

FORMING STAGE	FACILITATING FORMING
● Lots of questioning about thepurpose of the group and what tasks are to be performed ● Looking for leadership.	● Patient explanation of the purpose of the group ● Identifying and agreeing group goals, and objectives ● Setting up the process, e.g. how decisions will be made and who will make them ● Establishing leadership in the group.

Note: If this stage is not done thoroughly it is likely to have to be revisited as the group loses sense of direction.

STORMING STAGE	FACILITATING STORMING
● Disagreement over goals or objectives. ● Conflict between group members. ● Absence and withdrawal by group members. ● Frustration over lack of achievement of goals etc.	● Reiterating the purpose – reminding members of the goals. ● Checking on achievements so far – celebrating them, however small. ● Checking on tasks – reassigning them if necessary and reviewing resource needs to carry them out. ● Carrying out conflict resolution – using professional facilitation. ● Possibly rotating the leadership to encourage involvement by other group members.

Note: This stage is a common sticking point for many groups.

NORMING / PERFORMING STAGE	FACILITATING NORMING / PERFORMING
● Group attendance is high and enthusiastic. ● Tasks are being performed regularly. ● Optimism about achievements.	**Maintaining momentum by:** ● ensuring resource needs are met ● noting achievements ● learning from failures.

The group can then go in one of two directions:

A. DORMING / ENDING STAGE

- The group purpose has been achieved, or
- circumstances have changed and the group no longer continues.

FACILITATING ENDING

- May require a redefinition of goals if the group wants to continue together, or
- acknowledgement of achievements in order to leave participants with a positive experience of group work.

B. INDEPENDENCE

- The group has a clear vision of the future and a real sense of purpose.
- The group is empowered to deal appropriately with issues, conflicts, resource needs and other changes as they emerge.
- The group is innovative and moves from solving one problem to creating a desired future by identifying and tackling related issues.
- The group has strong partnerships and networks with relevant agencies and other groups.
- Individuals in the group confidently reflect on and appraise their actions.

FACILITATING INDEPENDENCE

- The facilitation role of an external agency is diminished and the group does most of the day-to-day facilitation itself. However, an external facilitator may still:

- assist the group to establish good networks with their community and beyond, for support, information and learning from the experience of others;

- help the group undertake good evaluation of its process, outcomes and networks so they can learn from experience;

- maintain a supportive environment for the group to try out ideas and take risks.

13 SETTING ACTION-ABLE *objectives*

All project paths should lead to a tangible action.

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This may sound dry, however the most common cause of ineffective communication programs is fuzzy and unachievable objectives.

It's important that your objectives are measurable, because that's how you prove and track success, and provide feedback to your audience.

To start with, there is a big difference between a vision, a goal and an objective.

A vision is a hope or dream for the future

For instance:

- A healthy Salt Pan Creek
- A restored Yarrahapini Wetland
- A sustainable Murray-Darling Basin

A goal is your preferred practical strategy to achieve the vision.

For instance:

- A healthy Salt Pan Creek: through a council audit scheme to reduce polluted runoff from businesses.
- A restored Yarrahapini Wetland: by supporting a community campaign for re-innundation.
- A sustainable Murray Darling Basin: by advocating a government investment plan with binding, measurable targets.

An objective is a *measurable* action, by a specific player, which is necessary to achieve the goal.
For instance:

- To reduce polluted industrial run-off in Salt Pan Creek:
  - Bankstown Council inspectors to carry out stormwater audits on at least 20 businesses per month.

- To re-innundate the Yarrahapini Wetland:
  - The Department of Land and Water Conservation agrees to fund a consultation and education process with local landholders;
  - Local government seeks funding for the necessary works.

- To ensure the adoption of a Murray-Darling Basin salinity investment framework:
  - The Commonwealth State Governments to establish an acceptable framework;
  - The Murray-Darling Basin Commission promotes a vision for sustainable rural landscapes;
  - Business Leaders formally agree to support the framework.

A little rigour goes a long way. If you have not defined an objective which is genuinely actionable, and measurable, then you won't know whether you have achieved it and you won't have any way of measuring the impact of your efforts.

The ATRACT-ORS tool (next page) is a simple checklist to ensure that your objectives are do-able.

WORKING WITH YOUR MANAGEMENT COMMITTEE

It's good to involve your management (or committee) in formulating your objectives so they are in full agreement, understand the rationales, and don't just arbitrarily add new objectives.

Here's a process you can use:

1) Freely brainstorm campaign objectives with your team, managers and/or committee.

2) Write up all the objectives you can think of on a white board or butchers paper. All objectives must take the form 'Player A does specific action X'.

3) Use the ATRACT-ORS tool to filter out non-actionable objectives.

4) If you still have more than three objectives, then use the Priority matrix (appendix 6) to choose ONLY ONE major objective, and no more than two secondary objectives to pursue during any one planning period.

5) Document this process and obtain management sign-off to work on only these objectives for a definite period e.g. 6 or 12 months (after which you'll evaluate progress).

The ATRACT-ORS tool

Does your objective pass each of these tests?

❑ **Achievable**
Has it a reasonable chance of success given the context and history of the players?
(Not sure? Use the Achievability Test below)

❑ **Targeted**
Is there a definite, reachable actor?

Reachable means you can say exactly how to each this audience, e.g. particular magazines, or networks.

❑ **Realistic**
Are you and your allies likely to have the resources to make a significant impact on this actor?

❑ **Action-oriented**
Is a definite, measurable action or decision required from the actor?

Measurable means you know when it's happened.

❑ **Compelling case**
What are the non-ideological benefits of your campaign goal that will make it personally compelling for the actor?

❑ **Timely**
Is there is enough time to plan, prepare and implement the intervention, and for the actor to respond?

Even if your objective fails one of these tests, it may still be acceptable if it meets one of the following exceptions:

❑ **Opportunity value**
Is the opportunity is too good to miss even if the outcome is unclear (ie. it's a calculated risk)

❑ **Recognition value**
Is it a major opportunity for exposure and profile-building for the campaign or your organisation?

❑ **Strategic value**
Is it strategically essential to support existing relationships or allies?

14 MAKING YOUR *program* MEASURABLE

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Measuring the progress of your project is important to ensure it does not go off track when it reaches the sea of issues surrounding implementation.

Evaluation is now a science, with it's own journals and professional bodies. Formal project evaluation can be a complex and expensive project in its own right.

However such professional-level evaluation is not appropriate for small-scale conservation programs.

In this context, evaluation need not be seen as a particularly complicated or taxing process. Essentially it involves setting objectives which are easily measured and collecting evidence as you go.

You get three strong benefits from evaluation:

1) You can report back to your funders – and possibly get re-funded!

2) You can reflect upon and improve your program.

3) You can report back to participants and the public – to acknowledge and celebrate their success.

SET MEASURABLE OBJECTIVES

First, have you got an actionable objective? OK…go and do the ACTRACT-ORS test above.
That helps you choose objectives which have a good chance of success.

Second, have you defined the objective so that you know exactly when it's happened? Look at these examples:

Non-measurable objectives:

- Save Salt Pan Creek
- Improve Water quality in Salt Pan Creek
- Reduce industrial runoff into Salt Pan Creek
- Convince local businesses to control run-off into Salt Pan Creek

Measurable objective:

- Bankstown Council inspectors to carry out stormwater audits on at least 20 businesses per month in the Salt Pan Creek catchment

This is an achievable and measurable objective. At the end of six months you can know exactly whether you have achieved it.

THREE KINDS OF MEASURES

There are three different aspects you can aim to measure:

a) Performance measures ie. the amount of work you did.

The example of Bankstown Council above is a performance measure. Examples:
- number of stalls held
- number of people interviewed
- number of brochures distributed.

b) Impact measures ie. how the audience responded.

Examples:

For a public event:
- number of people attended
- number who requested more information
- results from feedback forms distributed at event.

For a media event:
- number of stories published/broadcast
- number of calls received in response.

For advertising campaign:
- number of people who could recall the brand or message (you would need to do a telephone survey to find this out)
- number of calls/coupons received in response.

For a survey:
- number of responses
- number who indicated interest in joining a Bushcare group.

c) Outcome measures, ie. how the environment changes.

This can be often be difficult to measure, partly because of the cost, and partly because many different programs and events contribute to large scale environmental changes. For instance, waste reduction is influenced by economic cycles. Water pollution is affected by weather events. Changes in community behaviours can reflect passing fashions.

Some outcome measures are feasible, e.g. recycling rates in a particular local government area are continually measured by the local waste contractor; litter counts can be easily organised; Streamwatch projects can measure water quality in a particular creek.

Generally, the measurement of outcomes is best left to major efforts by other organisations, such as State of the Environment Reporting or State Government social research projects.

NOTE: often it's best to focus on the changes you achieved with a smaller group of people – those who actually participated in your project, or were reached directly. You can best do this by simple pre- and post- surveys that measure changes in knowledge, attitudes and self-reported behaviours.

COLLECTING EVIDENCE AS YOU GO

It's worth planning from the beginning how you will collect evidence from your project. Here are some simple actions to keep in mind:

- Keep a record of verbal comments from members of the public. This 'anecdotal evidence' (even though it is not statistical) can be very valuable, simply because it is considered and expressive.
- Keep a list of calls received from members of the public, especially during a particular campaign.
- Count heads relentlessly.
- Keep records of all materials printed and distributed.
- If you are using advertisements, always include a measurable call to action, for instance:

  Call this number for your free Native Gardening booklet.'
  Call this number to reserve your place at the Family B-B-Q and tree planting day'.
  Clip this voucher to enter the competition'.
  Come to the Save our Bush Park public meeting.'

- Distribute feedback forms at all participatory events. Consider surveying participants about changes to their confidence, knowledge and values.
- Take photographs at all events. Try to capture people's facial expressions – this will look great in your report or future presentations.
- Keep a press clippings file. Keep videos of any TV coverage.

MORE ON EVALUATION

An excellent guide to evaluating environmental education projects is available by the IUCN: *Evaluating Environmental Education*[39]. It can be downloaded from http://iucn.org/cec

39. Stokking, K., van Aert, L., Meijberg, W. and Kaskens, A., 1999. Evaluating Environmental Education, *World Conservation Union: Gland, Switzerland and Cambridge, UK.*

15 KNOW YOUR *audience*

©Alison Colyer

A well received conservation message relies on good understanding of what your audience thinks is important.

The more you know about your audience, the greater your chance of meeting your objectives.

It's important to be as specific as possible about defining your audience. The idea of *reachability* helps. You know your audience is reachable when you've defined it so succinctly that the definition alone immediately suggests the ways to reach it.

For example:

Unreachable audiences:

- The general public
- Householders
- Residents of Kogarah local government area

Reachable audience:

- Families with young children in southern parts of Kogarah LGA

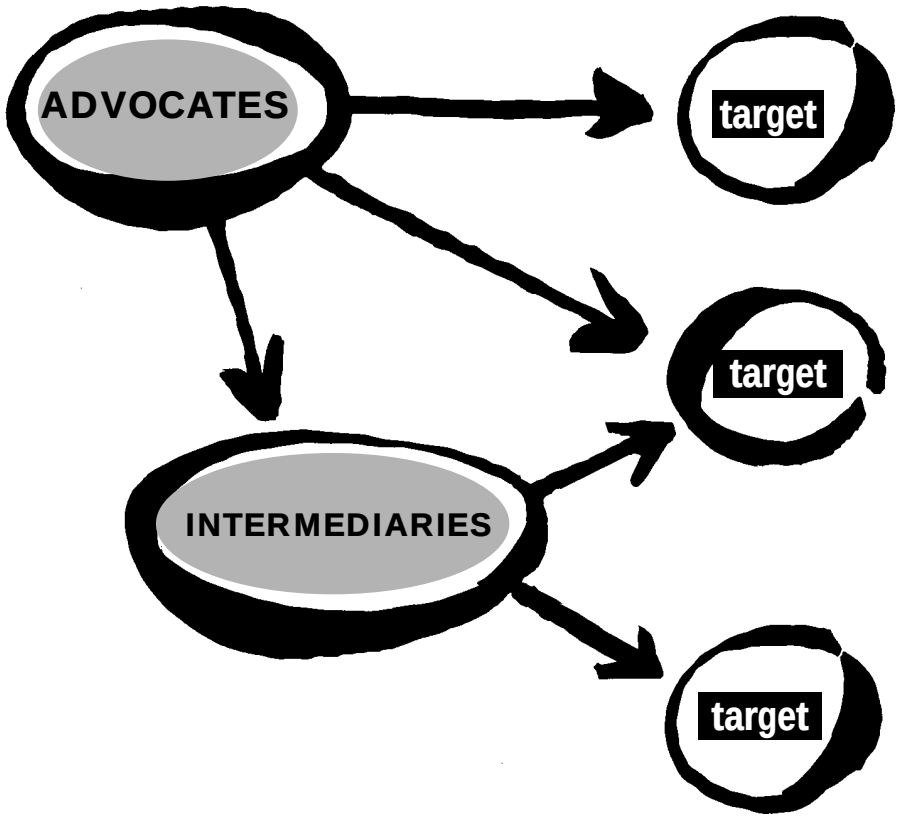
This is a reachable audience because you can immediately guess that specific child care centres and medical centres could be good ways to reach this audience.

Similarly, 'People with gardens living in Campbelltown' would be reachable through a limited number of local nurseries, plus the gardening feature in the local newspaper.

THREE KINDS OF AUDIENCE

No matter what your objective, it's worth being aware of three quite different kinds of audience: advocates, intermediaries and targets.

Generally you'll need to communicate different messages to each of these audiences.



Advocates	Advocates are your immediate program team. They can include fellow workers, counter staff, community supporters, peer educators or members of your management committee. They take the message directly to the public and have real face-to-face conversations with the target audience.	**They need to be:** motivated and know the important reasons for the program. They need to know their roles and what arguments to use with the target audience. **They may need** technical skills like bush regeneration, composting and water testing.
Inter-mediaries	Intermediaries help spread the message, magnifying the work of the campaign team. They should be credible people your target audience respects and listens to. They may include staff from allied organisations, media commentators, celebrities, local community or business leaders.	**They need to know:** how the campaign serves their own agendas, why it's important, the goal, the key arguments, and what they need to do.
Targets	The targets are the ones who need to act to achieve the objective. Targets can include members of the public, or decision-makers. You can even plan a campaign to target your own management!	**They need to know:** what the benefits are, who else is involved, and what the action is. **They may need** some practical 'action' skills – so you might need to plan demonstration events or stalls where people can experiment with new products or substances.

RESEARCHING YOUR AUDIENCES

a) Running your own focus groups

The best way to understand your audience is through running your own informal focus groups.

This is called qualitative research and it provides insight into an audience's attitudes, barriers and opportunities for change.

For reliability you should run at least 2 focus groups for each particular audience segment. How you segment your audience depends on your needs, but generally you'll want to separate doers from non-doers. You may have a separate group for lapsed doers. Occasionally you may want to separate men from women, or different age groups.

You can employ a professional firm to recruit randomly-selected participants, or you can invite your own participants.

If you work for a council, you can approximate a random selection by inviting a range of non-environmental council staff to a lunchtime focus group (free lunch provided of course!).

Focus groups are an effective way to make sure your project does not end up being a laughing stock.

©*Queensland* Tourism Queensland

Focus groups are not difficult. At their simplest, they are just a friendly discussion around a cuppa. As the focus group facilitator or moderator, your job is to:

- clearly explain the purpose of the gathering and the ground rules;
- keep conversation flowing, don't let one person dominate, encourage the quiet ones;
- stay neutral: don't provide information or take sides;
- ask probing, open questions that explore people's experiences:
  For instance:
  - What have you heard about .....?
  - What do you think about .....?
  - What's your view on .....?
  - Have you experienced .....?
  - How would you respond to .....?
  - Why?
- stay focused: be prepared, have a script and stick to it;
- don't dismiss anyone's comments out of hand;
- keep notes (or have a note taker, or tape record with permission);
- provide feedback to participants: how their ideas will be used and what's next;
- reward the participants (a small payment plus light refreshments).

You can use the focus group to answer formative questions like:

- How the audience understands the problem and their role in it.
- How they understand the solution and their role in it.
- What role models, aspirations, values, hopes, fashions and movements can you work with?
- Who are their influencers?
- Is the desired action realistic?
- What barriers exist?
- Are there competing messages or misconceptions?
- What real benefits can you offer someone who makes the change?
- What's the most direct way to reach them?

Focus groups are also the best tool for pre-testing different messages, images and materials.

b) Social research

Another tool to get insight into your audience is through social research, based on random surveys of the target audience.

This is called quantitative research and it aims to provide statistically reliable data on what people do or think. Beware of post-back surveys – they are not statistically reliable as the respondents are self-selected.

Quantitative surveys let you find out what people are doing now. When repeated they can track changes over time. When highly targeted they can be valuable evaluative tools. What surveys do not do is help you creatively design new programs – that's where focus groups come in.

When designing your own survey, it's good to repeat questions which have been used in similar surveys in the past, or in other geographic areas, because this comparison provides valuable information on how people have changed over time, or how your population differs from others.

40. Stokking, K., van Aert, L., Meijberg, W. and Kaskens, A., 1999. Evaluating Environmental Education, *World Conservation Union: Gland, Switzerland and Cambridge, UK.*

For advice on designing surveys see: *Evaluating Environmental Education* [40] which can be downloaded from http://iucn.org/cec

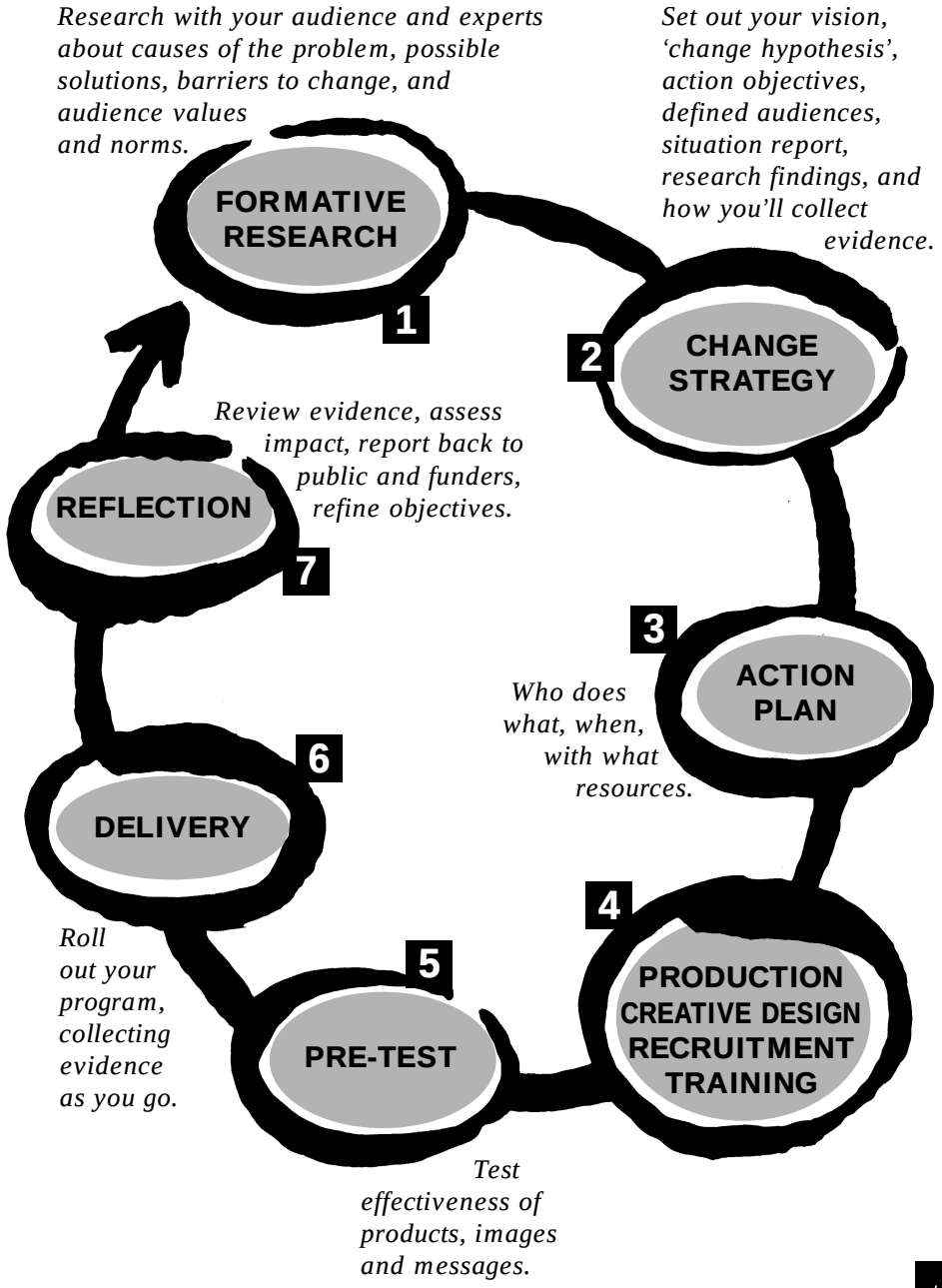
16 DESIGNING YOUR *program* AS A CYCLE

It's a good idea to imagine your program as a cycle, so that the results of the first year's program feed into the second year, and so on.

Some communicators recommend doing audience testing at every stage, however, at a minimum, you should do audience research (e.g. focus groups, telephone survey) at two stages: the **formative stage,** when you are planning your program; and the **pre-testing stage**, before you spend money on printing.

If you can afford formal evaluation, you'll be doing focus group research in the reflection stage as well.

THE PROGRAM DESIGN CYCLE



17 START PLANNING YOUR *program*

Use this section to plan out your program.

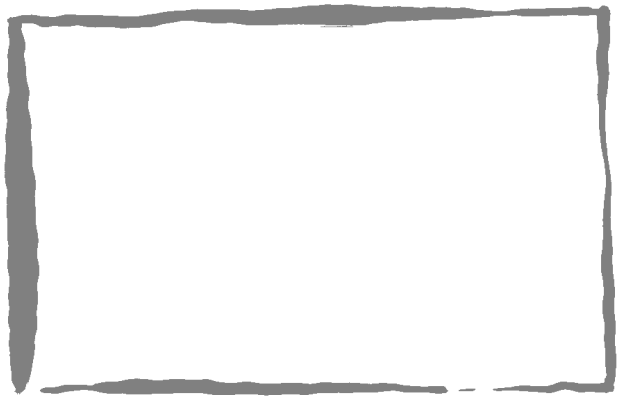
1) Write your vision here

That's your hopeful vision for the future.

2) Write your goal here.

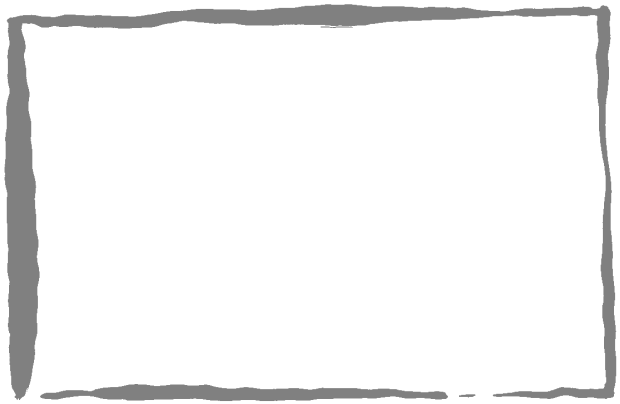
That's your preferred practical strategy to achieve the vision. You've already 'reality-tested' it and feel confident that it is the most work-able solution to the problem – refer back to the Formative Research chapter, from page 80.

3) Write your major objective here.
Make sure it's in the form "Player A to do action X".
Check:
Does it pass the ATRACT-ORS test?
Is it measurable?



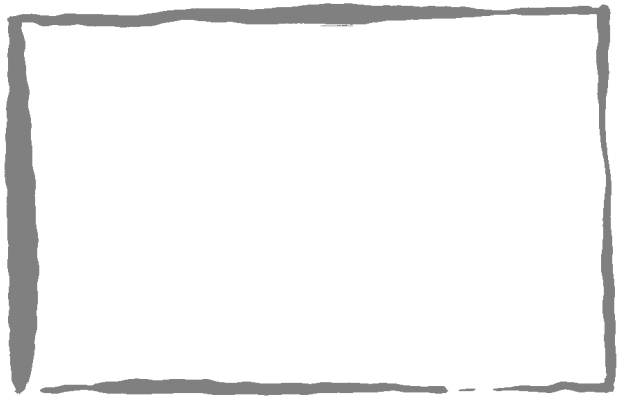
4) Write your secondary objectives here.

Make sure they are in the form "Player B to do action Y" and pass the ATRACT-ORS test.
Are they measurable?



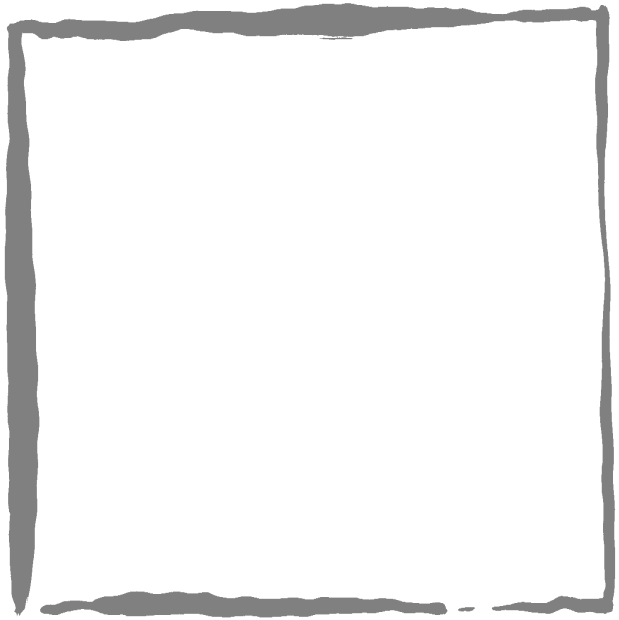
5) Write down the primary target audience for the major objective.

Is this audience reachable?



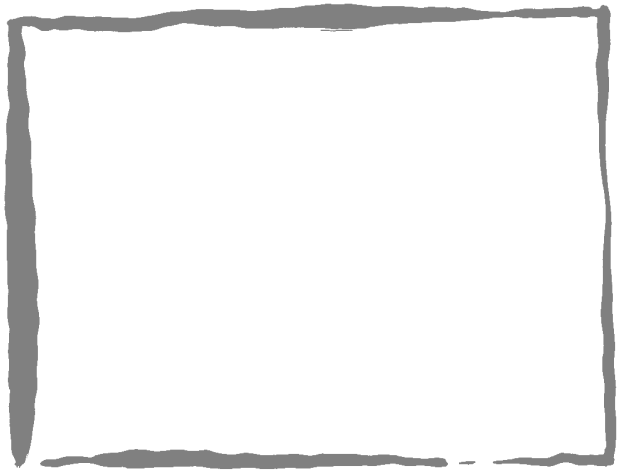
6) Name at least 2 influencers.

They need to be highly specific, e.g. would you know how to ring them up?



7) Now list your advocates or sales force.

They are people you already know, or you might need to recruit and train them.



The next steps are to craft messages and tactics for each audience.

18 CRAFTING STRONG *messages*

Imagine you meet a stranger in the street... you have one minute to engage them and convert them to your cause. What do you say?

©Klein-Hubert/WWF

Restoring a local waterway to bring back the platypus proved to be a simple and powerful message to motivate residents.

You'll need to have a short, sharp, compelling case, interestingly presented, which connects immediately to their personal concerns.

You'll need to grab their attention with a colourful personally-relevant word picture. Then be ready with answers to their concerns and doubts. Then finish with a simple solution that offers realistic benefits and appeals to the listener's common sense.

At the end of this chapter is a Message Matrix tool you can use to design compelling messages, but before you use it there are some points to keep in mind.

THE POWER OF STORIES

Humans have been telling each other stories for hundreds of thousands of years. We love a good yarn. Human brains seem to be naturally adapted to learn through storytelling. Think about what makes a good story: a hero or victim, a threat or a perilous passage.

NSW Farmers Association campaigners recently distributed anti-green leaflets to people in rural towns in NSW. They featured an elderly woman who said she was terrified of being sued $1,000,000 for mowing her lawn, because of the Threatened Species Conservation Act. If readers were concerned they should come to a public meeting to find out

more. This is powerful propaganda because it has an immediate and compelling story, and accords with rural people's distrust of central government. It also provides an action people can take to express their concerns.

Having a story like this that vividly illustrates your message and accords with your audience's values is vital for a successful communication campaign.

US campaigners fighting to save the Endangered Species Act used advertisements with a story which featured a story about Jackie Buckley, who as a young child was diagnosed with Leukemia.

©Endangered Species Council / www.stopextinction.org

She's alive today because of this flower.

Three years ago Jackie Bucklie was diagnosed with leukemia. Today she is in remission and has an 80% chance of survival thanks to the medicines derived from the flower of the rosy periwinkle.

Half of today's medicines come from natural sources. The Endangered Species Act is the best protection these sources have. But now the Act itself is in danger.

Tell Congress to save the law that saves lives. Use the [coupon] on this ad, or for more information, call (202) 547-9009.

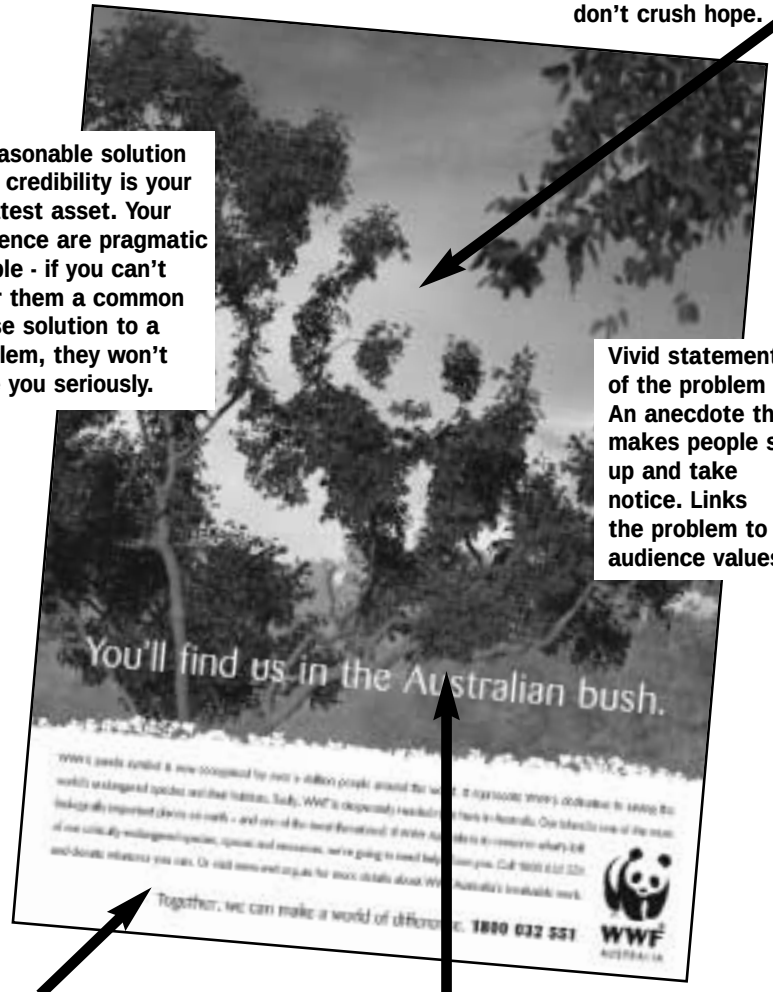
ANATOMY OF A COMMUNICATION

Supporting facts and stats
Specific facts and statistics are vital for your credibility. What others are successfully doing.

Theme image
Graphically illustrates and personalises the problem. But beware of harsh or excessively negative images - don't crush hope.

A reasonable solution
Your credibility is your greatest asset. Your audience are pragmatic people - if you can't offer them a common sense solution to a problem, they won't take you seriously.

Vivid statement of the problem
An anecdote that makes people sit up and take notice. Links the problem to audience values.



The audience's role

Quotes from credible witness(es)

The Grab or Hook
Grabs attention, suggests what the message is about (cues help the reader to decide it's addressed to them)

©WWF Australia

BE POSITIVE

Gloom and doom lead to despair. Be wary of negative 'eco-horror' messages. It may be true that 'XX % of species are being wiped out each year' and that 'extinction is forever'. However messages that blame humans without showing what an individual can do the fix the problem can simply cause disempowerment or denial.

When communicating general biodiversity messages, it is better to focus on positive stories about people planting local native plants, creating shelter for birds and lizards, and using recycled paper, and certified wood products. These are easily comprehended, common sense activities which are within people's 'comfy zones' and are compatible with their lifestyles. It may then be much safer to introduce the 'eco-horror' argument, because you have already offered readers an easy-to-do vision of practical remedy.

ALWAYS INCLUDE A CALL TO ACTION

Always ask your readers to do something. but don't overburden them with lists of complex actions. Keep it simple – just one or two things to do.

> Actions are how you measure your impact and actions are how people learn ... always include a call to action.

Easily measurable calls to action can be as simple as:

- Call this number for a free copy of...
- Clip and send this voucher
- Enter the competition
- Come to the family-friendly picnic day
- Come to the council meeting

USE CONCRETE LANGUAGE

Avoid abstractions like the plague!
Avoid technical words like habitat, ecosystem, sustainability, and biodiversity.

Don't be fuzzy.
Instead of 'huge amounts of trees', say 'Over 400 hectares of forest per year'. An even better idea is to convert hectares to average house blocks or football field equivalents.

Simplify your statistics.
Don't say 77.8%, say '3 out of 4'.

Try to create a word picture.
Not '3,000,000 cigarette butts', but '3 million butts – enough to fill an olympic swimming pool'

> **Facts and stats need to be as 'touchable' as possible.**

AVOID JARGON

Convert jargon into plain English. With species, always lead with common names where they exist. Some alternatives to biodiversity jargon are below.

Biodiversity jargon	Plain English version
Biodiversity	Diversity of life/Web of life
Ecological processes	Circles of life
Ecological relationships	Web of life
Bioregion	Landscape
Habitat	Home for wildlife
Ecosystem management	Managing the land
Remnant vegetation	Patch of bush
Contiguous vegetation	Intact bushland

WHO'S YOUR VOICE?

You don't want your message to be dismissed as 'just what I expect from those greenies'…or 'it's just the council again' or 'that's a typical NIMBY statement.

Readers always assess the *credibility* of a message by trying to figure out who is speaking it. So it's vital that your message does not appear to come from a 'voice' with an obvious ideology or self-interest.

So a vital question is: 'Is your voice credible?'

Many worthy communications are tainted by being 'from the government' or 'an expert'. The most powerful communications today are peer-to-peer. Remember all those four-wheel drive advert which feature farmers talking to farmers about their new vehicle. These adverts mimic peer communication.

So consider highlighting quotes from trusted others in your communications. Try to find believable, independent people with no immediate vested interests: use parents to talk to parents, farmers to talk to farmers, business people to talk to business people, conservatives to talk to conservatives, sportsmen to talk to young men.
And of course, use celebrities to talk to people who recognise and trust them.

©Network Ten

Hayley Chapman, a presenter of the children's TV show *Totally Wild* is the face of WWF Australia and Network Ten's schools conservation competition. Since winning schools appear on *Totally Wild*, Hayley helped entice schools to enter and have a chance to be on TV.

KNOW YOUR ENEMY

Be prepared. Conservation has enemies and many of their arguments are predictable: 'this development means jobs', 'regrowth forest has no ecological value', 'home composting is a health risk'. See Appendix 8 for some common myths about biodiversity.

Sit down and think of the arguments your opponents may use. Then carefully prepare your answers. Then you'll be ready with a defence, or better still you can raise the issues first and defuse the attacks.

BENEFITS ARE THE CORE OF YOUR MESSAGE

Put yourself in the audience's place.
Ask: ***"What's in it for me?"***

Try to find out:
What are their needs?
Which of their needs can you meet?
Why should they bother responding?
What key points will make the difference?

Remember to see benefits from the audience's view:

- You don't buy an air conditioner, you buy comfort.
- You don't buy circus tickets, you buy thrills.
- You don't buy a newspaper, you buy news.
- You don't buy glasses, you buy vision.
- You don't buy a child restraint, you buy safety & protection for your child.
- You don't buy insurance, you buy security for your family.

Be clear on the broad type of benefit.
Locate what your audience will perceive as value.

USING THE MESSAGE MATRIX TOOL

This planning tool was developed by Social Change Media, a Sydney-based public interest communication agency. It's been used to develop messages for hundreds of social marketing campaigns and products over the years, from HIV education to home composting.

It's good to use when brainstorming with your team.

List specific audiences. → / Copy this from your 'actionable objective' ↓	**Activists** activists, trained staff or educators, board members	**Influencers** allied organ-isations or professionals, celebrities, local leaders, commentators	**Targets** community or decision-makers
Behavioural objective the specific action you want them to take			
Barriers what's stopping them from doing it?			
Opportunities what's some desire, belief, fashion we can ride on?			
Competing messages what's the opposition saying?			
Audience benefits what can we offer that is important to them?			
Theme / messages how best to frame a convincing case			

Competition! Giveaways!

Remember, people act for their own reasons, not ours. It's often more important to get people to act than for them to understand the exact reasons we think they should act.

As we noted on page 27, some researchers suggest knowledge and attitudes may be best learnt as a result of acting or trialing a new behaviour, first.

Hence it can be a very good idea to include more universal, immediate incentives e.g. free vouchers, competition entry, give-aways, prizes, meet the stars, fun for the kids, free food, free how-to booklets.

NOTE: When brainstorming, make sure it is based on the audience feedback you received from your formative research (pages 80-85).

19 DESIGNING AN INTEGRATED COMMUNICATION *campaign*

A communications plan will help you connect all your campaign elements.

©*Queensland* Tourism Queensland

You've worked out your objectives and messages, now it's time to plan out the practical details of your campaign. Remember that effective communication campaigns are multi-faceted. They involve a range of efforts that reach people from a different angles, are repeated, and continually reinforce the basic message.

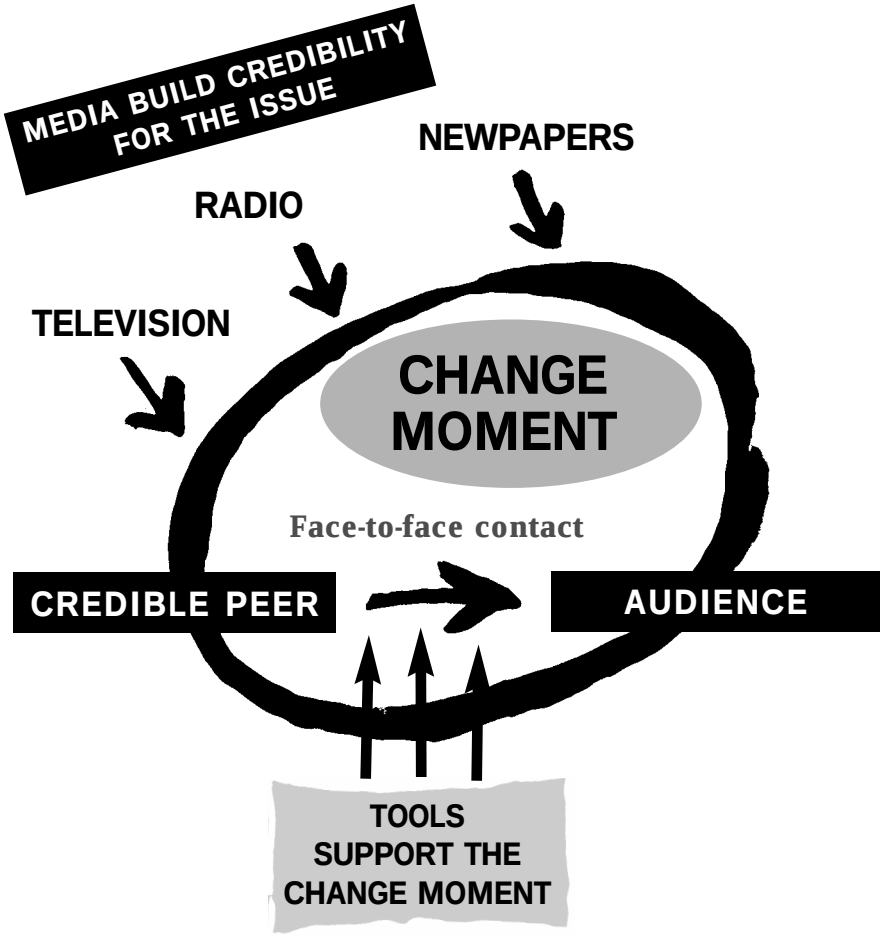
Simply put, there are three fundamental kinds of communication available to us:

1) Face-to-face communications or 'learning moments'. Person-to-person meetings can be the most credible kinds of communication - where conversations occur and people can formulate new views under the influence of peers or 'trusted others'.

2) Information tools such as printed materials. They rarely achieve change in themselves, but can be important to reinforce face-to-face efforts (e.g. advertising, billboards, posters) or to answer an audience's needs for more in-depth information (brochures, booklets, kits).

3) Media stories. These add a vital atmosphere of credibility, importance and immediacy to the issue, reinforcing other communication efforts.

This model shows their relationship



An integrated campaign aims to make simultaneous use of all three types of communications. The Campaign Matrix tool, on the right, is an effective way to map out the suite of initiatives you need to match the different needs of your different audiences.

USING THE CAMPAIGN MATRIX

This tool was also developed by Social Change Media. It works like this: List your specific audiences down the left column. Then, depending on your available resources, list ways that you can realistically reach each audience.

	FACE TO FACE COMMUNICATION	INFORMATION TOOLS	MEDIA STORIES
Activists			
Influencers			
Targets			

Here are some examples of methods that you could choose from to meet your audience needs.

	FACE-TO FACE COMMUNICATIONS	INFORMATION TOOLS	MEDIA STORIES
Activists involve, inspire, inform, reward	briefings, phone contact, training, check-lists, e-mail	background info kit, how-to info, news updates, e-mail, in-depth web site	exciting, motivation, credibility for campaign
Influencers obtain their support by demonstrating the benefits to THEIR agenda	delegations,phone direct,address their gatherings, seminars, broadcast e-mail	leaflets, brief papers/kits, newsheet, web site with targeted info	the importance of campaign, common goals
Targets who you want to change	public events, workshops, delegations, stalls	direct mail, e-mail, posters, banners, mouse pads, rubik cubes...	who else is changing, how they benefited

Try to fill in each square.

This is a simple tool that lets you lay out the elements of your campaign so you don't forget the needs of any particular audience.

MAKE YOUR ACTION PLAN AND TIMELINE

Once you have listed the elements of your campaign you need to decide who in your team is going to be responsible for each one, when, with what resources.

This calls for a simple project plan and timeline. It's a good idea to choose a launch date and work backwards to make sure you leave enough time for each activity. If you haven't done any of the activities things before, ask an experienced person how long each activity should take. It's easy to underestimate production times and most things will take longer than you think.

Even a small public communication project takes at least 3 months from planning to implementation.

NOTE:
A communication planning process is summarised at Appendix 3.

©Klein-Hubert/WWF

Before your project can fly, use the campaign matrix so the needs of your audience are met.

20 always PRE-TEST

Always pre-test your messages and products on members of the target audience. It's best to use informal focus groups. Give people time to read the products, then ask them questions.

Pre-testing always pays off. At the very least you'll sharpen the language and impact of your product. More probably you'll discover and avoid major flaws or ambiguities in the messages or imagery.

To avoid being startled when your intended target audience doesn't respond to your communication product, use pre-testing to make sure your product is on message and well received.

Focus groups are the best tool for pre-testing. Make sure the members are reasonably representative of the intended audience (remember: for a quick-and-dirty pre-test you could select members of council staff who are similar to the target audience).

Begin by discussing the problem you are addressing, then show your messages, images and materials. Once they have had time to review them, ask questions to probe their responses. A list of possible questions is included below.

It's a common mistake to only show a pre-test group a single version of the messages/images/materials. This is almost a complete waste of time and reflects laziness from the design team. To offer useful comments people need to be able to compare different alternatives of the message/images/materials. With a single set, people really only have an 'accept' or 'reject' choice, and no points of reference.

So always provide a range of examples to discuss. You should prepare at least three different sets of messages/slogans. Your designers should make at least three different versions of the logo and layouts of materials.

Examples of pre-testing questions[41]

For a communication product, ask the intended audience:

- What do you think the main message of this poster/advert/radio spot/etc is?
- To whom is the message directed?
- Could it be you? Why or why not?
- Do you find this product interesting? Why or why not?
- What grabs your attention most?
- Where did you stop reading? Why?
- What do you like most and least? Why?
- Does the main character remind you of someone you know? Why or why not (which may be promoted by specific questions about hairstyle, clothing, gender etc.)?
- What would prevent you from doing the suggested behaviour?

41. Questions adapted from those in Environmental Education and Communication for a Sustainable World – Handbook for International Practitioners, *Brian A. Day and Martha C. Monroe, Eds, GreenCOM 2000, pg.58.*

For a school education product, ask teachers and administrators:

- Is this activity/poster/film/booklet something you could use in your class?
- For what grade level is it most appropriate?
- For what subject is it most appropriate?
- Are the illustrations appropriate? Gender bias or ethnic bias?
- Is the vocabulary appropriate?
- Will the activity help you meet your curriculum objectives?
- Would you use this? Why?
- Would you need to be trained to be comfortable using this?

For any product, ask experts:

- Is the information accurate?
- Is the message appropriate?
- If people adopted this behaviour, could it make a difference to the problem?

21 COMMUNICATION *pitfalls*

Several common communication mistakes can result in your project ending up as a mere shadow of its original intention.

©Barry Traill

Here are some mistakes commonly picked-up in pre-testing, together with some suggestions to avoid them.

Answering your own question, not the audience's

This is probably the most common and damaging communication mistake.

It's good to imagine that all communications are part of conversations. Ask: *"If my message is an answer – what is the audience's question?"* Then check that your audience is REALLY asking that question.

For instance, members of a new housing estate are probably not asking how they can protect a local creek from litter and runoff. Intead they are asking things like: How can we meet our neighbours? How can we find activities for the kids?

Too much information

The complexity of the book/article should not be greater than the readers' own needs. Build your writing at the level of your readers' knowledge, not your own.

Try the 'yellow-highlighter test'. Take a yellow highlighter, browse through your text and mark only the parts that really grab your attention. Consider deleting the rest.

Boring

It's a stimulating world. There are lots of interesting things to do and look at. Ask: 'Why should anyone spend time reading my booklet or poster?' Then think of ways to put on a show.

Arrogance

Have you just been a little too ideologically pure by asking people to do things which are simply impractical? (Like composting all their grass clippings or reusing all their milk cartons.)
Pre-testing helps you pick this up.

Management-speak

Replace vague abstractions with real things you can touch. Replace 'a domestic green waste education program', with 'free classes in better home composting'. Remove jargon and acronyms. Imagine you are speaking it to a non-expert.

HINT: Everyone gets stuck in a grammatical quagmire from time to time. One way to write an idea clearly is to speak it. A good way out is to imagine an audience and to try to explain yourself to them verbally.

'Off' images

Audiences really focus on images. They'll be easily turned off by photo subjects with inappropriate gender or ethnicity, inauthentic people or scenarios (like the dirty curling linoleum in the corner of the supposedly modern kitchen). Pre-testing helps you avoid this loss of credibility.

Using questions as headings

A heading like "Why is mulch good for your garden?" communicates virtually no information. Such headings are a waste of space. Better to make your heading a positive assertion, like: "Mulch brings your soil to life".

Ambiguities

Your audience doesn't think like you – at least half of them will get the meaning you didn't expect. Pre-testing picks this up.

Weak captions

Captions, along with headings, are the most read parts of a publication. So put them to work. Don't just describe the photo, point to the bigger story, sell an idea, have fun, be poetic, hint at the grand epic of life. For instance, instead of writing "Nick and Marcy Bloggs visit the new community garden." You could write "Get in touch with the good earth at the new Rocklea community garden."
Or "Budding green thumbs get the organic gardening low down at Rocklea's friendly new community garden."

Incorrect information

Wrong names, phone numbers or facts, or spelling mistakes can be disastrous. At the very least they make you look unprofessional. At the worst you'll have to withdraw and reprint your publication.

22 REACHING NON-ENGLISH SPEAKING BACKGROUND *audiences*

There are many examples of people from non-English speaking backgrounds getting involved in environmental activities.

Here's a story which may be informative. A Landcare officer in western Sydney tried for over a year to involve people from NESB communities to tree planting activities. Special community days were held and few if any people attended. Then, by chance, the officer talked to a member of a Samoan church, who offered to organise a picnic day. Much to the officer's surprise over 100 people turned up with a great supply of BBQ food. Parents, children and elders all got to try their hands at tree-planting.

The story points to the importance of face-to-face contact with local groups, and also to the value of mixing environmental action with on-going social activities.

NESB audiences may have weaker than average environmental knowledge and values. But this is not necessarily a disadvantage. As with any mainstream audience, you'll need to wrap the environmental issue into people's actual needs and experiences. Many NESB groups are also quite suspicious of government. Remember that there are big cultural differences between language groups – don't try a 'one size fits all' approach.

Here are some general points to keep in mind when communicating with NESB audiences[42]

● **Work through community organisations**

It's important to work in partnership with NESB organisations (e.g Migrant Welfare Centres). Spend time talking with community workers and form a picture of the community needs, priorities, networks and popular media.Where possible, train bilingual peer educators to communicate with members of their own communities - this has proven by far the most successful approach.

● **Focus on the audience's priorities**

Strive to identify and answer the needs of a particular audience – don't just lecture them. Try to link your project to family health and well being, to cost savings, legislation, and to existing cultural priorities (e.g. household cleanliness is very important in Chinese society).

● **Use face-to-face communication**

Programs should rely as much as possible on face-to-face meetings, for instance through social groups or stalls at community festivals.

42. EMD Consultants. 2000. Involvement of Non-English Speaking People in Natural Resource Management, *unpublished literature review.*

● **Avoid information-heavy approaches**

Workshops, training seminars and other information-centred approaches are less likely to be relevant to NESB audiences since people may feel intimidated by technical information requiring high levels of English proficiency.

● **Use interpreters where appropriate**

While English is the appropriate language for many European NESB audiences, communities from Asian backgrounds will generally require interpreters or translated materials, as these groups have a more recent settlement history.

● **Check written materials**

To ensure accuracy, check written materials with bilingual staff in community associations before production. But note that even translated materials may sometimes be inappropriate since not all NESB groups are particularly literate in their own language.

New Backyard Buddies Program

The new NSW Government "Backyard Buddies" Program aims to underpin the efforts of local councils and individuals wanting to mainstream conservation attitudes and behaviours beyond those who are "keen and knowledgeable".

Over time Backyard Buddies aims to become a popular movement, one that is easy and enjoyable to take part in. A movement that leads people in urban areas to positive experiences of the native plants and animals living around them, a starting point for positive attitudes and more positive behaviour.

The Backyard Buddies brand, graphics and educative materials are available for use on appropriately designed community education and involvement projects. Local governments, museums, and community organisations are already using backyard buddies concepts and approaches to reach a broader audience than their existing programs.

For further information,
email: backyard.buddies@npws.nsw.gov.au
Web: www.backyardbuddies.net.au
Research report:
www.nationalparks.nsw.gov.au/urbanwildliferesearch

A few final thoughts

1. Planning focuses your energies and ALWAYS saves time and money.

2. People change for their own reasons, not yours.

3. Explore the issues with your audience.

4. Link your campaign to your audience's deeply held positive values, and to current fashions and trends.

5. Find out what the barriers are from the audience's point-of-view.

6. Reflect on your work and experiment.

7. Pre-test before you jump.

part

C

Further information

enabling ECOACTION

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[Information at: www.social-marketing.com]

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[Free download at:
www.nationalparks.nsw.gov.au/urbanwildliferesearch]

FURTHER WEBSITES

GreenCOM. The Environmental Education and Communication Project of US Agency for International Development
www.greencom.org

Environmental Communication and Public Participation Interactive Course
www.planetcreacom.nl/matra/

Institute for Media, Policy and Civil Society (Canada)
www.impacs.org

The Biodiversity Project (US)
www.biodiversityproject.org

Social Change Media
media.socialchange.net.au

World Conservation Union Commission on Education and Communication
www.iucn.org/cec/

appendix 1

Tips for talking about biodiversity

When you need to talk about biodiversity keep the following things in mind.

1. Make it real, not conceptual or abstract

Talk about biodiversity in terms of real places, real ecosystems, real species and real issues. Ground the abstract concept of 'diversity of gene pools, species and habitats' in real places and experiences. Illustrate with forests, rivers, deserts, coastlines, wetlands etc. and the variety of life that depends on them. Minimise use of statistics about global species loss.

2. Localise whenever possible; stress place

Make the connection between people and place – focus on local habitats.

Use local examples, experiences and anecdotes to provide context and meaning – a real place or problem that people can identify with, eg. loss of local songbirds, destruction of a local wetland or patch of remnant vegetation, habitat loss by bitou bush, habitat restoration by local Bushcare groups.

Avoid focussing on the exotic and distant: biodiversity is not just about what happens in Amazonian rainforests anymore! If appropriate, place your local issue into a regional or national context to highlight its broader significance.

3. Make the human connection: health and human services

Thanks to nature, life itself is possible. Illustrate and explain how healthy ecosystems sustain human life, from fresh air and clean water, to providing food, fibre and fun. In short, life supporting life.

Healthy natural systems keep us healthy: Balanced ecosystems promote human health, from supplying clean water to protecting us from exotic viruses, exploding insect populations, and toxic pollution.

Nature's pharmacy: Potential loss of future sources of medicines interests some audiences (younger adults) and not others. But, do not just talk about medicines that might come someday from exotic places. Instead explain common medicines that have already come from nature to illustrate how important natural sources of medicines already are. An example is corkwood found in Queensland which produces hyoscine (or scopolamine); a treatment for motion sickness, stomach disorders and the effects of cancer therapy. Start with the familiar, bridge to the possible.

4. Find common ground with common values. Lead with values – follow with facts

Most Australians believe that we have a responsibility to maintain a clean and healthy environment for our families and for the future generations that will inherit the world we leave behind. This sense of "stewardship" provides common ground for starting conversations, after which the facts can be introduced.

5. If the value fits, use it

Not everyone looks at the natural world the same way. Some think we should protect it because it is the responsible thing to do for the next generation, others because it is beautiful, others, because it is God's creation, others because they believe in the intrinsic value of nature, etc. Know which values your audience embraces before you invoke a particular value in your argument. When in doubt, rely on stewardship.

6. Explain how humans are responsible for loss of species and natural areas, but also explain how humans can help reverse this trend. Offer hope!

There's nothing like the imminent collapse of the planetary life support systems to really turn off an audience. Do not sugar coat the bad news, but always offer hope, alternatives, options: "there's another way of doing things."

Keep hope alive with success stories and messages that celebrate the values and benefits of biodiversity: do not limit messages to just the threat about its loss.

7. Connect the dots… make the relationships and interdependence of nature clear

Talk about species or particular habitats in terms of relationships: explain the links to human well being whenever possible. (For example, we need spiders because they eat insects and keep the insect population in balance, which in turn protects humans from out-of-control insect populations.) People understand that nature is an interdependent system, but do not know much about the specific relationships.

8. Take advantage of a basic appreciation of the balance of nature to expand ecological literacy

Most people appreciate the concept of nature as a balanced system, but many do not know what it takes for nature to stay balanced. Explain basic concepts such as diversity provides resilience/lack of diversity makes systems more vulnerable; explain the value of predators, scavengers and other "undesirable" species in terms of the whole system. Starting with well known species, such as earthworms, explain the role of invertebrates in maintaining the circle of life. Explain, explain, explain.

9. Speak in plain English. Avoid scientific, technical and other jargon

Based on Life. Nature. The Public. Making the Connection. A Biodiversity Communications Handbook. *The Biodiversity Project (see Further Reading)*

appendix 2

Key biodiversity concepts

Here are some basic principles of conservation biology which can be used to build on simpler concepts such as the 'variety of life'.

1. To protect species, we must protect their habitat.

2. Conserving and protecting **large intact landscapes** is essential to protecting a diversity of species and the habitats on which they depend, as well as the ecosystem services that nature provides humans.

3. Wildlife need **corridors** and connections **between core areas**, such as parks and reserves, to allow them to find food, mates, and follow migratory pathways.

4. The more species **diversity** there is in an ecosystem, the more resilient that system is likely to be; similarly, the more genetic diversity within a species, the more successful that species is likely to be.

5. Not only is an ecosystem dependent on a diversity of species, there must also be sufficient **populations** within species to sustain both the species and the system.

6. Within an ecosystem, certain species may be **"keystone species"**, and the survival and success of many other species depends on the survival and success of the keystone species. Cassowaries are considered a keystone species of the north Queensland rainforests due to their key role in dispersing the seeds of many plant species.

7. Extinction is forever.

8. The greatest numbers of threatened and endangered species and highest extinction rates are concentrated in **"biological hot spots"**, typically found in highly productive areas, such as tropical and coastal zones. However, saving these spots alone will not save biodiversity.

Based on Engaging the Public on Biodiversity, *The Biodiversity Project, US. (see Further Reading)*

appendix 3

Making a communication plan

Clear, purposeful planning is vital to the success of your project. Time spent in planning always pays off by avoiding wasted time and effort down the track.

Here is a suggested approach to planning a conservation communication project.

STAGE 1 - Research and Identify Goal/s

Step 1 **Identify the need and goal from a biodiversity perspective**

Step 2 **Identify stakeholders**
Who are the main organisations and people who need to be involved or on-side?

Step 3 **Analyse the issue/problem and its context from biodiversity and human perspectives**
What's the issue or problem?

Step 4 **Modify the goal** (if necessary)

Step 5 **Define the overall approach to achieve the goal, and the role and context of the communication/ education plan as part of an integrated strategy**

STAGE 2 - Planning

Step 6 **Develop education/communication goals to support the overall conservation goal**

Step 7 **Identify and know your target group/s**
Based steps 2 and 3, who do you want to reach?

Step 8 **Determine objectives, ideal behaviours, and outcomes**. What do you want to achieve? What do you want your target group/s to do?

Step 9 **Consider resources and funding**
How many staff are needed, how much will it cost, and who will pay?

Step 10 **Develop a framework action plan**
Specify who, what, when, where, how!
Inform and involve stakeholders

Step 11 **Design methods and measures to monitor and evaluate the action plan**
How will you know if your project has been successful?

Step 12 **Determine the best method/s of communication**
What methods should you use?

Step 13 **Develop a message and enlist messengers**

Step 14 **Anticipate any opposition.** Will any stakeholders oppose and attack your message?

Step 15 **Develop draft products**

Step 16 **Pre-test education and communication products**

Step 17 **Revise products** (if necessary)

STAGE 3 - Implementation

Step 18 **Implement the action plan**

STAGE 4 - Monitoring and Evaluation

Step 19 **Monitor**. Does your program or project need to be modified?

Step 20 **Evaluate**. Have your education and communication objectives been achieved? Is your project integrated with the overall goals? Provide feedback to stakeholders and community.

appendix 4

Findings from New South Wales research

The NSW National Parks Service has undertaken new research which, for the first time, investigates community knowledge, attitudes, needs and practices relating to conserving wildlife and their habitats in urban areas.

The study published as Urban Wildlife Renewal "Growing Conservation Urban Communities" reveals important points that should be taken into account in designing programs, and its findings are mirrored in the approach taken in this handbook.

UNDERLYING COMMUNITY NEEDS

The most important underlying community needs to fulfil when encouraging behaviours that contribute to urban wildlife renewal centre around the need for independence and freedom, and safety and security. Also important are the needs for self-actualisation, social interaction and the need to be a nuturing person.

What this means for educators

This suggests that educators should aim to create safe situations where people can enjoy and explore nature at their own pace, preferably in the company of their peers and friends. Special attention should be paid to lowering people's natural fears and anxieties about being in the outdoors.

RELATIONSHIP BETWEEN NATURE AND URBAN AREAS

The study found that people divide the world into areas that are considered "right for humans" and others that are "right for wildlife". People strongly believed that native animals should be encouraged into local bushland and unspoilt bushland. They are more reserved about encouraging native animals into suburban backyards. The circumstances where people are happy to encourage wildlife into their own backyards tend to be when the animals are not dangerous, unattractive, dirty or harmful and as long as the type of wildlife was felt capable of living unthreatened in an urban environment.

The species people most wanted in their backyards were small birds and butterflies followed by lorikeets, earthworms and kookaburras. The next cluster included koalas, blue tongue lizards, frogs and cockatoos. The least popular animals were spiders, bats, moths and snakes.

What this means for educators

When designing general biodiversity conservation programs, use these popular species as communication flagships. Any programs to encourage native animals into suburban yards should be sensitive to people's need for safety and security and not challenge their need for control and order.

Many people think that the natural elements in urban areas are left over bits and pieces, rather than a connected ecosystem. This means that educators should use visual aids to highlight how suburban yards connect to street landscapes which connect to local bushland, etc. An example is a Sutherland Council brochure to promote its Greenweb Program, which includes an aerial photograph showing how Eric the koala has moved along a native bush corridor in the Shire (see Case Study 3 on page 15).

TAKING ACTION

About a third of people interviewed in the study said they supported council efforts to regenerate some parks back to natural bush and seek out information to better understand how to live with native birds and other animals.

The research showed that having information on the environment and wildlife on hand was not enough to drive interest within the community, and that local motivators were needed to create relevance for people wanting to participate in programs.

The demographic of people with a high likelihood to adopt conservation behaviour tended to have a native garden, were "extremely concerned" about the environment, over 35 years old and household income of $20,000 -$29,000 or $100,000+.

Local councils and wildlife conservation groups appear to be the most widely nominated groups taking an active role in conserving native plants and animals.

What this means for educators

The findings show the importance of engaging people where they expect to find action and expect to have access to information. Programs need to develop strategic partnerships between organisations.

appendix 5

Findings from interesting US attitude research

The 1996 Biodiversity Poll Cluster Analysis (USA)

There has never been a cluster analysis of Australians' attitudes towards biodiversity issues. The following cluster analysis from the US may not be directly comparable to Australia, since Americans have rather different sets of values, however it can still provide some useful insights.

A computer analysis identified eight population clusters with common attitudinal characteristics within the biodiversity poll data. Support for biodiversity conservation was solid among two clusters, totaling 23% of the population. Potential support (sympathetic attitudes, but not strong commitments) can be found in three "middle" clusters totaling 34% of the sample. The remaining 43% are found in three other clusters, which are less likely to support biodiversity protection. Each cluster is likely to respond to different messages, although concern about ecosystem services and widely held stewardship values provide a basis for overarching messages. The clusters are briefly profiled below and in the following chart.

MOST LIKELY SUPPORTERS OF BIODIVERSITY

National Bio-connectors (8%)

People in this segment belong to national and international environmental groups and are educated, affluent, and engaged in society. More than all other segments they value nature's right to exist, appreciate nature's beauty, and feel that a healthy environment is important for their own productivity. They are the most familiar with the term biodiversity and are the most likely to disagree that the world would be better without mosquitoes and poison ivy. Most of them vote, and many contact their elected officials. They go to national and state parks and zoos, and they enjoy outdoor activities like hiking and gardening.

Patriotic Local Bio-connectors (15%)

This group was defined by allegiance to local and state environmental groups, political moderation, and community involvement (through school age children). They also enjoy outdoor activities, go to zoos and aquariums, garden, are the most regular TV news watchers (76%) and also read newspapers and use computers. The patriotic value—protecting "America's natural resources"—is important to this group. While they support maintaining biodiversity, they are less sure about saving all species.

SYMPATHETIC / PERSUADABLE GROUPS

Young Cross-Country Skiers (5%)

This is a small, but distinct group. All of them—100%—cross-country ski. Most also engage in other physical outdoor activities, such as hiking and biking. The group is largely male and under 40, and more educated, affluent, and Republican than the other younger segments of the public. They use computers and the Internet and are newspaper readers. Their interest in the environment is secular (this group was the least likely to value nature as God's creation), but they also believe strongly—more than other groups—in protecting nature for future generations. They are not particularly concerned about environmental issues (or other issues, for that matter), but they do tend to be frequent voters.

Alone Agains (15%)

This group was defined by marital status. All are divorced, widowed, or separated. Predominantly women (69%) and older (60% over 45), this group also has the lowest incomes. While not outdoor-sports enthusiasts, most have visited a park or museum in the last year. They are the most likely group to watch TV news regularly (81%). This group values protecting the environment for future generations and family, but places high value on God's creation and the beauty of nature. They are particularly concerned about water quality, and while they believe we should prevent extinctions, a majority believe it is all right to eliminate some species. They are also willing to place jobs ahead of environmental concerns.

Disconnected Singles (14%)

This group was defined by the highest proportion of single Americans (95%) and by its relative youth (92% are younger than 45). This group is slightly more male (57%) and is less affluent than most other segments. Three in 10 are minorities—more than any other segment. This group also is distinguished by their non-participation in politics. Many do not vote, or vote infrequently, and this groups members are the least likely to have written a letter to the editor or to have volunteered for a political party or candidate. This group is unlikely to regularly read a daily newspaper. They enjoy going to beaches and lakes (89%), parks, and to a lesser extent, zoos and museums. They are concerned about the environment, but only about half (51%) consider maintaining biodiversity very important. This is an important "persuadable" group for biodiversity.

LEAST LIKELY SUPPORTERS OF BIODIVERSITY

Disconnected Religious Conservatives (14%)

This group is clustered around a convergence of religious involvement, political conservatism, and lack of engagement in public affairs. A large proportion are Born-Again Christians (44%). This group contains more women (63%) and tends to be older and less educated than other segments. This group is the least active in society, and 21% are not registered to vote. This is the least likely group to pursue outdoor recreation or belong to environmental groups. 47% attend religious services weekly and a majority listen to talk radio. They place high value on God's creation but give lower priority to protecting the Earth for future generations than other segments. Protecting the environment for one's family is important, but environmental concerns are lower for this group than others. Maintaining biodiversity is not very important to a majority of this group.

Disconnected Outdoorsmen (14%)

Unlike their "connected" fellow outdoorsmen, who most likely fall in the first two clusters, this group of hunters (95%), anglers (87%), and campers (70%) is defined by non-participation in politics and church. Of the group, 31% are not registered to vote, and 75% attend church infrequently, or not at all. Even so, they express a strong belief in nature's connection to God. While they care about the environment, it is not a high priority, and they are more likely to agree that not all species are worth saving.

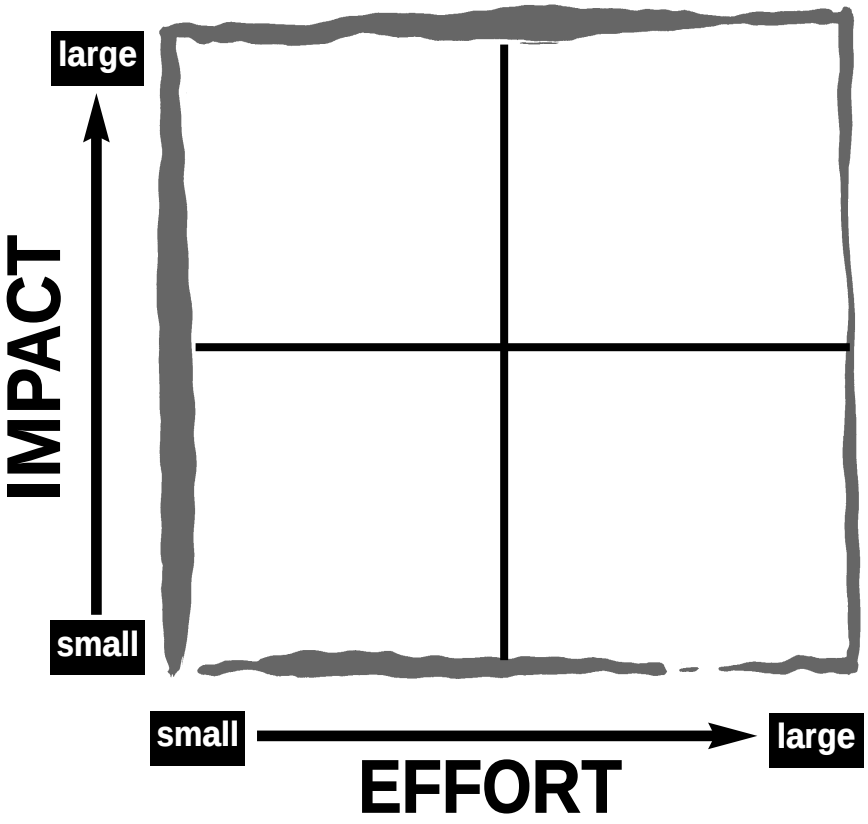
Engaged Property Owners (16%)

This group is comprised of married (91%) homeowners (87%) who tend to be (but are not all) upper income. It includes a considerable block of professionals (36%) and is predominantly Republican. These are frequent voters (88%), and they are engaged in public affairs. Their gardens may be a primary connection to nature, as 76% of this group gardens. They are computer users (61%) and church goers 51%. God's creation, future generations and family anchor environmental concerns, but this group gives less priority to environmental issues than any other cluster. Maintaining biodiversity is not an important concern for this group.

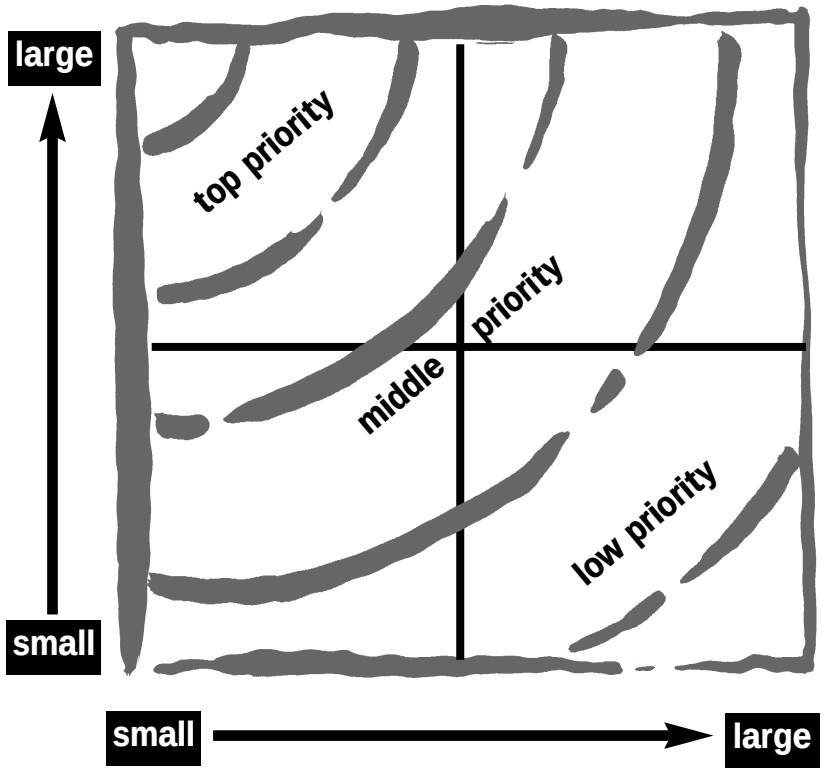
appendix 6

The priority matrix

Use this matrix to prioritise actions



How to interpret the matrix



appendix 7

Talking about bugs

Invertebrates make up nearly all of the species diversity found in Australia and on Earth. They play key, but mostly hidden roles, in keeping ecosystems healthy and functioning. This includes fertilising and structuring soils, nutrient cycling, regulation of plant diversity, seed dispersal, pollination, regulation of animal numbers, as well providing food for vertebrates.

Invertebrates, however, have a huge image problem. This presents one of the most challenging aspects to the biodiversity education and communication agenda.

PEOPLES PERCEPTIONS OF INVERTEBRATES

While limited research has been undertaken in Australia on community attitudes to invertebrates, an informative US study found that the general public and farmers showed feelings of aversion, dislike and fear, as well as describing the unattractiveness of specific groups, while acknowledging the beauty of others. The attitudes least expressed were affection, ethical concern or scientific curiosity.[43] There was little understanding of the taxonomic differences between invertebrate groups. The best known invertebrates were butterflies and moths.

Most knowledge among the general public could be classed as relating to: 1) invertebrates in agriculture and in gardening; 2) their basic biological characteristics; 3) venomous characteristics and the transmission of diseases.

It concludes that we need a "more compelling depiction of the extraordinary contributions to human welfare and survival made by invertebrates" and that this will greatly assist to reduce prevailing negative attitudes.

Another attitude that can added to those identified by Kellert is the "tyranny of numbers". How can there be a problem with invertebrate conservation when there are always too many flies at the picnic, too many jellyfish in the water, or too many spiders in the garden? How can there be a problem with invertebrate conservation when there are so many species?

43. Kellert, S.R. 1993. Values and perceptions of invertebrates. Conservation Biology, *Vol. 4, pp.845-55.*

USING FLAGSHIP SPECIES TO PROMOTE INVERTEBRATE CONSERVATION

The flagship species approach can be readily be used to increase community empathy, awareness and understanding of invertebrates and their habitat conservation needs. In general, flagship species need to be either:

- **Beautiful.** Lead with colourful butterflies
- **Beneficial.** Lead with native bees, lady bugs and earth worms highlighting their respective roles in pollination, keeping pests in check, and creating fertile soil/compost, followed by the critical role invertebrates play in maintaining the health of ecosystems.
- **Blueprints**. Many bio-technology 'blue prints' have been discovered in invertebrates. This includes the discovery of an antibiotic in a secretion from a bull ant, and a potential sun-screen discovered in coral polyps.
- **Bountiful.** Lead with lobsters and other luxury crustaceans and shell fish.
- **Bizarre.** Lead with quirky species such as the Giant Gippsland Earthworm, Lord Howe Island Stick insect, or the Tasmanian Giant Crayfish.

Alternatively, lead with 'mini-beasts' such as aquatic invertebrates and the role as an indicator of waterway health.

An excellent source of examples of bio-technology blueprints discovered in invertebrates is *Wild Solutions* by Andrew Beattie and Paul Ehrlich. Beautiful and beneficial flagship species should be used as the foundation in invertebrate communications as these will have the greatest impact on the public.

SUMMING UP

- Use a butterfly, or other colourful non-threatening invertebrate as a flagship species
- A primary focus on the vital role of invertebrates as mini eco-engineers keeping ecosystems working, whether it be the food web, or keeping soils fertile. Start with worms (soil fertility) and bees (pollination) and work out from there.
- A secondary focus is the role of invertebrates as sources of bio-technologies, eg. sunscreens from corals and antibiotics from bull ants.
- Do not focus on numbers of invertebrates.
- Build on local Waterwatch macro-invertebrate monitoring activities.

appendix 8

Myths and facts[44]

The controversy generated by the release of *The Sceptical Environmentalist* by Bjorn Lomborg[45] is one of the most recent attempts to undermine the strong case for additional biodiversity conservation by promoting several unfounded myths.

MYTH 1:
There is no evidence that species are becoming extinct at increasing rates; extinction is a natural process

While extinctions are a natural part of the evolutionary process, the current global rate of human-induced extinctions is far greater than what could be considered the 'natural' background rate. For mammals, the human induced extinction rate is about 100 times the background rate; for birds it is about 1,000 times greater.[46]

In the 200 years since European settlement, Australia has experienced the extinction of 27 mammal species and sub-species, more than any other country in that period. Almost half our marsupials are either extinct, endangered or vulnerable, and about one-third of freshwater fish are classified rare, endangered or vulnerable.

Many frog species are also in rapid decline. About 60 of an estimated 200 species have been reported to be in various stages of decline – nearly one third of all known Australian frogs. One senior Australian scientist has predicted that about 250 bird species, that is 50 per cent of Australian land-based birds, will become extinct next century if current rates of land clearing and habitat depletion if current trends continue. The decline of our better-known vertebrates suggests that many as yet undiscovered invertebrates will also be in trouble – the number of arthropods, for example, (mites, spiders and insects) that will disappear due to habitat loss can only be speculated.

44. Adapted from Biodiversity Baloney: Some Popular Myths Undone. *Union of Concerned Scientists.* http://www.ucsusa.org/global_environment/biodiversity/page.cfm?pageID=393

MYTH 2:
Scientists disagree about whether biodiversity is being lost and what should be done about it.

The *Australia: State of the Environment Report 1996,* prepared by more than 200 scientists, found that the continuing loss of biodiversity is "probably the most urgent issue in the whole field of environmental management. In many cases, the loss of habitat is continuing at an alarming rate, with associated inevitable loss of biodiversity." The 2001 State of the Environment Report found that many of the key threats to biodiversity identified in the SoE (1996) persist.

There is general consensus that the best way to conserve biodiversity is by protecting and managing species habitat and ecosystems. An action program needed to conserve Australia's biodiversity is set out in the National Strategy for the Conservation of Australia's Biological Diversity.

MYTH 3:
Current conservation efforts are adequate.

Despite enormous community willingness to improve environmental performance, government efforts in the form of incentive schemes and regulations to discourage polluting and destructive practices, need to be rapidly accelerated. The *Australia: State of the Environment Report* concludes that adequate measures are not yet in place to combat the threats to biodiversity. Tree planting schemes, for instance, are useful but not a cure-all, as replanted areas are a species-poor substitute for remnant native vegetation, as they lack many habitat elements required by native species. In any case, revegetation efforts are labour-intensive and have failed to keep up with the massive scale of native vegetation loss.

45. A series of critiques of The Sceptical Environmentalist, *including one by the renowned biodiversity scientist E. O. Wilson is at: www.gristmagazine.com/books/lomborg121201.asp*

46. Groombridge, B. and Jenkins, M.D., 2000. Global Biodiversity: Earth's living resources in the 21st century. World Conservation. *Monitoring Centre: Cambridge, UK*

appendix 9

Glossary of key terms

ADVERTISING - Those forms of public relations and marketing communication aimed at influencing and/or promoting purchasing behaviour relating to the services or products of an organisation. Advertising tools range from billboards and TV spots to direct mail.

BIODIVERSITY - The variety of life forms: the different plants, animals and micro-organisms, the genes they contain, and the ecosystems they form. It is usually considered at three levels: genetic diversity, species diversity and ecosystem diversity.

CAPACITY BUILDING - Strategies which seek to empower, motivate and enable communities and provide them with the necessary skills, resources, networks and information to allow them to pursue their own conservation and development goals.

COMMUNICATION - A process of exchanging ideas and sharing information. The ideal form of communication is a two way process aimed at mutual understanding, and the sharing of values and action.

ENVIRONMENTAL EDUCATION - Environmental education is a process of encouraging people to be aware of, and concerned about the environment and its associated problems, and be enabled through knowledge, skills, attitudes, motivations and commitment to work individually and collectively towards solutions of current problems and the prevention of new ones.

FOCUS GROUP - Focus groups are a way to collect useful qualitative data that explores the general attitudes, motivations, and behaviours of your audience. They are used to improve planning and design of new products or programs by obtaining background information about people's perceptions of a specific topic; develop new ideas or effective approaches for introducing a new service, product or program; stimulate new research hypotheses or interpret previous results from quantitative research.

SOCIAL MARKETING - Social marketing is the creation, execution and control of programs designed to influence social change. It uses many principles of commercial marketing – from assessing needs to identifying audiences, developing products and measuring results. But it is also quite different. The aim of social marketing is not just a one time business transaction – it is to build a long-term relationship between your organisation and its different audiences.

STAKEHOLDERS - Those people or organisations that are vital to the success or failure of an organisation or project to reach its goals. The primary stakeholders are: 1) those needed for permission, approval and financial support, and 2) those that are directly affected by the activities of the organisation or project. Secondary stakeholders are those who are indirectly affected. Tertiary stakeholders are those who are not affected or involved, but who can influence opinions either for or against.

TARGET GROUPS - A group of people that you need to reach with your communication to achieve a result. It is best to segment the target group as far as possible, and identify the opinion leaders (name, organisation etc) to whom face to face communication is possible.

EARTH ALIVE DIRECTORY OF BIODIVERSITY RESOURCES, PROGRAMS AND ORGANISATIONS (Version 1.1 February 2000) - Developed by the Community Biodiversity Network/Humane Society International, with funding support from Environment Australia.

This CDROM contains a relational database that includes information on over 4,500 biodiversity education and action products, over 100 programs and nearly 1,000 organisations.

What you will need to use this CDROM:
PC computer connected to a CDROM drive, 45 MB of free disk space, Windows 95/98/2000/NT 4.

The CDROM may result in screen freezes in some older computers.

To install insert into CDROM drive and double click "setup.exe". To search type a word that you think will appear in the name of the product, program or organisation. To do an advanced search use the various fields to tailor your search query. To find out what products or program were produced by an organisation or vice versa, click on the name of a record that appears from your search. To check out the details of a record, click on the Details button.

THE ON-LINE VERSION OF THE EARTH ALIVE DIRECTORY CAN BE FOUND AT: www.tnd.com.au/cbn/