



Growing Passion

Creating eco-literate communities

You cannot love something you don't know. If you love it you will protect it.

- Xola Mkefe, Park Manager, SANParks

One fancies a heart like our own must be beating in every crystal and cell, and we feel like stopping to speak to the plants and animals as fellow mountaineers.

- John Muir, American conservationist, (1838-1914)¹

I never used to think about nature the way I do now. I just used to throw papers if I was walking along eating. Now I know that if you throw anything, like a cigarette butt or a plastic bag, a wild animal or bird may eat it and die.

- Grant Revell, contract worker, Zeekoewel Nature Reserve

I would like to discover it and be part of it. Find out what I've been missing out on this 17 years and also interpreting it.

- Hout Bay teenager, survey by Alice Ashwell

I think the reason our people don't take an interest in nature is that nature was just a playground for us... no-one taught us anything about nature and then we could not teach our children... we used to enjoy chasing the rabbits and the buck, but no one explained that it was causing damage, these things are endangered, you must leave them alone... now we are concerned, when there is nothing left. Now it is so important to hold on to everything because everything is dying out... At first our emphasis was on children, but if we adults don't know about nature, it is no good to draw your child to nature, and then you cannot teach them. So we must also work with adults and get them involved.

- Jan Geldenhuys Harmony Flats Working Group



For our ancestors, understanding the ecosystem was as natural as breathing, and as critical to their survival. People might not have known the Latin terms for plants, but they knew and understood the weather, how plants grew, what they could eat, what would cure them, what would kill them and where to find these plants. They understood how animals behaved and how to read their signals. Most importantly, they knew that we were part of nature and if natural systems suffer, so do we. And ways of passing on this knowledge and understanding were part of everyday activities and social rituals.

As humanity has manipulated nature more and more for its own ends, this understanding has been lost, particularly amongst urbanised societies – the communities with power and influence. The consequences have been disastrous, leading to a combination of global climate change and exhausted environmental resources that have brought us to the brink of destruction of ourselves and much of life on earth.

Restoring this appreciation of our interdependence with nature is an urgent priority in the drive to greater sustainability and resilience, and our urban nature reserves have a special role to play. As the most immediate – sometimes the only – opportunity for urbanised people to interact with natural environments, they are uniquely placed to promote environmental awareness.

Here again, we have a lovely, self-generating loop. By engaging with communities in projects to promote environmental awareness and understanding, we strengthen

both the community's capacity to adaptively co-manage its natural resources and also their motivation, as they come to realise the value of nature conservation. This motivation leads to more engagement, which leads to more capacity and motivation, and more engagement, and so on.

Promoting environmental awareness is thus a core function of the urban conservator and may happen on many levels:

- **Informally**, as we talk to and interact with communities, or as communities use the site for recreational purposes. Although we have made this a separate chapter, all our work with communities promotes environmental awareness, as it holds the vision of conserved natural systems and keeps this vision in the collective mind of the community.
- Through **programmes** aimed at promoting environmental education and awareness, either on or off the site.
- Through working with **schools** around the **curriculum**.
- Through joint projects at the site, where schools, community organisations or volunteers get involved with work around **managing natural systems** such as species monitoring, clearing aliens or litter cleaning.
- Environmentally oriented **community projects** such as community or school gardens, community greening and recycling efforts.
- Through the facilitation of **deep encounters** with and in a natural environment.

In a perfect world, every nature conservation site would be equipped with a fully trained educationalist and environmental education centre. Sadly, few are. More often than not, the hard-pressed site manager has to add environmental education to a very long to-do list, or leave it to a intern with little or no experience. However, much can be done with limited resources, and particularly with creative partnerships with teachers, volunteers, NGOs and community based organisations.

We also need to keep in mind that promoting environmental awareness is exponential. A child who has had a memorable encounter with nature will go home and tell his/her mother or father, who then mentions it at work.... Daniel Goleman in his book on ecological intelligence talks about the phenomenon of collective intelligence:

A collective, distributed intelligence spreads awareness, whether among friends or family, within a company, or through an entire culture. Whenever one person grasps part of this complex web of cause and effect and tells others, that insight becomes part of the group memory, to be called on as needed by any single member. Such shared intelligence grows through the contributions of individuals who advance that understanding and spread it among the rest of us. And so we need scouts; explorers who alert us to ecological truths we have either lost touch with or newly discover.²



The field of environmental education is extremely complex and a detailed treatment is beyond the scope of this book. Some further resources for where to go to find out more are listed on page 143. However, here are a few ideas of where to start, beginning with thinking a little more about exactly what we are trying to achieve.

1. EE: Environmental Education or Enabling Encounters?

We teach kids to learn to respect nature in a relaxed way – we also play games and have fun. Children will not enjoy their experience if you push them too hard and hurry them on to the next thing. And if they do not enjoy the experience, they will be less motivated to look after nature.

When we walk, we ask the children to walk in silence. That is when they start to take note of their surroundings. Up until then, they are busy talking to their friends and they are not really aware of what is around them.

We also use the minerals of the mountain – the rocks and so on – as a way to communicate with Mother Nature. We ask kids just to be on a rock near a waterfall, just to connect with nature. We ask them to thank the mountain for allowing them to be there.

- Lindela Mjenxane, Managing Director, Beyond Expectations



Children on a Beyond Expectations hike 'listen to mother earth'

Environmental education needs to be based upon an environmental experience; there needs to be a 'life changing experience' to enable the learner to open up before information is imparted. Ask most conservators why they do what they do and the answer will be a 'heart' answer from their youth only later followed by the 'facts'. We need to conduct a 'hearts' campaign before we address the 'mind'.

- Dalton Gibbs, Area Manager, City of Cape Town

If we understand... that we are animated by the same breath of life as every other living being... that other... living organisms breathe... the very same molecules of oxygen... [that] we share not only this breath of life, but also other molecules, other patterns of organisation, so [we can see] we are really one particular strand in this whole web of life. When we have that experience, not just as theoretical knowledge but as an actual experience, then we feel a very close kinship and an emotional attachment to the other living beings and then it is natural to care for them as they care for us.

- Fritjof Capra³

We are animated by the same breath of life as every other living being...



Our most pressing objective in creating environmental awareness is achieving that shift in consciousness, the realisation that 'we are one strand in a whole web of life'. Although there is a cognitive dimension to this, it is first an emotional shift. The rational reasons for nature conservation are compelling of course – but they are not always immediately evident, and we humans are very good at ignoring the threat of destruction until the roof above our heads actually blows off. Once we have made the emotional shift, and internalised our connectedness, then 'it is natural to care for other living beings as they care for us.'

This is not something that we can teach. It is only something that we can *enable*, by facilitating encounters between people and nature, by taking people into nature, and inviting them to really listen, to smell, touch, feel and experience the complex and elegant variety of plants and animals around them. We bring the people, nature does the rest – and we need to trust it, because it really does. As long as their senses and hearts are open, even the most urbanised human cannot fail to respond.

Once wonder is aroused, people will be motivated to learn more. The particulars of what and how much they learn depend on factors such as age, level of interest and motivation. Our focus needs to be on systems rather than species, as the really important learning to get across is that we are all part of an interconnecting system, and nature has a lot to teach us about how to live in a system that is sustainable.



As long as their senses and hearts are open, even the most urbanised human cannot fail to respond

We need to live consciously as one strand of nature's web



Below are some basic teachings that can help us communicate this understanding:

1. Explain the notion of sustainability itself, which has been used quite loosely. A simple definition is that living sustainably is living in a way that does not damage the planet's capacity for regenerating life, and does not compromise the quality of life for future generations.
2. Explain the features of an ecosystem that make it sustainable, namely that:
 - An ecosystem generates no waste as one species' waste is another species' food;
 - Matter cycles continually through the web of life;
 - The energy driving these ecological cycles flows from the sun;
 - Diversity assures resilience;
 - Life, from its beginning more than three billion years ago, did not take over the planet by combat but by co-operation, partnership and networking.⁴
3. Explore how we can learn from nature and adjust our life choices to be more sustainable, in other words, to live consciously as one strand of nature's web.

Beware of scaremongering

Sometimes, when trying to convey the urgency of the environmental crisis, we fall into the trap of trying to frighten people into reacting. This is often counterproductive, especially with children, and can create a sense of hopelessness and guilt. Our children carry the legacy of their predecessors and are likely to have to pay a heavy price for the short-sightedness of those who came before. This is not their fault, and the last thing they need is to be made to feel guilty for being human or to feel that it is too late to do anything. We want to empower people to take responsibility for managing communal natural resources and encourage them to see that if we act together, we *can* make a difference.

We don't know everything

We have much to learn from community members who have lived in close contact with our sites since they were children. They may bring a wealth of traditional knowledge and understanding that flows from years of living in close proximity with a natural area. We need to find ways to enable them to make this knowledge available to others.

Most people in townships have links back to rural areas and nature. They can identify birds, know their Xhosa names and can describe their habits. We need to capture that and build on it.

- Xola Mkefe, Park Manager, SANParks

2. Who are we trying to reach?

I think most [environmental education] organisations focus on schools. It is good to start at a school level... but at the same time, adults are the ones that are destroying nature.

- Zwai Peter, ex Cape Flats Nature Communications Manager

I initially assumed that the people in the area are impoverished and environmental education and environmental issues are not a priority to them. On the contrary all respondents are eager to learn about environmental issues. When we did the questionnaires they constantly asked us to explain issues such as global warming. 100% of respondents were willing to attend environmental education workshops because they realised the need for environmental knowledge.

- Lameez Eksteen⁵

The answer to this question is everybody – and the greater the range of people we access, the more we help create the collective ecological intelligence that Goleman describes. In the past, environmental education programmes tended to focus on primary school children. Certainly, this group is receptive to learning about nature, with a lot of natural curiosity and enjoyment from being outdoors and interacting with animals. However, in order to create a community of nature conservators, we need to ensure that we have suitable processes to enable us to reach all groups and ages.

Studies have shown that children are neurologically wired to learn about plants and animals between the ages of three and eight years. This is an important developmental stage in humans when we learn what we can eat and what eats us. This is the stage when girls want to ride ponies, children have soft animal toys and dinosaurs are all the rage.

Ironically big business has cottoned on to this, which explains why practically all modern animated movies have animal characters but with adult humour (Finding Nemo, Shark Tale, Ants, Bugs, etc). Now you know why Shrek's friend is a donkey who can talk; it doubles the audience potential!

Once children reach their teens, they enter a different developmental stage, that of socialising and finding out who they are in this "tribe" and where the boundaries are.

Understanding these broad developmental stages is important to know who you are dealing with and the receptivity of the audience.

- Dalton Gibbs, Area Manager, City of Cape Town

Teenagers

The high school curriculum now incorporates a substantial focus on environmental education. In addition, with some imagination, an urban conservation site can offer lessons in maths, languages, arts, history, economic and management sciences, geography, technology and life orientation as well as in the more obvious life sciences.



While there is a great deal of scope for formal educational programmes involving teenagers, it is also extremely valuable with this group, as well as with younger children, to give them a less formal experience of nature. An approach that is too 'classroomish' can kill their natural curiosity. Our first goal is to awaken a love of nature, a deep respect for its complexity and an awareness that our survival depends on it. Respectful behaviour will follow and the more technical knowledge will come later.

Community members/volunteers

We need to make use of every opportunity to build awareness. For example, Xola did not just attend community meetings or meetings with councilors and decision makers,... he'd take them on a tour of Wolfgat and Macassar, expose them [to it], share its beauty and feeling.... It is so important to show that the site is not some abstract place you're asking them play a part in looking after.

- Tanya Layne, Urban Nature Programme Developer, SANBI



It is important for teenagers to have an informal experience of nature.

In adult education, learning commonly takes place in relation to a real-life issue which people are experiencing and need to address. The more people are concerned about the issue, the greater the relevance and learning that takes place.

- Bianca Currie, Lecturer, Social Ecology, Nelson Mandela Metropolitan University

When working with adults, we are likely to encounter a huge range of interests, cultural backgrounds, time that's available and so on. Some members of our communities may have university degrees, others may be illiterate. Some may be passionate about nature; others may think they have little interest; some may be extremely busy; others may be retired or unemployed. We can never reach everybody. But we can have a range of educational experiences to broaden our reach as much as possible. Once people's interest and curiosity are aroused, we just need to point them in the right direction and they will continue to educate themselves.

The quotes at the beginning of this chapter show that curiosity about the environment is not just found amongst those who are educated. Most people want to know more and to be able to identify birds and plants so that they can teach their children. However, as Bianca Currie remarks, we need to find an aspect of environmental education that is relevant to them, and build on it.

Team members

There should be an ethos that you are a conservator not because of some diploma, degree or even any training. Rather, it is an attitude of the heart towards all living things on this planet. Every person who works on a conservation site, in whatever role, should consider themselves a conservator who is learning every day.

- Dalton Gibbs, Area Manager, City of Cape Town

Educating team members, including temporary staff, labourers, gate-keepers and so on, is well worth the effort. This not only benefits the individuals, but also creates a team of well-informed conservators who can help answer questions for visitors and explain the rules, not just reinforce them. It also enables them to be 'nature ambassadors' and educators who can pass their knowledge and understanding on to family members and friends. We also discussed this in Chapter Four.

3. Ways of learning

There are as many ways of learning about nature as there are ecosystems. We could not possibly list them all, but we will briefly explore some of the ways that have been used by Cape Town's nature conservators and their partners. Since we said environmental awareness should start with enabling encounters, that is where we will begin:

3.1 Meeting the great healer

[When I first went up as a child] I was so passionate to be on top of that mountain. You can imagine a kid born in the Cape Flats, growing up in the Cape Flats... you can lose any sense of what is inspiring about this city. Imagine having the opportunity to go somewhere where there are no houses, traffic lights, nothing. No swearing from the neighbour, no gun shots,... you come back a different person. In church you hear of someone saying 'I used to do this and this bad thing, but now I am transformed' – nature can do this same transformation.

- Zwai Peter, ex Cape Flats Nature Communications Manager

The healing power of nature is one of the most profound gifts a natural area can offer us. Deep encounters with a natural environment awaken a love of nature because we can sense the huge physical, psychological and emotional benefit. These are especially valuable in communities suffering a high level of stress due to poverty, overcrowding and other social problems. These benefits have been documented and explored in a number of studies.⁶

For more intense experiences, we can work in partnership with specialist organisations such as Educo. Such partnerships enable us to offer youth and adults life-changing encounters with nature and with themselves in a natural environment. People who go through these will undoubtedly hold a special place for the conservation site that offered them this experience, and will remain loyal conservators through their lives. The case studies on pages 74 and 77 illustrate these experiences.

But these encounters can also happen less formally. Our urban sites offer a refuge and a safe place to encounter nature. This is a tremendous gift which should be made available to as many people as possible. Every conservator we interviewed who had had this opportunity had been profoundly affected by it and for most, it was their first step on the road to nature conservation. There is no higher service we can offer to both the future of conservation and to the spiritual and emotional well-being of our communities.

3.2 Environmental Education programmes

These may include programmes, hikes and camps with children on the site, information days, talks, story telling, or drama presentations at schools or in community forums, workshops and so on.

A good educational programme grows the value of a site in a community, while increasing the community's capacity to manage natural resources. Most community members appreciate opportunities to increase their knowledge and skills and also appreciate educational opportunities for their children. It is essential that affordable education programmes are offered to all economic sectors, with rates that suit the income of neighbouring communities.

A range of different methods may be used, but more interactive methods are more effective. People learn more by **doing** than by listening. It may feel safer to have the participants sitting in a room, but they will learn far more if they go out and use their senses to look, listen and touch, before they discuss what they have discovered.



Nature can transform us

The reserves are exceptionally rich learning environments. The natural ecosystems, excellent displays and exhibitions, printed and audiovisual materials, and the education officers themselves, are all valuable resources for learning. However, in most cases, I found that these resources were not being used optimally to support active learning. In general, too much time was spent indoors listening to the education officer present a lecture or slide show. The field trip was usually a short guided walk, with few opportunities for hands-on, experiential learning. Group work, if used at all, was seldom effectively planned, and only once did I observe an education officer involving the teachers effectively as group leaders.

- Alice Ashwell, Environmental Educator⁷



These teenagers are giving back to nature...



Lindela with children on a BEEP hike

Beyond Expectations

I first worked on the mountain as a guide for the Hoerikwaggo trail. I was blown away by its beauty. What I loved best was that I'd leave the house full of challenges, for example, perhaps I'd have had an argument with my mother, but I'd just forget about it on the mountain. Nature would take these challenges away, and when I came back home, I was free.

The mountain had such a positive impact on my life - I wanted to give the same opportunities to other youth. There are many people living adjacent to the mountain who have never been on it. I also wanted to promote a love for the mountain, and a sense of ownership. So I started Beyond Expectations. We take a group of 20 children up for a night on the mountain almost every weekend.

I am most interested in how nature can change an individual - the spirits of the mountain are so powerful. We aim to go beyond the environment, although we do also cover environmental issues such as teaching about nature, littering, fynbos and water.

There are many things you cannot explain about the power of the mountain. I remember once a boy was sad because his grandfather was dead and I said his spirit is with us, perhaps in the those birds flying overhead and just then one bird swooped down right close to us and then flew off again.

As Xhosas we have a strong belief in the power of the mountain. Our elders would go to the mountains during a drought to pray for rain from the ancestors and before they even came home from the mountain, it would start to rain.

For the youth who come on these experiences, it is not just about environmental education - they also need to address issues affecting them.

For example, we tell them: walk in silence for 20 minutes. Forget about all the other things. Just think about your purpose in life. What are your challenges? What are your stumbling blocks? What is stopping you from leading the life you want to lead?

My main objective in establishing the project was to address these issues. Our participants often have things that challenge them, but no opportunity to talk about them. So they build up to a boiling point, which drives them to get drunk, or steal, or perhaps a girl will turn to a rich man and in this way, they destroy their lives.



So we give them time to lie on a rock and communicate with nature and let nature give them the answers to their questions. In this way they are engaging the universe, or Mother Nature, or the spirits.

They often raise family issues, sometimes they cry. I also share my experiences and talk about how I have coped with challenges and this way, motivate and inspire them. I explain that each of them needs to be their own ambassadors, even if they have no support from their parents, they need to carry themselves into the world.

If they have serious problems we refer them to psychologists.

I feel it is not just a project, it is a calling. These experiences have a positive impact on the lives of these children. Before they leave, we give them a few minutes to make a wish or pray for whatever it is that they need.

- Lindela Mjenxane, Managing Director, Beyond Expectations



Youth in Nature

In 2005, the Community Action towards a Safer Environment (CASE) called a meeting with ESWP management to help with a group of teenagers who wanted to experience the natural areas of Cape Town. In response, we formed a hiking group which would meet every month in the various reserves around Cape Town.

The group's initial motivation was to experience natural areas and to get physical exercise, rather than environmental education. However, we arranged for a staff member on each reserve to accompany the hike and tell us about the area. Soon, the inquisitive nature of the kids got the better of them and exercise took second place to finding out about the world around them. As we grew closer, we also started sharing our feelings about life's challenges and rewards.

During the second year, the group participated in the Tygerberg Nature Reserve Olympiad. They attended every pre-exam visit to the areas surrounding Tygerberg which taught the participants about the hill's history, archaeology, flora; fauna, and ecology etc. The group put all their spare time and energy into this endeavour – I took enormous pride in their efforts, and so did the judges who awarded them prizes for participation.

As the group's environmental knowledge and skills progressed so did their will to serve the environment, and in their third year they began to help out at ESWP with litter clean-ups and alien vegetation removal. They also helped with tours for other groups.

By now, there were between ten and fifteen members in the group, who were often involved in leading hikes with younger members. During this year, we engaged in discussion with CASE, who felt that the social challenges faced by the group, who came from a socio-economically depressed area, should be addressed. We decided to work with Educo Africa, an international organisation facilitating camps for leadership development to run a nine day leadership camp.

Twenty-four CASE members attended the camp at Groot Winterhoek, a Cape Nature reserve, near Porterville. The nine days included a two-day workshop on environmental issues, and what each individual can do to stop the destruction of our natural resources. It also included a five-day journey of self-development where they went into the mountain wilderness of this awesome natural area.

Skills such as rope-access, solo camping and group activities taught the kids to trust one another and to be trustworthy. We learnt to carry our own weight and support each other in tough times. This allowed the kids to develop emotionally among their peers, strengthening their existing bonds and forming new ones with each other.

Group and solo time was available to each individual for the healing power of nature to work its magic. The awe-inspiring surroundings helped to reveal the strengths and insecurities of the members and the intense, structured programme facilitated handling these issues in a relaxed, comfortable and safe manner.

The learners' issues and problems stem mostly from their unstable family lives: either broken homes or disrupted ones. Another major setback is the chaos in their communities, which they have to learn to rise above or they would sink to the bottom.

I am proud to say that this group has chosen to fly.

The Educo methods of *"Just let them be"* and *"Working it out as a group"* seemed strange to me at first, but I soon saw the benefits of the children's self-development and growth. Responsibility and ownership were the biggest improvements amongst the group.

On our return it has been evident that these adolescents will develop into promising future leaders, who will each make a significant difference in their community and beyond.

- Stacy-Anne Michaels, Environmental Education Officer, City of Cape Town, case study, July 2009

Active learning

Move from the known to the unknown

Start from what the participants know already. Many adults and even children may know quite a lot about the environment such as indigenous names of birds and plants, medicinal and useful plants and so on. Finding out what they know or have observed for themselves empowers them and helps them link new knowledge to an existing knowledge base – and is a good learning opportunity for everyone in the group, including the presenter.

Move from concrete to abstract, from particular to general

Begin by talking about what is around them – the life forms and processes they can observe or have observed every day. Use these to move onto more abstract ideas. For example, a tadpole in a drainage ditch could lead to a whole discussion about stages of life, ecosystems, habitat, pollution (why is it in this drainage ditch and not another?), the food chain (what it eats, what eats it) and so on. Use questions to encourage participants to think about the issue and to make the connections themselves.

Encourage learning that is active rather than passive

Most of the time the participants should be doing something – observing, exploring, feeling, touching, smelling, discussing, noting down their observations. Set tasks and group projects and appoint a leader for each group to make sure the tasks are done. It may sometimes feel a little chaotic, but they will learn far more than if they were sitting silently listening to a lecture.

Use all senses

Nature is so rich in textures and smells. Heighten the learners' awareness of these by encouraging them to close their eyes when exploring a shell, a stone, a feather or different herbs. Or blindfold them and get them to identify objects by touch or smell.

Use creativity

A big part about understanding natural systems and cycles involves understanding patterns. Use creative arts – visual arts, dance, music – to teach participants about patterns and link these to nature. Encourage participants to revel in nature's design by comparing spirals in different life forms and so on.



How can we extend the reach of our programmes when our resources are so stretched?

Creative partnerships are invaluable in extending the reach of our education programmes and working collaboratively also helps build up our networks in the communities and to create avenues of community engagement with the site. Below are some examples of partnerships that have operated around Cape Town's conservation sites.

Partnerships with teachers

When I asked the teachers for suggestions to possible environmental topics that they can incorporate in the curriculum, the one teacher answered "Daai los ons maar vir jou, want jy is mos die 'professional'" [That we leave for you because you are the professional]. Immediately my heart skipped a beat. What would happen if one of the teachers asked me a question and I couldn't answer them? Would I stand there in the middle of the room full of 'professionals', embarrassed, my mask ripped off and my face exposed?

- Jerome September, Environmental Education officer, City of Cape Town



The Schools Environmental Education Project (SEEP) hike

The SEEP hike is held four times a year in Wolfgat or Macassar Dunes Nature Reserve, organised jointly by the reserve managers, Cape Flats Nature, and SEEP, an environmental education project based at Crestway High School. The project originated with Mr Jethro, a teacher from Gugulethu Comprehensive School who came to ESWP for posters. In the process of talking to Cape Flats Nature staff, the idea for an enviro-hike with learners from different schools was created.

Its objectives were:

- To promote environmental awareness among high school learners on the Cape Flats;
- To expose learners to the fun and enjoyment of hiking in nature;
- To help learners experiencing social problems;
- To develop a sense of responsibility among learners;

- To develop leadership and teamwork skills among learners;
- To integrate learners from different schools;
- To excite learners about nature on their doorstep.

The programme is adjusted each year in response to different requests. Some of the lessons gained from organising the hike are the following:

- It is important not to make the hike too long and physically demanding, to give learners time to take in their surroundings;
- Lifeskills should be part of the program and the lesson should not be too narrowly curriculum based. We have to link lifeskills with nature;
- The hike should be fun for the learners. It is important to create an unforgettable experience. The lessons on the hike should involve self-discovery, teamwork and fun.

Report From SEEP

The enviro-hike took place on Sat 10th of Feb in Wolfgat Nature Reserve (WNR) with over 80 learners from five high schools. The learners were divided into two groups:

Group 1 was taken on a tour of the Wetlands at ESWP with input from the enviro-guides.

Group 2 was given the opportunity to observe bird life in the Wetlands. We found this particularly informative and helpful.

We then went to Swartklip by bus. Here the group was divided into smaller groups, and each group assigned to an enviro-guide and a teacher. The walk through WNR was challenging but enjoyed by first-time participants in particular.

After lunch at Mnandi Beach, we were divided into three groups:

- GROUP 1 learnt about life-saving, rescue techniques and water safety.
- GROUP 2 was addressed by a law enforcement officer from the coastal patrol unit.
- GROUP 3 was taught the game Polish soccer – a wonderfully innovative game that can occupy very large groups. The learners enjoyed themselves immensely and teachers now have a new game to add to their repertoire.

This was a particularly successfully enviro-hike, interesting, instructive and enjoyable – in the words one of the participants; "Sir, when do you come again?"



The SEEP hike is a good example of what can be achieved in partnership with teachers. Teachers are important partners for programmes involving school children and may also help with adult programmes. Many conservation managers have formed successful partnerships with teachers, but others have experienced problems. Some teachers feel insecure about doing environmental education, as is shown by the teacher's remark to Jerome: "Daai los ons maar vir jou, want jy is mos die 'professional'." We need to work collaboratively with teachers to break down these barriers and encourage a sense that we can all learn from each other. Below are some guidelines:

- Begin with schools closest to your site. Transport is often a major challenge. It is a huge advantage if the students can walk to the site. Nearby schools can form the bedrock of school partnerships, as it is easier to

maintain contact and collaborate on projects. Teachers from nearby schools may make use of the reserve with minimal or no input from the reserve staff;

- Initiate contact with a letter to each school outlining what the reserve offers, followed by a visit to the principal and/or relevant head of department;
- Early in the year, organise a workshop to inform teachers of the services on offer, make contact and find out what programmes they need. This may be done jointly with other reserve managers, and can be used to explain what each reserve offers;
- Find the right teachers with whom to work. Start with teachers who are personally motivated, flexible, willing to develop/co-develop curriculum-aligned resources and have supportive school contexts. Pilot projects with these teachers can be used to showcase the education potential to other schools. One can also establish a teachers' forum to help motivate and recruit new schools;
- At the beginning of the year, try to meet with teachers from each neighbouring school to plan the year's programme;
- Working with schools also provides opportunities for reaching adults. Parents may be invited to accompany children on visits to the site and can help with education and supervision. If they are keen, you can work with teachers on providing parent-targeted programmes;
- Ensure collaboration - some teachers are fantastically hard-working, but others are all too willing to sit back and let the conservators do all the work. As professional educators, the teachers need to be an active part of the process and should be able to drive the programme with minimal assistance. Draw up task lists in planning meetings, and make sure it is clear who is doing what;
- For big groups of learners think through who's doing education and who's doing supervision – both are needed.



In addition to partnerships with teachers, it may be helpful to develop relationships with local Education Management and Development Centres, or with regional offices of provincial education departments.

Grade 10 learners have to complete a certain number of hours of community service, and education programmes can be used to promote community service for conservation. Tshepo at Bracken has an ongoing arrangement with local schools to enable learners to do community service on the site. Clear tasks and supervision for learners are needed.

Partnerships with environmental education providers

There are a number of dynamic environmental education providers that can make a huge contribution to lightening the workload and providing effective education opportunities for communities and schools. It is worth finding out about and linking up with regional environmental education networks, such as the Environmental Education Friends and the Environmental Education Association of Southern Africa (EEASA). These groups will put you in touch with other service providers and provide valuable skills development programmes. Use these networks to establish links with organisations in your region that offer environmental education programmes and may value using your site.

Friends groups and community volunteers

Some conservation sites, particularly those in well-resourced areas, have established Friends groups that are extremely helpful in providing environmental education. If they are constituted as a non-profit organisation, they can also raise funds for this purpose. At Helderberg Nature Reserve, for example, the Friends have financed the building and running of a vibrant environmental education centre, and conduct programmes in the Reserve. A dynamic initiative in Cape Town is the Cape Town Environmental Education Trust, which includes Friends Groups, conservation groups and a sports development body. It has signed a memorandum of understanding (MOU) with the City to provide education which is in line with City line functions. It conducts 60% of the City's environmental education camps.

Mark Ogilvie explains:





Cape Town Environmental Education Trust

CTEET is an NGO. We provide environmental camps for children at Zeekoevlei.

We take learners from Grade 4 up to the age of 15/16. They attend a three-day programme, during which they are totally immersed in nature. We take kids away from cell phones, TVs and give them three days of intense living in nature. We are changing the lives of these kids through nature. For example, before when the children saw a snake, they would immediately kill it. We teach them a different approach. Now they understand the snake and see its value.

The Education Centre promotes itself. Schools generally hear from one another. The camps are partially funded, and are offered to poorer communities for a nominal fee of R50. We find people value the camp more if they pay something.

We recruit helpers from the local community. They are carefully selected and paid camp by camp. These helpers may go on to become field rangers and are then seconded to, and managed by, the City.

Attitudes are different now. Children are so alienated from nature. I had an upbringing in Grabouw and spent a lot of time out in nature. Today's children have a sensory overload with technology... they just want to be on mixit.

We give them a paradigm shift out of the technological world.

There is a place for technology such as GIS and we make use of this and teach the kids to use it. The field work is very active. The child in the field can upload GPS coordinates to a database and becomes a scientist in the field – often this presents the WOW moment. We want to extend this by linking the reserve to the schools for example, have a school adopting an area to include within the Biodiversity Network. They are now participating and contributing towards something concrete and useful.

We also go beyond conservation and teach the child about self-knowledge. It is only through knowing themselves that they can relate to others. We teach them to overcome their limitations so that they can absorb more and explore further – in a guided and facilitated way. They have many fears especially a fear of the dark. We help them confront these and we get them really physically tired and dirty.

We can't run these programmes without the support of schools. Teachers play a vital role, but it is hard work getting their cooperation. The Education Department presents formidable administrative challenges for teachers and offers no recognition or rewards for going the extra mile. And some parents are reluctant to pay. I talk to them about the price of experience. What is the price of experience? You need to really work with those adults.

- Mark Ogilvie, CEO, Cape Town Environmental Education Trust

These groups can go a long way in extending the reach of the site. However, it is important they take part in the formulating of the overall vision of the site, and that the programmes are run in a way that supports this vision.

Another example is provided by Kelvin Cochrane, a resident of Zeekoefvlei. He became involved in a project to upgrade the vlei (see page 70), and has become a passionate conservator. Amongst other projects, he works closely with local schools in creating indigenous gardens at the school and on the Princessvlei site. These all have strong educational value.

3.3 Using the school curriculum

The school curriculum offers opportunities for environmental education in all learning areas and we can greatly enhance the value of our sites for schools by complementing their curricular work. This gives hard-pressed teachers an added incentive to make time to bring their learners to the sites.

Working with the curriculum does not mean moving away from the experiential, active methods described earlier. Our current education system is orientated towards independent and self-driven learning and, with the help of teachers, our lessons can be creative and non-prescriptive. Here again, partnerships are vital and there are many support organisations, such as the Primary Science Project, who can assist with providing resources.

Below are some suggestions to help stretch our limited resources:

- Develop a few focused curriculum-linked programmes from which teachers can choose, rather than planning a new programme for each teacher. This will help us plan ahead and ensure that we use our time most efficiently;
- Develop programmes on topics best suited to our sites and work with other conservation managers or education officers to complement these. For example, one site may offer wetlands and birds, while another may be good for coastal ecosystems and marine life. We can also work with other site managers on sharing resources and lesson plans on more general topics, such as careers in conservation or pollution;



The school curriculum offers a lot of scope for active learning in natural environments

Joint projects build stewardship at Harmony Flats



- If possible, send lesson plan outlines and worksheets to teachers when they book the programme. This helps the teachers prepare their learners for the outing and gives them an opportunity to suggest any adaptations to the programme to suit their learners;
- Develop toolkits that are standardised, easy to use, and will gather data that can benefit the reserve. For example species checklists, pollution audits, and alien species audits;
- Make use of resources that have already been developed and adapt them as necessary.⁸

3.4 Joint projects to protect natural systems

There is a lot of scope for partnership activities focussed on protecting the natural systems on the site. All the urban sites in Cape Town make good use of litter drives, alien clearing, species monitoring and other conservation management activities. These can be used as educational opportunities, particularly if we:

- Enable the participants to experience the nature around them positively;
- Encourage them to be conscious of what they are doing;
- Stress the benefits of their contribution by explaining how it will help the natural systems;
- Model observant behaviour ourselves;
- Answer questions about things they observe while out in the field.

Apart from their educational potential, these projects not only directly benefit the site, but also induce a sense of stewardship and responsibility in the participants, and engender pride in their achievements – litter drives are particularly rewarding. This is an excellent way to build up community conservators.

A sense of stewardship can be enhanced with acknowledgement, such as awarding certificates, or entering names into a 'book of honour' at the site.

These projects can be demanding and will be greatly enhanced by working in partnership with teachers, local community based organisations, scientists and specialist groups. One such group is the Custodians of Rare and Endangered Wildflowers (CREW).

Custodians of Rare and Endangered Wildflowers (CREW) works with civil society to monitor endangered plants. We work nationally, with offices in Pretoria, Cape Town and KZN, as part of SANBI. We feed information to the endangered species programme.

We work with a huge range of communities, from the low-income community surrounding Harmony Flats to retired people in St Francis. Our model is to get people into the field to collect data. The people at Harmony Flats volunteered their time, but generally it is hard to sell the concept to impoverished communities with other priorities.

We have 14 groups working between Cape Town and Port Elizabeth – mostly Botanical society groups, retired people, mountain clubs, rambles etc.

There are two ways of starting:

A group may be initiated by interested individuals, who approach CREW for training and identification courses. CREW will then go into the field with them, show them how to use the species monitoring forms and give them the plant identification guides. Some of these groups are now very capacitated and can work more or less independently. For example the St Francis group take the initiative in setting up their own projects and do their own planning.

CREW may also target specific areas which need monitoring and go in and start a group as we have done in Swellendam. Through this process we identify keen individuals and invite them to workshops. Sometimes a very keen individual becomes a node for a group such as with Mr McManus in Napier.

We do some environmental education and slot in with teachers and any other organisations to enable school kids to go out into the field to monitor species.

- Ismail Ebrahim, CREW Regional Manager, SANBI



CREW in action at Edith Stephens Wetland Park

It started when I would go into the Reserve with my little dog to pick up litter and the children from Everite would stare at me as if I was crazy. So I invited them to come along and help me. While they are out there picking up litter, they often noticed plants and other things and we would chat about it, or find out more from Tshepo. We have started a little dancing group with the children and I help them by making their costumes.

- Lindie Braack, volunteer, Bracken Nature Reserve

This is a modest project, but significant because Everite is a very alienated, impoverished community who have been difficult to engage with around the site. This small initiative is teaching the children not only about nature in front of their homes, but also beginning to break down some of the apathy from the community towards the site.

3.5 Community greening projects

Indigenous greening projects in surrounding communities are a powerful way to promote environmental awareness and education, and can be hugely empowering in enabling participants to see that they are making a difference. They are also a good way to build local organisation and to prepare for adaptive co-management. These too can benefit from partnership with local community organisations, schools and church groups, and the help of locally based community greening and development NGOs.

Edith Stephens Wetland Park has been extensively involved in partnerships to promote community and school gardens. One such garden is at Voorspoed Primary.

These initiatives can start small and quite informally. Lindie is a dynamic member of the Friends group at Bracken and works with Tshepo on a number of educational projects with local schools. She explains her own pet project:



Teacher and learners explain the vegetable growing project at Voorspoed Primary School

Teachers wanted to find ways of greening the school. There is a big area surrounding the school but it is mostly without vegetation, or else covered in thorns. We were very excited to get trees during Arbour Week. Unfortunately the trees died because we did not know where to plant them.

Thereafter we went to ESWP for advice on coping with the soil and watering plants. They have supported and helped us.

We have now formed an agricultural environmental green team with the learners who plant veggies for thirty minutes on Mondays and Wednesdays. They are very keen. We grow the veggies in containers now. In future we are planning to grow them in tyres.

We use the veggies to supplement the school feeding, where we feed over 350 children per day. Children come to school for the food. The veggies are healthy because they are organic. Teachers and pupils participate in workshops at ESWP, and they will be helping us to establish a fynbos garden at the school.

We also have a recycling project now with newspaper and office paper.

- Mr Pedro, community activist and volunteer



Vegetables grown by the learners



Edwina presents her garden to the Champion's Forum

The story about the trees dying is a good example of a well-intended initiative that failed because of a lack of proper follow up and empowerment of the community. Fortunately, the success of the vegetable garden has restored the school community's enthusiasm and trust.

ESWP has also been in partnership with Community Action towards a Safer Environment (CASE) to run clean-up and community greening projects around Hanover Park. They have worked with high school children to create a fynbos garden. (These teenagers are also involved in the youth group described on p94). The children are extremely proud of their garden. When a visiting conservator asked them how working in the garden helped their schoolwork, he expected to be told that it taught them about biology. But Edwina replied, "It really helps with stress when the pressures of schoolwork mount up. You can kick a tree and it doesn't talk back." Luckily, judging by the health of the plants in the garden, it looks as if they are not kicked too often! The Manenberg People's Centre and Proudly Manenberg are other local organisations involved in greening projects.

Gardens are an excellent site for experiential teaching about nature conservation issues, and are extensively used at the Centre for Ecoliteracy in Berkley. Fritjof Capra observes:

Gardening reconnects children to the fundamentals of food — indeed, to the fundamentals of life — while integrating and enlivening virtually every activity that takes place at a school. In the garden, we learn about food cycles and we integrate the natural food cycles into our cycles of planting, growing, harvesting, composting, and recycling. We also learn that the garden as a whole is embedded in larger systems that are again living networks with their own cycles. The food cycles intersect with these larger cycles — the water cycle, the cycle of the seasons, and so on — all of which are links in the planetary web of life.

Through gardening, we also become aware how we ourselves are part of the web of life, and over time the experience of ecology in nature gives us a sense of place. We become aware of how we are embedded in an ecosystem; in a landscape with a particular flora and fauna; in a particular social system and culture.⁹

Food gardens have the advantage of providing food or an income, but indigenous gardens are helpful in increasing people's awareness and appreciation of local flora and fauna.

This helps people to recognise and appreciate 'nature under their noses' and to see plants as part of a bigger system, as

these plants generally attract more birds and insects. The spread of indigenous gardens is beneficial for natural systems as it creates habitats that can provide connectivity between natural sites through built up areas, and supports biodiversity.

Although indigenous community gardens are done in partnerships with organisations, individual gardens planted by landowners can also offer these benefits. These do not have to be large tracts of land, as Asieff discovered when he helped some of Zeekoevlei Nature Reserve's neighbours plant out their pavement.

One day Asieff Khan stopped to chat to an elderly man weeding the sandy patch of pavement in front of his house on 14th Ave, bordering Zeekoevlei Reserve. The man asked Asieff if he knew of any plants that would grow in the sandy soil.

Asieff managed to get him some restios and other fynbos shrubs that are indigenous to the area. There is now a beautiful garden on the pavement that the residents are tremendously proud of. They love watching the birds and insects that are attracted to the plants, particularly the Cape Canaries who nested and hatched chicks in the small tree that they planted. Neighbours want to grow their own fynbos gardens – they'd always thought that garden flowers were confined to roses and marigolds.

The family are now passionate supporters of Zeekoevlei and will phone Asieff if they see anyone going there to dump rubbish.

- Residents of 14th Avenue

By responding creatively to a need, Asieff set in motion a process to enable local residents to develop knowledge and passion about indigenous plants and birdlife in their area. They have become citizen conservators, and are offering a small piece of extra habitat for indigenous species.

Ilitha Lomso is a youth organisation based in Khayelitsha that has been involved in a dynamic partnership with Macassar Dunes Nature Reserve. This is what Andile and Senza said about their work:



The garden in 14th Avenue



Ilitha Lomso

We began in the nineties as an informal group of school pupils interested in community work. Over time we have narrowed our focus to environmental issues such as township greening where we planted trees and created community gardens. We had a programme where we made households responsible for their street corners. We ran a competition sponsored by Truworths where we judged the best community corner, and the winning family was awarded with communal gardening equipment.

At the moment the focus is on water and nature conservation. We identify problems, build proposals and link with potential partners to run projects over a specified time, usually three to nine months. Beyond this, our role is to mobilise, lobby or advocate. We have not had huge funding but since 2001 we have received consistent funding from SADF, an American organisation funding development. It is supported by exiles living there who want to plough money back here.

Through a strategic planning process, we identified water as an important issue. We built up a network with government service providers at provincial and national levels, as well as with environmental organisations. We initiated a programme where youth are trained to help residents to fix their taps and stop leaks – this created huge savings in water usage.

We need to find projects that will benefit the Reserve, but also have social benefits as we are working in a desperate community.

- Senza Kula Co-ordinator, Ilitha Lomso and Andile Sanayi, Co-ordinator, Macassar Dunes Co-Management Association

These efforts are empowering for communities, particularly if they are initiated and spearheaded by community based organisations such as Ilitha Lomso. They increase environmental awareness and an appreciation of natural systems. Furthermore, they increase stewardship, pride in a place, and promote self-worth.



A male Mallard duck

The Mallard Eradication Project

A few years ago, I was part of an operation conducted by CapeNature to eradicate alien Mallard ducks (*Anas platyrhynchos*) that were threatening the indigenous Yellow-billed Duck (*Anas undulata*). The operation was conducted at various public dams around Cape Town. We used alpha-chloralose to sedate and trap the birds for removal.

Unfortunately, the intentions of the project did not include environmental education. This meant that a good opportunity to build awareness was lost, and hostility and anger was aroused amongst the community. We had distributed brochures, but in retrospect these were quite inadequate.

This experience taught us not to underestimate the role of the local communities. The project took place in the areas where they walked their dogs and held picnics, and obviously the mallards were one of the main attractions of these spots. In addition, people took their children to the dams and taught them about wildlife. Had we taken the trouble to discuss the matter with people and to fully inform them beforehand, we could have shifted their opinions and won support. This would also ensure that once the birds have been removed, no-one would release them back into the dams again. Instead, we left people and their children traumatised by the sight of “dead ducks” and with bad memories of Bongani Mnisi, the “duck killer”. A situation which could have turned out heroic turned sour due to poor planning and approach. Scathing reports were sent to the newspaper, and even City officials tried to stop the operation, although they were partners.

Only when we realised that we could not continue without public support, did we call a meeting with relevant stakeholders. At this meeting stakeholders expressed their anger. All comments were recorded and people were asked for ideas as to how the project should have been executed. The meeting showed us that people who were considered destructive, were good citizens who simply needed to be made aware before the proceedings. The conflict was created by our approach. If we’d spent enough time trying to understand why the local communities wanted those birds to remain at the dams, things might have turned out differently.

Instead of claiming to know better than the public, we could have allowed the public to take a leading role, by identifying all areas infested with mallards and also forming part of the eradication teams. Although time is vital in project management, going ahead without public support meant that the project was delayed anyway. And the communities would



Bongani Mnisi discusses the duck problem with a colleague

wait until the officials were finished removing the birds then re-introduce more birds into the dams, a few hours after the officials had left.

Some conservation officials felt that people always resist change and usually adapt over time. But in the end all agreed to give the public enough time to absorb the intentions of the programme instead of just doing it and hoping that everyone would sing along.

Other key lessons were:

- Change can only come when you allow yourself to learn by receiving learning experiences from others. The community is full of untapped skills and resources that could be a key to the success of any future projects;
- Different communities have different interests. Participation and consultation methods need to be adapted according to the needs of such communities instead of applying a one-size-fits-all philosophy;
- Nothing can be done in isolation. Had we tried to implement the project in conjunction with the public, more could have been done and the public could have continued with the project in our absence;
- We need to understand the interested and affected parties’ stance in order to approach them in a manner that will make them feel included;
- We should have approached the media beforehand with the appropriate articles introducing the issue and appealing to the public for comments;
- Brochures do not constitute public consultation, but should be used with other relevant media such as local radio station announcements, proper use of local news papers, meetings with various community forums, home owners associations, bird clubs and other relevant media and social networks available;
- We need a communication strategy to encourage comments and a channel whereby the public can share their views instead of allowing frustrations to build up;
- We need to create community champions who live near areas prone to mallard colonisation, to assist in data capturing and monitoring as well as eradication;
- We are public servants and should have listened to the needs of the public and respected their wishes. If we do not listen to the public that we serve, who are we serving?

- Bongani Mnisi, Area Manager, City Of Cape Town



3.6 Using every opportunity to grow passion and awareness

We need to use each and every opportunity to create environmental awareness. Koos Retief, from Rietvlei Wetland Reserve, ensures that all his ground staff know about the animals and plants in their Reserve. This means that not only do they benefit from environmental education, but they can also answer queries from visitors. If they have to enforce rules, they can explain why the rule is necessary. They are sharing in the vision, and sharing the vision with visitors. This has made visitors more willing to observe the rules.

Controlling alien species is a good area for community involvement and holds many lessons about how our natural systems work and how human interference can throw them off balance. However, sometimes the removal of alien species (particularly animal ones) can anger members of the community, and needs to be approached carefully to ensure that it is not the wrong kind of learning experience. The case study on the previous page shows what Bongani Mnisi discovered.

Bongani's story reminds us that for many nature-lovers, alien species have become part of the landscape, and part of the 'natural' resources of the city that they value. However, most will become ardent defenders of indigenous species if given the opportunity to discover them and to understand the threat aliens pose to indigenous species and ecosystems. Dalton Gibbs has found that families initially opposed to the removal of Mallards at Die Oog became equally attached to the indigenous ducks he re-introduced and supported Mallard eradication thereafter.

Bongani's story illustrates the short-sightedness of a top down 'we-know-everything' approach. The threat of the Mallards was a wonderful opportunity to educate communities and to work together with them. Sadly, in this example, this opportunity was missed – but we can use our adaptive approach to learn from these mistakes.

3.7 Enabling access

My friends from Nyanga said when they were growing up they thought that the mountain was a wall that separated the rich from the poor.

- Zwai Peter, ex Cape Flats Nature Communications Manager

Edith Stephens Wetland Park acts as a window for these communities to understand a natural area. Many projects start with taking the groups into the wetland to learn to appreciate a natural area and the principles of being in a nature reserve and then we'll take them to other nature reserves in the city. For example we have taken a group of teenagers from Hanover Park to every nature reserve in the city, so they have a good idea that Cape Town is not just an urban area. And then these kids give back - they did all the alien clearing at ESWP in April.

- Luzann Isaacs, Reserve Manager, City of Cape Town

The new paradigm must be that our urban parks have real long term value as public open spaces (primarily as places for the enhancement of people's well being) even if their 'natural biodiversity' value erodes because of the pressures of urbanisation. That having been said, it does not mean that we should not strive to do our very best to sustain the 'natural' values or qualities of our urban parks, even if those 'natural' values are no longer purely 'natural'.

- Howard Langley, retired conservation Manager

As we mentioned earlier, much of our passion for nature emerges from the opportunity to simply be in it. Our urban conservation sites bring irreplaceable value to communities by providing a natural sanctuary in a harsh urban environment. Making a conservation site accessible inevitably means making it available for recreational use. There is a serious shortage of safe, aesthetic recreational spaces in our cities, especially in



low-income communities. As urban density increases there will be more and more pressure on urban conservation areas to provide recreational opportunities.

But doesn't this mean our sites will be mowed over and trampled by visitors and we'll just have to spend more money on toilet paper rather than our core business of biodiversity?

Enabling recreational use does put some pressure on urban conservation sites, although much less than the pressures posed by fragmentation and urban infrastructure. But we cannot expect a community to be committed to the stewardship and adaptive co-management of natural resources without allowing them access to these resources. Who will fight to save an invisible reserve behind a fence? Allowing access helps us work towards our goal of creating resilient social ecological systems, extending the borders of our natural systems by making the whole city conservation friendly, and creating natural habitats in every nook and cranny of our environment. This will serve the cause of biodiversity far better in the long term.

While recreational activities can impact negatively on natural systems, offering these opportunities may provide the following advantages.

- Recreational use means more visitors. This can make it less attractive to drug users, prostitutes and other anti-social elements, although we do need systems to safeguard visitors from criminal assaults.
- Recreational use greatly enhances the value of the site for the community. A community is far more likely to defend a place where they can picnic or canoe than a place where they can just watch birds, even if they enjoy watching the birds while they picnic and canoe!
- Recreational use provides the user with good opportunities for developing environmental awareness. Many youngsters who come to the site on a family picnic, may develop a love of and interest in the animal and plant life while they are there. We can enhance these opportunities with good display and information boards which are regularly updated – people will stop looking at them if the same fly-spotted posters stay up year after year. High school students could be invited to do projects

on relevant topics around the site, and display them for short periods. We can also equip all staff members to answer basic questions that visitors might ask.

- An income can be generated if the site is made available for private functions such as weddings. ESWP charges for these functions, but not for non-profit organisations. (In the City of Cape Town, income needs to be in terms of Council approved tariffs and goes into general City coffers.)

Koos Retief manages Rietvlei Wetland Reserve, which attracts thousands of recreational visitors each year. This is how he manages:

We have a number of recreational clubs who use the site for fishing and boating. I have learnt that you have to be very strict and ensure that every activity benefits all users of the site, not just a narrow group.

Clubs are allowed ten days per year for events such as races and water sports. You have to scrutinise every proposal carefully. I turn down lots of requests, such as an annual race for big power boats. We are also trying to protect the natural environment and the club does not always appreciate the value that a well-managed environment brings to it.

You have to be steadfast, even if it makes you unpopular. I have also learnt to use by-laws to strengthen my hand. For example, to enforce restrictions regarding boat size, the age of the boat drivers and so on.

I also use my advisory board, which has stakeholders from all the different users of the site. This helps to make sure that all the different needs of the site are recognised and respected.
- Koos Retief, Reserve Manager, City of Cape Town



The following strategies may be useful:

- Set aside sections of the site for freer public access and restrict access to other parts to protect natural resources, or for the safety of the users. Make it clear what activities are allowed in different areas. Reserves should have a Conservation Development Framework which will specify the zoning of the site;
- Ensure there are enough staff on weekends to manage the site;
- Appropriate infrastructure draws visitors and also minimises negative impacts. This might include toilets, picnic tables, bomas for shade, boardwalks and paths. Litter bins can be a problem – people tend to drop their litter next to the bin, and they can attract baboons and other animals. It may be better to have one or two animal-secure bins for recyclable plastic, tins and glass, and/or ask people to take their litter when they leave. This is ideal, and is being successfully employed at Kirstenbosch National Botanical Garden where hundreds of people picnic every weekend, but it may not be feasible at all sites;
- Try to channel high-impact recreational activities such as fishing and boating through clubs or associations that have formal relationships with the site through an advisory board or other structure. The clubs can help play a role in regulating the activities of their members and can also be asked to pay back value in fees or in volunteering. For example, the Scout Club spends one day a month doing clean-ups at Helderberg Nature Reserve in return for being able to use the site for their activities. The youth involved in Edith Stephens Wetland Park programmes help out with landscaping and other work;
- Have prominently displayed information boards about the reserve, the animal and plant life there and the need to tread lightly;
- Ensure that all staff members are able to explain to visitors why regulations are necessary when they enforce them;
- Use by-laws to enforce the prevention of destructive behaviour such as drinking alcohol, loud music, littering and prostitution;
- Hold recreational functions with an environmental theme aimed at families. These may be done in partnership with local organisations or other bodies. For example, the Edith Stephens Wetland Park held an evening of night sky watching in collaboration with the local observatory. The observatory provided six telescopes and their experts to explain the constellations. This proved to be very popular;

The living display garden at Bracken Nature Reserve.



- Other activities might include spring fairs, litter drives, mid-summer evening picnics, concerts and plays;
- Reserve the right to curtail recreational activities if necessary in agreements entered into with organisations. Make sure that organisations understand what limits need to be imposed on activities and why these are necessary in terms of sustaining natural systems and respecting other users. This will be much easier if we have built a relationship of trust and openness with the organisation and they share our vision as to what the site needs to offer.

Moving on...

In the next chapter we explore adaptive collaborative management of the natural systems on the site.



¹ John Muir, quoted in <http://www.religionandnature.com/bron/dgr/Taylor--DGR3.pdf>

² Goleman, D., "Ecological intelligence", essay published online by the Centre for Ecoliteracy, <http://www.ecoliteracy.org/essays/ecological-intelligence>

³ Capra, F., A chat with Fritjof Capra www.science-spirit.org/printerfriendly.php?article_id=424

⁴ Capra, F., "Ecoliteracy: The Challenge for Education in the Next Century", Liverpool Schumacher Lectures March 20, 1999 Center for Ecoliteracy, Berkley California

⁵ Eksteen, L., "Investigating the relationship between a nature reserve and local community: A case study of Wolfgat Nature Reserve on the False Bay coast", University of the Western Cape, *Environmental Project Report*, p.4

⁶ For example, Fuller, R.A., K.N. Irvine, P. Devine-Wright, P.H. Warren, and K.J. Gaston, "Psychological benefits of greenspace increase with biodiversity", *Biology Letters*, 2007, May 15; Miller, D., "Take a hike and call me in the morning", Special to *The Washington Post*, November 17, 2009

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⁸ Adapted from Ashwell A., *ibid*.

⁹ Capra, F., "Ecoliteracy: The Challenge for Education in the Next Century" Liverpool Schumacher Lectures, March 20, 1999, Centre for Ecoliteracy, Berkley California, <http://www.ecoliteracy.org>