

Growing Vision

Mapping systems and growing vision through cycles of reflection and adaptation

I was so excited when I heard I was going to manage Bracken Reserve. I was told it was a beautiful granite outcrop with rare species... I couldn't wait to start. But when I arrived I discovered that it was still a dumpsite. There were no fences, no gates, trucks were going back and forth dumping in the landfill, rubbish was blowing everywhere, the place was thick with aliens. There was not even an office... For my first few weeks, my 'office' was an old tree stump. I felt so overwhelmed, I just wanted to run away... luckily, there is this one part of the Reserve which is still pristine and beautiful. When I stood there, I thought: Okay, we can make this work... This is worth fighting for.

- Tshepo Mamabola, Reserve Manager, City of Cape Town

Taking responsibility for a small piece of nature in a teeming and often hostile city can be overwhelming. As a new manager, it is natural to feel anxious and to want to bring an orderly process to the site, to write out a list of tasks to be done and to tick them off.

But an urban nature conservation site is a living organic system. If we are lucky, it may be a remnant of a pristine, well established and stable ecosystem. But even these sites inevitably interact with, and are impacted by, the urban environment and are therefore subject to changes that are hard to predict. In addition, a site is not only a physical space, but also the centre of an intricate and fluctuating network of human relationships that flow in and around it.

In short, an urban nature conservation site is a complex living system, and the most successful way to manage it is to learn from nature. Nature derives its resilience and sustainability through connecting living systems in an interactive web of adaptive cycles. Equally, the most effective way to develop resilient and sustainable systems on and around our site is by building networks and partnerships and connecting the different elements in learning cycles of action, reflection and adaptation.

This may sometimes seem extremely difficult and, at other times, surprisingly easy. But, with practice, it is possible and



Tshepo Mamabola, Reserve Manager, and Bracken Nature Reserve



Nature derives its resilience through connecting living systems in an interactive web of adaptive cycles

ultimately rewarding as the urban nature conservators in this book will testify. In this chapter, we look at ways to get to know the site, to grow our vision for the site and to engage our stakeholders, community collaborators and management team in an ongoing cycle of action, reflection and adaptation that will enable us to work towards realising this vision.

1. How do we begin?

A cycle goes around in a circle, which makes it impossible to pinpoint where it begins. It is similarly difficult to identify the precise starting point for a new manager. We might say, begin with a vision, but a vision needs to be informed by a thorough understanding of the site and, similarly, such understanding needs to be driven by a vision.

The starting point will vary and will depend on the circumstances. But, wherever we begin, we need to approach any new enterprise with openness tempered by steadfastness. We need to open our eyes and ears to capture the nuances of all the processes relevant to the site, from a caterpillar eating a particular plant to the political dynamics of a local community. And we need to open our minds to new ways of understanding and knowing. Suggestions made by stakeholders and community collaborators may sometimes fly in the face of traditional conservation practice. But while fences may occasionally be useful on our sites, they definitely have no place in our minds. Resilience demands adaptability and a willingness to be open to new ways of understanding challenges and to new solutions. We need to learn from the ingenuity with which nature weaves itself into an urban environment – from the plants that grow in cracks in the tarmac, the pigeons that roost on the window ledges of a skyscraper to the hippos wallowing in the sewage works.

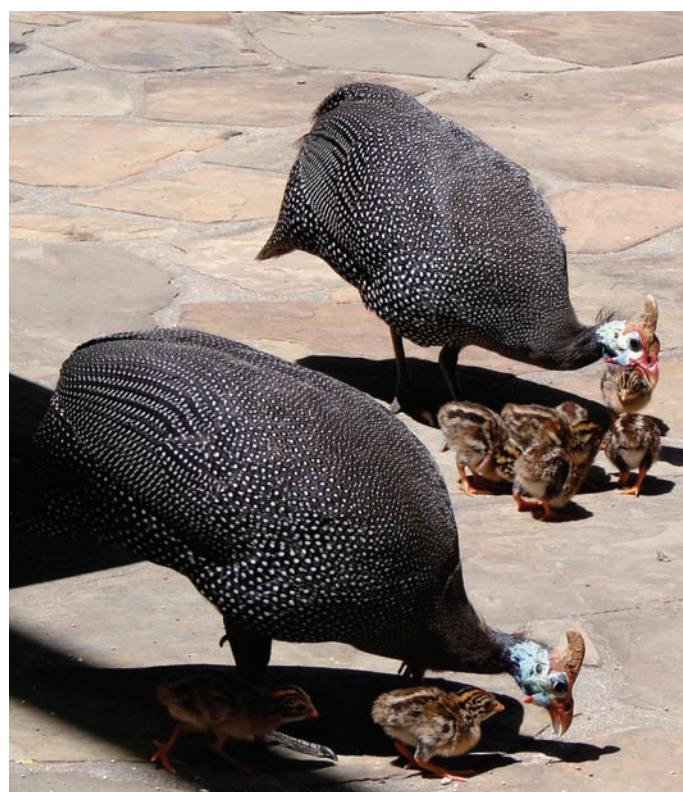
At the same time, we need to be guided by vision, principles and values which do not easily shift or change. Just as nature's resilience derives from a balance of stable and shifting elements in an ecosystem, so do we need to find this same delicate balance in managing our sites. Like a tree, we need to be flexible enough to bend with the wind, but still remain rooted to our core vision and values.

This enables us to maximise the value of the site for both the nature growing on it and for the community engaging

with it. In this chapter, we look at ways to engage our stakeholders, community collaborators and management team in an ongoing cycle of action, reflection and adaptation that enables us to get to know the site, grow our vision and work towards realising this vision.

1.1 The turning wheel: the action, reflection and adaptation cycle

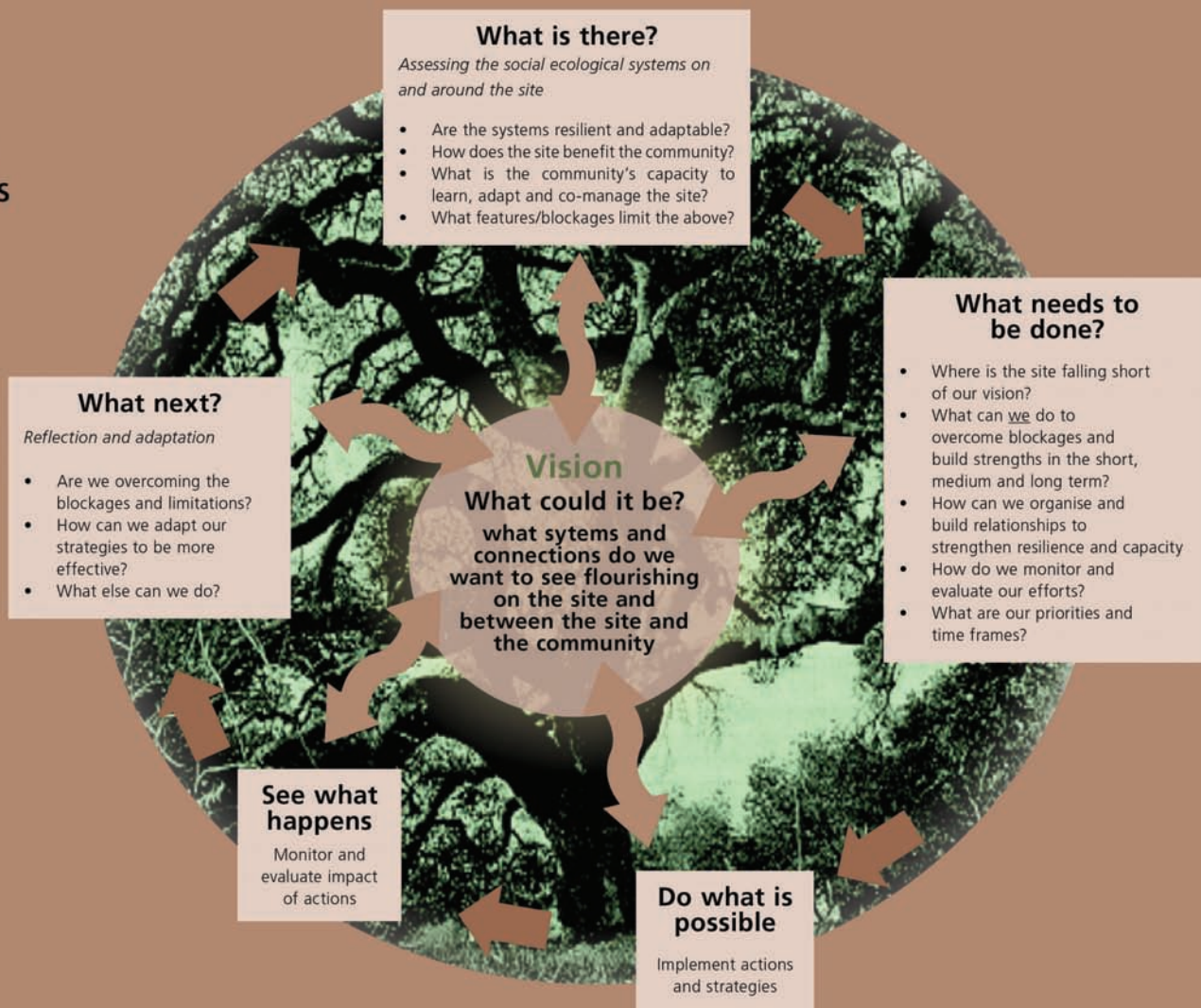
This cycle provides a dynamic system that links our vision with operational planning, monitoring and evaluation, and enables us to adapt our practice in response to unexpected difficulties or opportunities. It covers six main processes:



Guinea fow find a habitat in an urban garden

STAKEHOLDERS & CO-MANAGERS

- Staff on the site
- Local volunteers/
interest groups
- Local civic,
church,
health and
other groups
- Education
institutions
- Private sector –
local and big
business
- Partnership
NGOs and
institutions
- Government
(national,
provincial & local)
- Conservation
agencies/experts



- Formulating a vision for the site and the surrounding communities (**what could it be?**);
- Developing a thorough knowledge and critical assessment of the social ecological systems on and around the site (**what is there?**);
- Using this knowledge, and the vision, to identify and prioritise projects, and to guide our practice in the short and long term (**what needs to be done?**);
- Implementing strategies and actions (**what is possible?**);
- Monitoring and evaluating changes in the social ecological system in response to our interventions and other factors (**what happens?**);
- Using the insights gained by this to reflect on and assess our strategies, goals and actions in response to feedback, and then adapt them as necessary (**what next?**).

These processes are shown in the diagram above.¹ This cycle will be repeated at micro and macro levels. At a macro level, with broad planning goals, it may be repeated annually or every five years. At a micro level, for example around a particular project, a 'mini-cycle' may be repeated monthly or even weekly.

We will explore aspects of the cycle in more detail, but first we need to explore the agents who drive this cycle.

1.2 Stakeholders and collaborative managers

Nature areas can provide more than just bakkies and beautiful flowers... but we have to look at each site in the context of that particular community and see how we can meet the community halfway.

- Zwai Peter, ex Cape Flats Nature Communications Manager

The **stakeholders** are distinct from collaborative managers and may be defined as all those who have an interest in the site – which may include those who want to use it for purposes other than nature conservation – as well as those who have particular expert knowledge that may be valuable to the site. In considering who these may be, we need to think as broadly and creatively as possible. Stakeholders may include:

- Members of all surrounding communities, who may be represented through volunteer associations with a particular interest in conservation, but also through schools, civic groups, religious groups, ward councillors, development forums, local business forums and community policing forums;
- Members of relevant Community Based Organisations (CBOs) and Non Governmental Organisations (NGOs)

Macassar Dunes Conservation Area stakeholder's meeting



By engaging stakeholders, we begin to realise our vision of a community-responsive and community-engaged nature conservation site



who may engage with the site at some level such as township greening projects, community development agencies, food gardening projects, HIV/AIDS support groups and youth development organisations;

- Government bodies, such as the authorities managing the site, and other relevant agencies such as law enforcement, transport, water affairs, fire departments, housing, clinics and schools;
- Conservation agencies such as the Working for Water, Working for Wetlands, SANBI, provincial Parks Boards, SANParks;
- Staff of higher education institutions and interested experts in conservation and ecology;
- The staff and management of the site.

The **collaborative managers** are those stakeholders who become actively involved in managing the site. They may be volunteers, elected representatives on management forums or committees, or community members with a special interest in a particular project or work of the site. Individuals from this group will be actively involved in the day-to-day management of the sites and community based projects launched from the site. They may even spearhead these projects.

While some of the constraints [to managing a reserve] can be very challenging... most could be made easier by simply including people at the beginning of everything instead of at the end where they end up feeling like they are almost being pushed towards accepting anything that has been put before them.

- Bongani Mnisi, Area Manager, City Of Cape Town

Why do we need to involve stakeholders?

There has been a tendency in the past, for experts to decide how these sites should be managed, and then inform communities after the fact. As Bongani points out, this has often led to a break down in trust and alienated communities from the site. Involving stakeholders in strategic processes may seem laborious and it may be difficult if dealing with a divided community with different interests. However time-consuming it may seem, conservators have discovered

that not involving stakeholders can, in the long run, be more consuming of time and resources as they battle to manage a conservation site surrounded by a hostile or apathetic community.

Broad and representative stakeholder involvement offers us the following benefits:

- By engaging stakeholders and community collaborators, we are already beginning to implement our vision of a community-responsive and community-engaged nature conservation site;
- An urban conservation site lies at the heart of a complex social ecological system, and has to perform a delicate balancing act of servicing the needs of differing sectors of the community as well as the needs of nature conservation. The only way to ensure that these needs are understood and addressed is through extensive stakeholder engagement within and between these sectors, as well as broad input from different knowledge systems and perspectives;
- Ongoing consultation with stakeholders is key to creating a strong, resilient web of partners and collaborative managers to undertake the demanding task of conserving the site, while ensuring that surrounding communities gain the maximum benefit from it. Any stakeholders have the potential to become collaborative managers, but they cannot develop the necessary consciousness, knowledge and skills if they are not involved in vision building;
- This process will deepen management's understanding of the needs, aspirations and value systems of all relevant communities and thus enrich their vision as to how the site can serve the communities' needs. It will also enrich stakeholders' understanding of what value the site can offer, and what is needed to sustain the good health of the natural systems on the site;
- It helps to demonstrate to communities that their needs and interests are being taken seriously and that the site is there to serve their needs. The site has no future if local communities do not recognise that they have a stake in that future;
- If the community is divided, the site managers may slip into consulting only with groups who are easy to work with, or more sympathetic to the managers' vision of the site. This can further divisions and alienate the site from other sectors of the community.

Later on in this chapter, and in other chapters, we explore ways to engage stakeholders. While this may take place in different forums, it is worth noting that it is extremely valuable to ensure that stakeholders from all different perspectives have opportunities to interact around strategic issues concerning the site. This will facilitate their reaching a common understanding of each other's perspectives, as well as help in attaining a consensus as to the general objectives of the site.

2. Holding the Vision: *We hold the vision, and the vision holds us*

Moulding the Frog: how holding the vision can guide us

If you were to take a piece of clay and try to make a little frog, for example, this is what you would most likely do: First you would imagine what it looked like and then you would squeeze and push the clay into something that roughly resembled a frog's shape. It would not be long before you started putting the eyes and mouth in and then you would work on the legs and feet. But then, when you stood back, you would see that it would not really look like a good frog because the overall shape is not there. You have rushed into detail before the overall frog-like shape is right. Yet if you then tried to change the overall shape, all the work you put into the eyes and mouth and feet would be spoilt and wasted.²

Our vision is what will give us our 'frog shape' and, as the story suggests, we need to invest time and energy in ensuring that it is clear, that it honours the intentions of the site, and represents as broadly as possible what stakeholders want or need from the site.

A good vision is the stabilising element in the action and adaptation cycles. It provides:

- A lens through which to view and evaluate different aspects of the site;

- A benchmark against which to monitor and evaluate our progress, and identify when we may be going off course;
- A common frame of reference that can unite diverse members of the collaborative management team.

Although our vision will be continuously enriched and deepened by our practice, it also needs to be moulded around a core of principles and values that will keep it steady.

The starting point for the vision is a simple three-letter word: Why? Why is it vital for the good of the city, the community and the environment to conserve this site? Why do we need healthy social ecological systems on and around the site? We have explored the general objectives of urban conservation in the previous chapter. These provide a broad framework, but they need to be translated into a specific vision for each site.

*But the governing
authorities of many sites
have a vision that is embodied
in a mission statement -
surely then it is not
necessary to go through it
all over again?*

An institutional mission statement may provide broad directives. But this is just a collection of words if it is not actively articulated and embraced by all the stakeholders. Although people might support the overall intentions of a site, the factors that make them passionate in its defence are often personal and varied. This one might love the owls, that one might remember a grandmother harvesting medicinal plants while another one might find employment every year clearing water hyacinth. It is important to find ways to engage all stakeholders and collaborative managers in formulating a vision, to find a consensus and to translate this into a mission statement or statement of intent. This is valuable because:





Mamre stakeholder design workshop

- It ensures that the objectives of the site encompass as broad a range of needs and interests as possible;
- A well managed process of grappling with a vision invites the stakeholders to examine what value conserving the site may offer to them. This will expand their understanding and awareness of the value of the site, and of their interdependence with nature;
- Most importantly, developing and exploring a vision is a key leadership skill that will greatly advance the community's capacity to collaborate in managing the site. If all those involved in either voluntary or paid work around the site truly embrace and understand the vision, the collaborative management team will be far more sustainable and productive. Team members who understand how their work fits into the broader vision of the site need less management, and are more productive and more empowered to take initiative. They are better equipped to identify and take advantage of creative community partnership opportunities that can advance the objectives of the site. They are more able to monitor and evaluate their efforts and to adjust their activities in response to feedback.

In the following case study, Tanya Layne explores how holding a vision can provide a stable focal point that pulls together a wide diversity of endeavours into a common purpose, and how sharing the vision enables a transfer and decentralisation of leadership:

Holding the vision

Today, Edith Stephens was buzzing.

The urban agriculture crowd was meeting in the reception area... gogos from Gugs, Nyanga, Philippi and Christine from Manenberg chairing in her usual street smart way. They were meeting with SEED (who teach school teachers to grow school food gardens and use them to teach the curriculum) to discuss training and support for their work on the garden here. Luzann is arranging for SEED to be based at Edith Stephens Wetland Park, which means lots more teachers and a demonstration garden. This has been done with little intervention from the Cape Flats Nature team... just a fair amount of nudging and support to get the Urban Agriculture Group going and networking with permaculture people and organisations like Abalimi Bezekhaya, SEED and Permacore... a light touch... but then it just all happens without us.

In the hall, at the same time, was a banquet thrown by a consortium of five township companies launching a new project to draw tourists to the Flats (long table for 30, tablecloths, gold overlays, serviettes in wine glasses, restios for table decorations, kids' artwork from the 50th anniversary competition on the walls). They were marketing Cape Flats cuisine and there was African dance/drumming entertainment... Again [this is] the result of very light touch networking from us... going to Sonke township tourism route meetings, using community catering services, passing the connections on to Luzann, Luzann maintaining the relationships, exploring ideas and options, keeping the conversation going.

Managers on sites will never be able to unlock economic benefits on their own. It's about knowing our own skills and capabilities and calling on those around us to complement our strengths. It's also about letting go and not needing to hold and control everything but still giving support, care, nurturing and protection.

The light touch is about holding a vision. It is part of Cape Flats Nature's catalytic role to hold onto the vision in casual conversations as well as more formal situations.

- Tanya Layne, *Urban Nature Programme Developer, SANBI, case study, May 2007*



Herb spiral planted at ESWP in partnership with the Guguletu Boy Scouts



Stakeholders explore the Mamre conservation area

Mamre Nature Garden

The proposed vision for the garden is a conservation area that considers and caters for the needs of the communities while maintaining its biodiverse richness through continuous research and education for the benefit of plant and animal life as well as human life for today and tomorrow. In short: conservation by people for biodiversity and people.

Mission

This conservation area's proposed vision will be achieved through the following:

- Giving people a chance to state what they know conservation to be;
- Ensuring that people are taking the lead in the formulation of a management plan for the area;
- Making sure that they identify areas which require attention, be it through research, environmental education or other specialised training, so as to ensure that the communities take the leading role in the management of the area;
- Engagement with higher education institutions to ensure that the area is managed proactively through continuous research to avoid any unnecessary loss of biodiversity;
- Knowledge and understanding that, while biodiversity conservation is imperative, it should not be to the detriment of the people that live near it, as this often makes those communities feel excluded, often giving rise to vandalism.

– Bongani Mnisi, Area Manager, City of Cape Town

Mission statement

Once a vision has been established through negotiation, it is helpful to translate it into a simple, clear mission statement. This states the context and values underlying the vision, and translates it into a list of intentions. This can be popularised and made known to all stakeholders and visitors to the site. It can serve as constant reminder for the communities as to what the site promises with their engagement and serves also as a benchmark against which the management of the site may be measured and adapted if it is failing to keep on track.

See pages 65, 66, and 67 in Chapter 4 for more detail on growing the vision with the community and stakeholders.

The example above is a mission statement flowing from a vision for a conservation area in Mamre.

3. Mapping the systems

The first task of any new manager is to do research. Often new managers overlook resource material that is right there on the site. For example – Rondevlei is one of the city's oldest conservation sites. It is stuffed full of history. It was originally connected to Zeekoevlei, but at some point it was closed off from Zeekoevlei and the water levels were lowered so that Rondevlei now has a lower water level than Zeekoevlei. This means that when it floods, the water flows back to Rondevlei. Conservation managers could not understand this. But if they had read the history of the place they would understand the reasons behind this.

– Howard Langley, retired conservation manager



Understanding the history of Rondevlei helps us understand the hydrological changes

Howard highlights one example of why it is so important to develop a thorough understanding of the site and of how it fits into the surrounding communities.

Urban nature conservation sites, like everything else in the world, do not exist in isolation. They fit into a complex interaction of nested systems that interact with each other through cyclical processes. What defines these systems, is not so much the constituent parts, but how they relate to each other. As Fritjof Capra explains:

An ecosystem is not just a collection of species but a community, which means that its members all depend on one another. They are all interconnected in a vast network of relationships, the web of life.

Understanding ecosystems [and social systems], then, leads us to understanding relationships. This is a key aspect of systems thinking. It implies a shift of focus from objects to relationships. A vibrant community is aware of the multiple relationships among its members. Nourishing the community means nourishing these relationships.

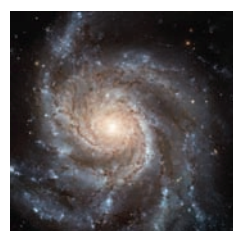
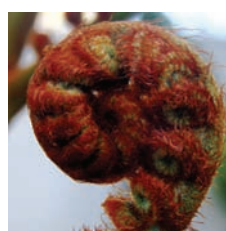
Now, understanding relationships is not easy for us because it is something that goes counter to the traditional scientific enterprise in Western culture. In science, so we have been taught, we measure and weigh things. But relationships cannot be measured and weighed; relationships need to be mapped. You can draw a map of relationships, interconnecting different elements or different members of a community.

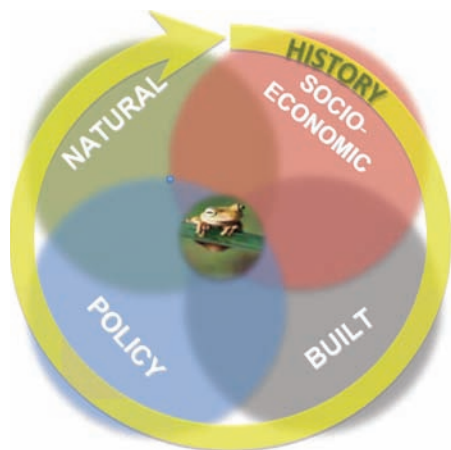
When you do that, you will discover certain configurations of relationships that appear again and again. This is what we call patterns. The study of relationships leads you to the study of patterns.³

These systems may be micro, such as the digestive process of a worm, or bigger slower processes such as food chains or evolutionary cycles. The bigger cycles are more stable, while the smaller are adaptable and vulnerable to change. Between them, they provide the resilience to change through a balance of adaptation and stability. Monitoring both the changing and the stable features of these systems can help identify vulnerable linkages and can help us identify interventions which may improve the resilience of the system. We also need to monitor the impact of these interventions at both a macro and micro level and be sensitive to unexpected consequences of our interventions, so that we can adapt them accordingly.

An urban conservation site provides a node of interaction for a range of these cycles, both micro and macro. The micro-systems of the living organisms living on the site are connected through the bigger cycles of food chains and hydrology. These also link the organisms on the site to human organisms, which in turn connect through social systems at every level, from family to government. All of these systems flow through and around each other and all have an impact on the resilience and sustainability of both the site and the surrounding communities.

While it is clearly impossible to track all the systems and their interactions, we do need a thorough investigation of key systems to assess their viability. In this process we need to look at the site through a zoom lens, to enable us to spot small, easily overlooked features that may enable or weaken its resilience. And we also need to look through a wide-angle lens, to enable us to see the systems impacting on the site that operate on a larger scale. While it is impossible to draw hard boundaries around interacting systems, it may be useful for us to group them into the following clusters:





3.1 What indicators show us the social ecological system's resilience and adaptability?

As part of discovering what is there, we need to review all these clusters of systems, and assess their health in terms of their resilience and adaptability.

1. **Natural systems:** These are the natural systems flowing through the site. On a micro level, they include the interactions of the different species on the site. But it is also critical to assess how these interact with natural systems on neighbouring sites and with the broader ecosystem through linkages created by green belt corridors or water systems, migrating species, wind, pollinators and so on.

Questions to ask include⁴:

- What are the parameters – size, location, and main geographical features – of the site?
- What biome, vegetation types and species does it represent?
- Does it have resilient or restorable natural systems? Which species are key in indicating the health of the systems?
- What is its broader natural environment and what are points of connection with other natural environments?
- Has it been degraded by aliens, building, pollution or other activity?
- How much diversity does it support? Is it a remnant of an important ecosystem? Does it have rare or endangered species?

2. **Socio-economic systems:** These include all groups that may use, benefit from, or impact on the site, but with a

natural system; socio-economic system; political system; and the built environment.

An extensive inventory and mapping of the systems on the site may feel overwhelming for new manager. However, the important point is to take in as much as possible and know that every day we will learn more and our understanding will deepen. These systems are in a state of constant flux, changing in response to weather, to seasons, changes in the surrounding built environment, environmental changes and our own interventions. We need to engage in a continuous process of discovery, and of tracking any changes in the systems. We need to identify and pay particular attention to indicators that alert us to significant shifts in the resilience and health of the ecological or social systems. The following questions can help us identify these:



All urban sites are part of a social ecological system

specific focus on local communities. They also include the collaborative managers.

Questions to ask include:

- What are the major political and economic features of the broader urban environment?
- What are the features of the surrounding communities, such as culture, language, history?
- What is the level of trust, cohesiveness and connection in the communities? What divisions weaken this?
- How resilient and sustainable are their livelihoods? What are their aspirations, values, and needs? What are their concerns?
- How do they relate or not relate to the site?
- How equipped are they with the cohesiveness, skills, consciousness and knowledge needed to collaborate in managing the site and other natural resources?
- Who else has an interest in protecting or not protecting this site i.e. who is a stakeholder?
- How is the community organised? What possible nodes of connection are there e.g. civic or development organisations or forums; church groups; volunteer groups; youth groups; politicians. How representative are these structures? Which sectors are *not* represented by organised structures?
- What pressures are there to use the site for purposes that will make nature conservation difficult e.g. commercial development or mining?
- Who is currently involved in working on or managing the site? How do they link with others in the community?

3. **Political systems:** All sites are governed by laws and regulations. They are protected – or not protected – by legislation, institutions and political will. They are managed by municipal, provincial or national authorities, all of which have different protocols and systems that interact with and impact on other systems.

Questions to ask are:

- What is its legal status: Who owns it? What legislation protects it?
- What is its administrative status? Which government or municipal structures are involved in managing it? What national, local or institutional vision does the site need to fulfil?
- Is there a conservation development framework and/or a management plan in place? How were they developed?
- How is it resourced?
- Are there institutionalised opportunities and incentives for neighbouring landowners to get involved in stewardship and nature conservation?

4. **Built environment:** The site may be surrounded by roads, housing, commercial centres or industry. It may have storm water systems, industrial effluent, or sewerage systems running into its rivers and wetlands. It may have pipes running through it that have to be regularly dug up and repaired. It may, like Bracken, even be built on or near a rubbish dump. These are not living systems, but they supply the scaffolding that enables – or impedes – the flow of living systems.

Questions to ask include:

- What infrastructure, beneficial to urban conservation, is on the site e.g. enviro centres, nursery?
- What features, such as storm water detention ponds, may be used to benefit natural systems?

- What features of the built environment and urban infrastructure have a negative impact on the site?
- What schools, churches, open spaces, health clinics, recreational and other community facilities are in the area?



This map, created in a workshop, reflects the interaction between the site and its surroundings

When assessing these systems it is also important to be aware of relevant history. All systems evolve in time and carry the remnants of former systems within them. We need to understand important aspects of the social history of a site – how did this land come to be a conservation site? How have people connected with it in the past? And the natural history – what processes of evolution led to the particular biodiversity found on the site? And the interaction of the two: How has the site adapted to the pressures of human development? How has human interference shaped its topography and ecology? How has the site been managed or not managed? What is its cultural and historical meaning for local residents? While it may be impossible to have a detailed understanding, it is important to know major historical factors that have shaped the site, as is illustrated in Howard's comment on p33.

But where do we get this information? How do we find time on top of everything else?

Timm Hoffman started a field herbarium at Rondevlei. He collected specimens, mapped them and kept notes. These are all contained in B4 folders with the pressed plants. This has provided an incredible history and resource for Rondevlei. From the field herbarium you can clearly establish what's been happening with the plants and biodiversity of the site.

- Howard Langley, retired conservation manager

As Howard points out above, the first place to start is the site itself. Older conservation sites usually have extensive valuable information painstakingly gathered by former conservators, which is often overlooked because it is stuffed in a cupboard somewhere. So begin at home, ferret out whatever you can and make sure that it is accessible to all present and future co-managers of the site.



Gathering information can help to strengthen relationships with community stakeholders.

Remember that gathering information can be time-consuming, but it will save time in the long run. Operational plans and management strategies developed from a thorough knowledge base will be a lot more targeted and effective. And, as mentioned earlier, gathering information is a long term, ongoing project.

Information gathering also offers opportunities for involvement by tertiary students, local school children and community volunteers. By delegating to these groups, the information gathering process can, in itself, be a means of developing and strengthening relationships with community partners and stakeholders.

Finally, we need to ensure that the information is accessible to anyone and everyone who needs it, including all staff, stakeholders and community collaborative managers. This means:

- finding ways to simplify and present information to different stakeholder forums through displays, pamphlets, newspaper articles and so on;
- Storing and filing information in a way that is clear, easily accessed and easy to build on.



Community volunteers explore the Lwandle Migrant Labour museum



Local museums can be a rich source of information

Finding information

The following sources may help supplement whatever information is located at the site:

The natural systems

- Libraries
- Research documents and academic journal articles
- Official records and other documents of the site e.g. alien management, fire management, species monitoring, soil and water quality
- Local community members
- Photographs
- Maps
- Geographic Information System overlays
- Other conservation agencies
- Natural science experts
- Managers at other conservation sites

The socio-economic systems

- Libraries
- Research documents, journal articles and newspaper articles
- Local community members
- Maps of the area
- Government documents on demographics

- Social science experts
- Local NGOs and CBOs
- Local political and community leaders
- Surveys

The political systems

- Official documents around the site e.g. title deeds, conservation development frameworks, management plans
- Government legislation
- City Integrated Development Plans
- Vision and plan of the conservation authority
- Management within the governing authority
- Environmental lawyers

The built environment

- City plans
- Maps

History

- Local libraries and museums
- Research documents
- Official records of the site
- Historians
- Local community members
- Media archives

3.2 How does the site benefit the community?

The value of urban conservation sites lies partly in their potential for biodiversity conservation... [but also in their...] potential for awareness raising, education, recreation, delivery of environmental services, economic activity and for civic affairs as local community organisations and authorities use the spaces to conduct business. [In other words...]for catalyzing human beings into acting on securing the wellbeing of nature into the future.

- Sue Soal et al⁵

Our second area of inquiry concerns the interaction of these systems. In particular, we need to explore how far the site currently benefits the community and promotes sustainability, resilience and adaptability in the community. The more the site does this, the more it is recognised as a critical community asset, and the more sustainable it becomes.

The following questions can guide us:

1. Does it provide ecosystem goods or services such as a carbon sink, water purification or catchment, flood management, fish nurseries?
2. Does the community make use of the site? How?
3. Does the site provide:
 - Economic benefits through employment, sustainable harvesting, food gardens, eco-tourism or any other projects?
 - Recreational facilities?
 - An accessible safe place where people can experience nature?
 - Environmental education opportunities?
 - Community facilities e.g. venues for community activities?
 - A gathering point for surrounding communities?
 - Nurseries for indigenous gardens?
 - Opportunities to develop skills, leadership and awareness?



Community surveys can help us discover how the site can best serve the community

3.3 What is the capacity of the community to manage collaboratively?

Thirdly, we need to consider the capacity of the community to collaboratively manage the site. If the community has no history of managing the site, we can gauge this by assessing their adaptive and collaborative management skills in other aspects of their lives – these are a good indicator of strengths and weaknesses that will affect their capacity for a strong partnership around the site.

The following questions can help us:

- Does the community have a history of interacting with or managing the site or any other natural resources?
- Does it feature traditional, local or other knowledge systems that can help inform the management of natural resources?
- Are there spiritual, cultural or other belief systems that understand and value natural systems?
- Are there strong relationships of trust and mutual support in the community?
- Is there unity and tolerance of diversity?
- Is there a strong network and partnership of organisations?
- Does the community have access to material resources?
- Are there strong leadership and organisational skills?

3.4 What threats, limits and blockages are there?

Finally, we need to assess what limits and blockages may threaten these three aspects.

These may include degradation of natural systems; alien species; pressure from urban infrastructure; fragmentation; poor legislative protection; non-sustainable recreational use, poaching or harvesting; criminal activity and vandalism; dumping; lack of community involvement or accessibility; divided and fragmented communities; poor human and other resources.

4. What needs to be done?

Where work at any one site may appear to be thankless, endless and with little reward, that same site, if conserved with full and appropriate engagement of the people around, could be a source of pride and generator of stability and community transformation decades later. Conservation ultimately is about the investment that people make in preserving sites, educating their children, lobbying for conservation resources and living in such a way that the planet is cared for.

- Sue Soal et al⁶

Information gathering is an ongoing process. We need to keep our eyes and ears open, and continuously adapt our understanding of the site and its context.

The next phase of the cycle is to assess the site against our vision, and use what we know to guide us forward, or to shift our direction. Here we need to review the strong points of the social ecological systems around the site, and consider how best to use these to overcome their weaknesses, challenges and limitations. We can then formulate a plan of action in the short, medium and long term through different stakeholder and collaborative management forums. The precise focus and process followed here can be adapted to suit different forums. For example, a stakeholder process involving a range of community participants may be broader and less specific, while a process involving staff members and community



Working with the community we can create a site that is a source of pride and generator of community stability

collaborative managers will be more detailed and technical, with specific time frames, accountability and outcomes for each aspect. But any process will involve a cycle with the following stages:

- Brainstorm features of an ideal site in the short, medium and long term – for example: one year's time, five years' time and fifteen years' time.
- Group the suggestions into categories and simplify them into broad goals.
- Rate each suggestion in terms of:
 - Whether it is feasible;
 - What value it will add or impact it will have on the site.
 Ask: How realistic is this suggestion in terms of the budget and capacity available? How effective will this be in enhancing the value of the site and in realising our vision? Use the answers to prioritise and select actions.
- Discuss how the assets and strengths of the site may be used to help implement these suggestions.
- Discuss possible obstacles to implementing these suggestions and ways to overcome them.
- Consider the challenges to the site. Ask: How immediate is this threat? How damaging could this be if we do not find a way to meet it? The most pressing challenges may then be considered as a priority.
 - Discuss whether the actions planned may help defuse the threats, or turn them into opportunities. For example: alien growth may offer employment opportunities; campaigning around threats of development may engage communities; engaging communities in joint ventures may break down divisions; educating communities around vandalism and harvesting can provide opportunities for

engagement; non-sustainable uses could be made sustainable – for example, by having a medicinal plant garden to prevent illegal harvesting.

- If you feel these plans will not meet the challenges, decide what other course of action is possible or necessary.

Draw up an action plan:

Use these ideas to draw up a two- to five-year plan of action. Specify:

- Milestones and target dates for achieving them;
- Indicators to monitor progress;
- Methods of evaluation;
- Who is responsible for which task and where they can go for help if necessary.

The plan of action can also assist in drawing up job descriptions of different staff members, and in clarifying the mission statements of any volunteer organisations or collaborative management structures.

Identify monitoring and evaluating indicators

An important part of the cycle of action and reflection is identifying indicators to help monitor progress. Here we need to look at quality as well as quantity. Natural scientists can help to identify suitable indicators for the health of the natural systems, for example the presence and numbers of indicator species, water quality, soil samples. Whatever indicators we choose, we need to ensure that we are monitoring the resilience, health and adaptability of the overall system, rather than just counting species on the site.



Involving local community partners, such as these members of the Harmony Flats Working Group, is essential in drawing up an action plan

Monitoring social ecological systems is more complex. Here again it is important to focus on quality as well as quantity. For example, the issue is not only how many school children visit the site, but also what quality of experience they have there. It may serve our long term objectives better to have fifty children profoundly moved and therefore passionate about nature conservation, than to have three hundred who forget about their visit in a few days.

We also need a monitoring and evaluation system that is sensitive to unexpected impacts. Often these are not picked up, or are dismissed as anomalies. But they can be the most valuable in showing us which actions are in fact achieving the opposite of what was intended, and which have unpredicted positive spinoffs.

While we must be honest about strategies that are not working, we also need to remember that many impacts will be small, particularly in the beginning. We need to ensure that the indicators we choose are sufficiently fine-tuned to reflect these. As Ruitenbeek and Cartier observe:

Do not sow failures when reaping small efficiencies. Within a complex system even an apparently small intervention may have significant impacts. In chaos theory we call this the butterfly effect... a butterfly flapping its wings in Asia may affect weather patterns around the globe days later.⁷

The indicators we choose depend on our objectives and on our particular situation. It may be helpful to call on social development practitioners to help develop indicators. However, it is also important to engage stakeholders in developing indicators, by asking: How will we know if we are achieving our intended objective? This can be done in the vision building workshops, as it is helpful in grounding suggestions into concrete actions. This not only helps to identify indicators, it also empowers stakeholders by encouraging them to think

of what achieving the stated objectives really means. We will explore processes to enable reflection in more detail in Chapter Three.

5. Putting it into practice: a case study

We need to find the most appropriate way of involving stakeholders in these processes, depending on the context and the issues surrounding the site.

Below is one example of how Cape Flats Nature involved stakeholders in formulating a vision and strategic plan for four pilot sites: Harmony Flats Nature Reserve, Edith Stephens Wetland Park, Macassar Dunes and Wolfgat Nature Reserve.





Initial stakeholder workshops run by Cape Flats Nature

Stakeholder Workshops

Four workshops were attended by over 200 participants from 109 organisations, including CBOs and NGOs, educators, politicians, city officials, members of provincial and national government, and conservators.

The workshops were run with the Participlan© methodology. This was adapted for each site, but generally involved the following:

- Participants were asked a question to help them consider what actions and organisational structures they need to realise a vision for the conservation area. For example: *12 months from now the Macassar Dunes system is valued by the surrounding community for its biodiversity and has become a safe place for children to walk and play... what are we doing to achieve this?*
- All ideas were noted and acknowledged as valid. They were grouped to avoid repetition, and to draw out commonalities and differences.
- Participants were asked to rate the ideas according to what is most important for the community and for conservation.
- Participants were asked what might prevent them from achieving the vision and what could be done to overcome these barriers to success.
- Participants were split into small groups. Each group was asked to develop a concrete plan of action for one issue and report back to the group.

Examples of practical ideas generated at the workshops include:

- Participants proposed that the Edith Stephens Wetlands Park be formally launched and that regular events, featuring popular local musicians and drama groups, be hosted to promote the Park.
- A group was elected to co-ordinate activities at Harmony Flats. The group has met and planned a door-to-door campaign to promote an understanding and appreciation of the Reserve in the surrounding community. They aim to initiate a recycling project to keep the Reserve clean and recruit people living in houses bordering the Reserve for a fire fighting course so they can assist in combating one of the major threats to this habitat.
- At the Macassar Dunes workshop, participants suggested that each participating community based organisation should take its members to visit the dunes as a way to educate the community about the area's biodiversity and its value.

- At the Wolfgat workshop, members of the Mitchells Plain Urban Renewal Forum and the Khayelitsha Development Forum agreed to work together to host a Clean-Up Day, in which councillors and a member of parliament agreed to participate. It was suggested that an information pack be compiled to assist teachers in using the Reserve as an outdoor classroom, and that volunteers from the two community forums should meet with school principals to encourage them to get their teachers to do so.
- At the integration workshop, community champions asked Cape Flats Nature to host a regular 'Champions' Forum' to enable sharing of experiences and ideas and build champions' capacity to drive community involvement. This forum has developed into a dynamic and sustained structure which has provided networking and capacity building opportunities to both conservation and community partners.

Factors that contributed to the success of the process include:

- Key roleplayers from the City, the communities, and other organisations at each site were involved in developing the questions that framed the workshop sessions.
- A wide range of community organisations was approached, as well as individuals living on the immediate boundary of the sites.
- The process allowed every participant to contribute meaningfully as equals, despite differences in status, conservation knowledge, language and literacy level.
- The process focused on generating specific actions.
- The questions and process focused participants' attention on what actions *they* would take, rather than generating a list of demands for authorities or the project. This is likely to make a positive contribution to managing expectations, as no promises were made, apart from providing feedback from the process.
- The process did not assume peoples' needs and wishes, but at the same time was open about the fact that conservation is a priority for Cape Flats Nature through the rating questions.
- The facilitator catered for the three languages of the Western Cape and illiterate people.
- A highly skilled facilitator was used.



Vision of Wolfgat Nature Reserve drawn by staff and volunteers

The following activity may be more suitable for a smaller workshop with community collaborators or staff members, and can be used to build and consolidate a common vision after or in preparation for the stakeholder workshops.



Stakeholder design workshop for Mamre Nature Garden

Vision building:

You will need large sheets of paper or cardboard, magazines, crayons, tissue paper, paints.

Ask team members individually to consider: How would you like to see the site in ten years time? How would you like it to have developed? How would you like it to look physically? What will its staffing be? What plants and animals will be on the site? What infrastructure will be here? How will surrounding communities be using and relating to the site?

In groups, discuss and then draw a picture of what you see. Depending on the size of the group, this can be done as the full team or in smaller groups of five to six people. Ask participants to be creative, and use collaged tissue paper or photos from magazines, crayons, natural material such as leaves, and paint. (A collage presents a wonderful opportunity for all to participate as it addresses the common concern 'but I can't draw!' and provides for interaction and much discussion!)

Each group then shares their picture and discusses them together. There may be differences, which provide a platform for further debate and discussion. A common vision will emerge, which all team members will have shaped in some way. The vision becomes a resource and asset that will support developments at the site. The spinoff from this exercise is that relationships among staff will be strengthened through the process of sharing and building. Hold onto the vision by displaying it in a commonly used area. It can serve as a measure for your achievements over time.

Moving on...

The cycle of mapping, visioning, formulating and implementing plans, monitoring and evaluating indicators, and reflecting on and adapting strategies provides a solid adaptive framework for all work undertaken on and around the site. This process provides an invaluable guide for managing our teams, engaging with community stakeholders and collaborative managers, managing the natural resources, networking and lobbying. Some of these cycles will be big and comprehensive, others will be quick and informal, but as long as they are dynamic and responsive, they will enable us to create and grow a resilient and adaptive enterprise.

In the next chapter we consider how to use this cycle and other strategies to create a dynamic and cohesive collaborative management team.

¹ Adapted from Cundill, G., Fabricius, C., "Monitoring in adaptive co-management: Toward a learning based approach", *Journal of Environmental Management* (2009), doi:10.1016/j.jenvman.2009.05.012

² A Barefoot Guide to Working with Organisations and Social Change, The Barefoot Collective, www.barefootguide.org, p121

³ Capra, F., "Ecoliteracy: The Challenge for Education in the Next Century", Liverpool Schumacher Lectures, March 20, 1999, Center for Ecoliteracy, Berkeley, California

⁴ See also the Resilience Alliance Workbooks for scientists and practitioners, (available on the website <http://www.resalliance.org/3871.php>).

⁵ Soal, S., Langley, H., Jacobs, V. Cape Flats Nature Evaluation Report, 2007, p12

⁶ Ibid p10

⁷ Ruitenbeek, J. and Cartier, C., "The Invisible Wand: Adaptive Co-management as an Emergent Strategy" in *Complex Bio-economic Systems Occasional Paper No. 34*, Center for International Forestry Research, October, 2001, Bogor, Indonesia Website: <http://www.cifor.cgiar.org> p.13