enabling stewardship
Chapter 4

Enabling conservation stewardship

4.1 Conservation Stewardship—Involving private land owners

Biodiversity conservation needs YOU!

Historically, the establishment of protected areas in South Africa was hardly a strategic process. Although some reserves were declared to conserve particular species or landscapes, other sites were conserved by default; they were the “left-over” areas like mountain catchment areas and wetlands with relatively low development potential. The result is that our current protected area network does not adequately conserve many of the country’s most threatened lowland ecosystems and species.

Some natural ecosystems have become so fragmented that, when you look at vegetation maps of certain areas, all that remains is a disjointed collection of red dots—those vegetation remnants that have been flagged as critically endangered by reports like the National Spatial Biodiversity Assessment. In fact, 80% of priority conservation areas in the Western Cape are to be found on privately owned land! The conservation authorities will simply not be able to “join the dots” and link priority fragments via conservation corridors unless private landowners get involved.

In November 2002 the Botanical Society of South Africa and CapeNature embarked on a two-year Conservation Stewardship Pilot Project, funded by the CEPF. This ambitious project set out to find ways of involving land owners in conserving threatened habitats on their properties, and developing incentives to encourage, support and recognise their efforts.

(i) The Conservation Stewardship pilot project

The Conservation Stewardship Pilot Project evolved out of two important research projects conducted by the Botanical Society of South Africa: the Cape Lowlands Project, a conservation planning exercise for the lowlands funded by WWF-SA and the Mazda Wildlife Fund, and a project to find incentives for land owners to conserve these areas. Informed by the results of the Cape Lowlands Project, the Botanical Society and CapeNature identified three pilot areas where they could work with farmers to develop and refine workable stewardship arrangements; these areas were Agtergroenberg near Wellington, the Bot River Valley near Grabouw and the Lower Breede River area near Swellendam.

The other important component of the Botanical Society’s research was identify-
ing financial and other incentives that would encourage land owners to conserve threatened habitats on their properties. Through long and persistent lobbying efforts and involvement in the law reform process, the Botanical Society managed to get a landmark clause included in the Property Rates Act (No. 6, 2004): conservation land on private property that has been formally declared in terms of the Protected Areas Act (No. 57, 2003) may now be exempted from municipal rates.

The Conservation Stewardship Pilot Project also investigated possible in-kind incentives from national and provincial government agencies, such as conservation management advice and practical assistance with the scheduling of alien clearing and fire management. It has been difficult to convince other organisations to provide direct financial support such as alien clearing funding for private landowners, but negotiations are continuing.

During the pilot project, a shift occurred from focusing on “incentives” to promoting the idea of “stewardship”. It became clear that financial incentives are not enough to convince land owners to conserve threatened habitats. Personal commitment and a sense of responsibility to conserving that which has been entrusted into your care is a far more powerful motivating factor. Indeed, the project has shown that some farmers are willing to spend considerably more on conserving a critically endangered patch of veld than they would be able to earn from cultivating it. While incentives are still an important component of the stewardship package, the success of this initiative ultimately depends on land owners who care about the environment and are willing to play a role in being active conservation stewards. Fortunately, these champions exist. Through their involvement the stewardship ethic is taking root in the rural areas of the Western Cape.

What is Conservation Stewardship?
For CapeNature, the ultimate goal of the Conservation Stewardship programme is to safeguard threatened habitats and to create secure biodiversity corridors within productive landscapes. The organisation has neither the intention nor the resources to purchase or expropriate these critical habitat fragments. Instead, it aims to secure these sites by keeping people on the land and involving them in the conservation of threatened habitats.

The pilot project developed a suite of three stewardship options: conservation sites, co-operation agreements and contract nature reserves. This allows land

Stakeholders deliberate options for conservation stewardship.
The choice of stewardship category depends on the biodiversity value of the site and the land use limitations to which the land owner is willing to agree. Each successive level of stewardship agreement benefits from additional incentives such as increased conservation management support.

<table>
<thead>
<tr>
<th>Option</th>
<th>Where applicable</th>
<th>Possible land use restrictions</th>
<th>Benefits to the land owner</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contract Nature Reserve</strong></td>
<td>□ Critically important and threatened sites</td>
<td>□ No development or land use rights will be permitted in the protected area</td>
<td>□ Substantial assistance with habitat management</td>
</tr>
<tr>
<td></td>
<td>□ Priority areas adjacent to statutory reserves or sufficiently large to be self-contained ecosystems</td>
<td>□ Access and residence rights will not be restricted</td>
<td>□ Increased recognition and marketing exposure</td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ Owners retain title, but restrictions are lodged on the title deed</td>
<td>□ Lobbying on your behalf by conservation agencies for incentives (e.g. tax relief)</td>
</tr>
<tr>
<td><strong>Biodiversity Agreement</strong></td>
<td>□ Any conservation-worthy land, especially wetlands and water catchments</td>
<td>□ Land must be managed to conserve biodiversity and support natural processes</td>
<td>□ Specific agreements for fire, alien, plant and animal management</td>
</tr>
<tr>
<td></td>
<td>□ Includes small and isolated fragments</td>
<td>□ No development is permitted in the protected area</td>
<td>□ Assistance with management plans</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>□ Advanced extension services (e.g. alien clearing planning)</td>
</tr>
<tr>
<td><strong>Conservation Site</strong></td>
<td>□ Any natural land</td>
<td>□ Very few, but the area needs to retain its natural character, and the land owner needs to co-operate with conservation authorities and any relevant legislation</td>
<td>□ Advice and support through basic extension services</td>
</tr>
<tr>
<td>(Entry level)</td>
<td>□ Not a good option if the land has rare or endangered habitats or is an important ecosystem, unless this designation is part of a plan to progress to higher conservation security</td>
<td></td>
<td>□ Assistance with farm maps</td>
</tr>
</tbody>
</table>

owners and CapeNature to negotiate an agreement that is appropriate in terms of the biodiversity value of the site, the security of the contract, and the level of support that CapeNature can provide. Existing categories of private conservation areas can be reclassified in some cases or accommodated in these three options; for example, a property that is part of a conservancy automatically qualifies for the designation “conservation site”. Land owners who are reluctant to enter into a binding contract immediately may start with an entry level conservation site registration and progress to a more binding biodiversity agreement or contract nature reserve if they choose to do so and if the biodiversity of the site warrants this.

The Conservation Stewardship programme has developed site assessment procedures to enable extension officers to assess the conservation significance of properties and to decide on the most appropriate stewardship option to recommend to land owners (see table). Once agreements have been signed, land
owners qualify for incentives if they manage their sites according to a management plan, which is audited annually by CapeNature.

While a contract nature reserve may provide the highest level of biodiversity protection and land owner support, this is not to say that biodiversity agreements and conservation areas are unimportant. These agreements can be entered into relatively quickly and simply compared to contract nature reserves (which require extensive negotiation and which must be declared officially by the provincial Minister of Environmental Affairs and Development Planning). They therefore help to provide immediate protection for threatened habitats. Where the biodiversity value does not warrant the creation of a contract nature reserve, these lower level stewardship areas contribute to the creation of essential biodiversity corridors linking biodiversity nodes across productive landscapes.

**Project benefits**

The Conservation Stewardship Pilot Project was an effective multi-stakeholder process that took place between 2002 and 2004 in the Cape Floristic Region. In addition to the main project partners, namely the land owners, Botanical Society and CapeNature, a number of other organisations contributed at various stages of the project and helped to give shape and substance to the emerging programme.

During the pilot phase the project team contributed significantly to the professional development of CapeNature’s extension officers who are responsible for implementing the stewardship programme. Skills development included renosterveld ecology field training, mapping and managing alien clearing, land owner negotiation skills and site assessment audits.

Although CapeNature has supported stewardship initiatives in the past (e.g. the Natural Heritage Programme and the establishment of conservancies) the pilot project helped to make their stewardship programme strategic.

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**Conservation Champions**

The contribution to the conservation estate by private land owners is significant: over a million hectares is conserved through some kind of stewardship arrangement in the Western Cape alone. However, some protected areas like conservancies have no legal status. The challenge is to streamline the system to ensure the best possible levels of biodiversity conservation and support for landowners. At the time of writing, eight contractual reserves had been declared in the Western Cape; together these protect nearly 8 000 ha of critically endangered ecosystems – a huge victory for conservation in the Cape Floristic Region!

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**A cost-effective approach**

A cost-benefit analysis suggests that Conservation Stewardship provides CapeNature with a cost-effective way of ensuring that the Western Cape achieves its biodiversity conservation targets.

In one case, CapeNature’s investment of approximately R15 000, comprising the services of an extension officer and the legal costs of setting up a contract nature reserve, has been more than compensated for by the land owner. The contract secures the site as a nature reserve in perpetuity by attaching restrictions to the title deeds and the land owner undertakes to manage the site, with costs estimated at about R120 000 per year. In turn, CapeNature assists the land owner with labour intensive conservation management projects, like fire management and invasive alien plant control.

This particular contract nature reserve incorporates two critically endangered vegetation types, and achieves 21% of the Swartland alluvium fynbos target and 2.2% of the Swartland shale renosterveld target. Twenty-seven rare and endangered plants and one critically endangered reptile, the geometric tortoise, are found on this reserve.
rather than reactive by focusing limited capacity on conservation priorities on private land. Conservation Stewardship has become a core function and recognised programme within Cape-Nature. The organisation is now working with rural land owners and state and civil society partners (e.g. the Western Cape Stewardship Association and CREW) to implement a well-defined suite of stewardship options in the Province.

Protected areas in the Land Department of Agriculture in the Western Cape contribute only 2.9% of all critically endangered vegetation targets, and few opportunities remain to expand existing statutory protected areas to meet the conservation targets set for our most critically endangered vegetation types. On the other hand, the planned contracts and agreements on private land could contribute 8.3% of all critically endangered vegetation targets. The Stewardship Programme will enable private land owners who have these threatened habitats on their properties to contribute significantly to meeting these targets.

Where to now?
As awareness of stewardship options grows, the number of interested land owners is bound to increase. There is much work to be done, such as continuing to negotiate new contracts; providing existing stewardship land owners with management advice and support; expanding the existing suite of incentives; and writing and auditing management plans. The Conservation Stewardship Pilot Project set up systems and structures and made a start with capacity building within Cape-Nature. In order to maintain the momentum and roll out the programme at a scale that will achieve the C.A.P.E. biodiversity targets, CapeNature requires additional staffing and resources dedicated to this initiative.

The Conservation Stewardship programme has been well received in other regions and provinces. Staff have been appointed to start stewardship negotiations in the Greater Cederberg Biodiversity Corridor and the Gouritz Initiative region. In the Northern Cape, a recent grant from CEPF is making stewardship capacity development possible in the Bokkeveld. In the Eastern Cape, the Wilderness Foundation is investigating how another province might adapt the model to their particular context. It will be important to ensure that the lessons emerging from these regions are shared widely so that the programme can continue to develop and adapt.

What have we learned?
- One of the most encouraging findings of the Conservation Stewardship Pilot Project is that many land owners are willing to conserve threatened biodiversity on their properties. However, they need to know what they have on their property, what its value is and how to manage it.
- The pilot project identified the lack of staffing and dedicated capacity in CapeNature’s extension service as being a key factor limiting the success of the stewardship programme. Additional staffing and resources must continue to be made available as this key programme grows.
- Conservation stewardship is a complex function and should not be delegated to inexperienced staff members. Extension officers must be able to negotiate legal contracts with landowners, advise them on the conservation worthiness of their properties and provide management advice and support.
- The suite of stewardship options benefits both the land owner and CapeNature. Land owners can choose the level of agreement that they feel comfortable with, and

The first eight Stewardship pioneers:
- Elandsberg Nature Reserve – Parker Family Trust
- Foxenberg Nature Reserve – Jan and Mari-anne Hemmes
- Renosterveld Nature Reserve – Steven and Helen Japp
- Bontebok Ridge Nature Reserve – Frank and Sue Turner
- Cluver Family Reserve, De Rust – Cluver Family Trust
- Eagle Rock Nature Reserve – Wendy Robinson
- Kleinezeljacht Nature Reserve – Carel Goosen Familie Trust
- Porcupine Hills Nature Reserve – Murray and Fiona Weiner
CapeNature is not under pressure to create more stewardship reserves than it can immediately support.

- Stewardship negotiations can take a long time but it is important not to rush the process. While donor funding is often necessary to kick-start initiatives, it is important to have a sustainable institutional budget dedicated to the stewardship function to ensure that negotiations are not derailed when project funding ends.

- The implementation of major policy changes, such as the introduction of rates rebates or tax relief, relies on the co-operation of many people and organisations. The lack of a champion in a key department can undermine the best efforts of a multi-stakeholder team.

- The fundamental goal of stewardship is the conservation of biodiversity. Sites qualify for contract nature reserve status only if they capture critical biodiversity or important ecological processes. It is important not to raise the expectations of land owners whose land does not qualify for this level of protection.

- Land owners involved in contract nature reserves contribute a huge amount to conservation; the stewardship programme estimates that every one rand that CapeNature invests can leverage up to R100 of land owner investment.

(ii) The first stewardship champions!

At the C.A.P.E. Partners’ Conference in June 2005, declarations of intent were signed to establish the first eight contract nature reserves under CapeNature’s new Conservation Stewardship Programme. All the stewardship champions have been involved in conserving irreplaceable habitats on their properties, some for generations.

Conservation initiatives in the Agtergroenberg

In the Agtergroenberg region near Wellington, farms with limited access to water have generally been used to graze livestock rather than for intensive agriculture, resulting in the survival of stretches of natural vegetation. Recognising the importance of the renosterveld and fynbos on the uncultivated portions of their properties, land owners like the Japps and Turners encouraged their neighbours to join them in forming the Renosterveld Conservancy. They have since entered into management agreements with CapeNature to declare portions of their properties as Contract Nature Reserves, securing the future of some of the most significant areas of renosterveld and fynbos left on the Cape West Coast.

Elandsberg Nature Reserve

Also in the Agtergroenberg, the Parker family has for many years been conserving and rehabilitating natural ecosystems on Elandsberg Farms. In 1973, the late Dale Parker established the 2 600 ha Elandsberg Private Nature Reserve to safeguard endemic plants and the endangered Geometric Tortoise, and to protect natural areas from development. Despite this, Armscor expropriated 500 ha of the nature reserve in 1981. Seven years later, in an attempt to provide further protection for the reserve, it was declared a Natural Heritage Site. Now, by becoming one of the first Contract Nature Reserves under the Stewardship Programme, the Parker family hopes that the site will be secured for conservation in perpetuity.

Over the years, the nature reserve has grown to 4 000 ha and today conserves...
the largest contiguous area of West Coast Renosterveld. The Parkers have incorporated abandoned marginal farm-land into the nature reserve, and this is where cutting edge research on the rehabilitation of renosterveld is currently taking place.

The Elandsberg Private Nature Reserve is stocked with game and runs breeding programmes for buffalo and quagga. Game drives, birding, hiking, mountain biking and four-star accommodation attract local and foreign guests and provide employment for nearly 20 people. Income from farming and tourism is ploughed back into maintenance of this unique and irreplaceable natural area, contributing to the conservation and restoration of biodiversity pattern and process in the region.

Cluver Family Reserve, De Rust
De Rust, one of the largest and oldest estates on the Elgin Plateau, is the home of Paul Cluver Wines. The farm falls within the Kogelberg Biosphere Reserve, and has taken seriously its responsibility to manage its farming operations and natural resources according to sustainability principles. The establishment of a Contract Nature Reserve at De Rust contributes significantly to conservation targets in the Elgin area. The reserve safeguards two vegetation types that C.A.P.E. views as irreplaceable, and forms a corridor linking the Groenlandberg with the lowlands of the Elgin Basin.

Co-management in the Van der Stel Pass between Bot River and Villiersdorp involves three private land owners working together to conserve a critically endangered vegetation type known as Western Rûens Shale Renosterveld. These committed environmentalists have been actively promoting conservation, ecological restoration and ecotourism in the area. Their three adjoining properties make up the “Van Der Stel Complex”, which includes not only renosterveld but also forest and fynbos habitats. Combining the natural areas on the three properties and managing the Contract Nature Reserve as a unit will greatly enhance ecological management and the ecotourism value of the area.

Securing conservation areas
In most cases, establishing Contract Nature Reserves on the properties mentioned above is the culmination of a great deal of conservation work undertaken by private land owners over many years. The contracts with CapeNature will make the future of these protected natural areas more secure and ensure that land owners have access to environmental information and management support.

What have we learned?

The bulk of the costs of managing a protected area are carried by the property itself. Additional revenue streams such as viable farming activities and tourism ventures are needed to subsidise reserve management costs.

- Municipal tax relief is stated in national legislation but needs to be lobbied at local level.
- Becoming a Contract Nature Reserve is a very time-consuming process, which requires commitment and patience.
- Staff turnover at CapeNature is a potential threat that could affect continuity of the Stewardship Programme.

(iii) The Western Cape Stewardship Association takes off!
As CapeNature’s Conservation Stewardship programme has started gaining momentum, participating land owners have launched an association to encourage networking, co-ordinate private conservation initiatives and represent the interests of members. After almost two years of planning and preparation, the Western Cape Stewardship Association was officially launched at Kirstenbosch in September 2005. The Association is honoured to have as its patron South Africa’s previous Minister of Environmental Affairs and Tourism, the current President of the IUCN, Mr Mohammed Valli Moosa.

Thanks to thorough preparation by the steering committee, the Association has hit the ground running. Its vision...
and goals are clear and an action plan is in place. To enhance networking and the sharing of good practice, their first annual conference took place in 2006. Effective communication is one of the primary goals of the Association but because members come from all parts of the Western Cape, regular meetings are costly and impractical. The Association will therefore focus on keeping members in touch electronically through e-mail, an actively managed website and regular e-newsletters. The Association also plans to build stewardship capacity by publishing information on biodiversity management, sustainable agriculture and ecological restoration and developing training opportunities.

The value of conservation champions in various industries cannot be underestimated. Members of the Western Cape Stewardship Association are both committed conservationists and influential members of the agricultural community in the province. The group looks set to make a substantial impact on biodiversity conservation and sustainable livelihoods in the Cape Floristic Region.

(iv) Area-wide planning in the Slanghoek Valley

A fynbos conservation priority

The Slanghoek Valley lies in the upper reaches of the Breede River catchment between Paarl and Worcester. It is home to a unique type of fynbos, Breede Alluvium Fynbos, which is now critically endangered. More than 70% of the vegetation has already been lost, and only one percent is formally protected, meaning that this unique vegetation type relies almost entirely on private land owners for its protection.

Because of the uniqueness of the natural vegetation and the importance of the Slanghoek Valley as a natural corridor, farmers in the area were finding it difficult to get the authorities to approve applications for developments on their properties. A farmers’ association, Breedekloof Wine and Tourism, and the Department of Agriculture therefore requested that a botanical survey be conducted to identify which areas had development potential and which should be conserved. With the support of the CEPF, each farm in the Slanghoek Valley was surveyed and fine-scale Global Information System (GIS) maps developed. The maps presented current land use, an indication by landowners of future development plans (5–10 years) and conservation information in a format that was easy to interpret. By overlaying different GIS layers it became possible for the first time to see where biodiversity was under the greatest threat and therefore to identify where the conservation “hotspots” were. The maps made it relatively easy to give the farmers feedback as to where development and conservation opportunities existed on their properties.
The botanical survey was an outcome of a LandCare: Area-wide Planning (AWP) exercise in the valley, which brought together 24 land owners with landholdings totalling 75 000 ha, as well as community members, NGOs, the Department of Agriculture, the Breede River Municipality and various government environmental agencies. Through the AWP process, the different stakeholders raised their concerns and identified five community projects that helped to address local social, economic and environmental needs in an integrated manner. LandCare provided funding to support the implementation of these projects.

**Area-wide Planning project opportunities**

The botanical survey will enable the farmers of the Breede River Wine and Tourism group to contribute in a more proactive way to the long-term conservation of critically endangered biodiversity in the valley. Now that they can distinguish between critically endangered habitats and areas with greater development potential, the development application process should be much more efficient. And because the LandCare: AWP process is in step with the Spatial Development Framework of the Breede River Municipality, the people of the Slanghoek Valley can look forward to government support for their local development projects.

**LandCare: AWP Projects**

- Botanical survey
- Pedestrian path for children and agri-tourism
- Rehabilitation of the Hoeks River
- Rehabilitation of the Badsberg 4x4 Route
- Removal of alien plants
- Land reform farming partnerships
- Tourism centre: promote BEE

**Fine-scale maps for conservation and development**

There are numerous economic reasons why farmers would rather develop than conserve the natural vegetation on their properties. For one thing, agricultural land can generate approximately R40 000–R60 000 per ha per year, while undeveloped veld may generate no income. Furthermore, land owners may apply for bank loans commensurate with the value of their land. According to the 2004 Municipal Property Evaluation, irrigated land is valued at R40 000 per ha compared to only R500 per ha for veld; this is a strong incentive for farmers to develop their land.

While farmers are keen to develop their veld, they are becoming increasingly frustrated by the arduous and time-consuming process of getting development applications approved. As many as five different government departments may comment on development applications, but the process is so inefficient that it may take years for approval to be granted. Delays such as these are simply untenable when a farmer is trying to respond to market opportunities. Consequently, many farmers ignore the development application process and develop natural veld illegally, whether for 4x4 routes, farm dams or cultivation.

Against this background, it is a great advantage to have fine-scale maps that clearly identify priority conservation areas and areas with development potential. Land owners and the authorities can use these maps to decide where developments should and should not take place, thus greatly speeding up the development application process. CapeNature can use the maps to evaluate the biodiversity value of these properties and to recommend conservation stewardship options. Few farmers can afford to set aside large tracts of potentially productive farmland for conservation purposes, but fine-scale maps enable land owners to identify veld that is critical to biodiversity conservation, thus enabling them to focus conservation efforts and resources most effectively.
(v) The St. Francis Conservancy: private landowners helping to meet conservation targets

Co-operating to conserve

In the southeastern lowlands, between Cape St. Francis and Oyster Bay, a group of private land owners, inspired by Richard Cowling, has become actively involved in conserving priority biodiversity through the establishment and management of the St. Francis Conservancy. Key to the success of this initiative has been co-operation among multiple land owners to conserve ecosystems that span the boundaries of properties as diverse as holiday cottages, farms and even the site of a proposed nuclear power station.

A group of land owners obtained funding from the CEPF and appointed Brian Reeves of the Wildlife and Environment Society of South Africa (WESSA) to help with the establishment of the conservancy. Brian recognised that it was important not only to develop a proposal and management plan for the conservancy, but also to ensure that the members of the conservancy were motivated and equipped to continue managing the conservancy once it was established. He therefore focused on strengthening communication and co-operation, and developing a shared sense of purpose among the land owners.

Forming a conservancy that involves a diverse range of properties can be a huge challenge. At first land owners may think that they have very little in common. However, as people work together and get to know one another, understanding and trust can replace early misgivings. Initially, for example, some residents were sceptical about ESKOM’s involvement in the conservancy, especially as its property was earmarked for a nuclear power station. However, as they learnt about ESKOM’s nature reserve that surrounds the Koebberg Nuclear Power Station in Cape Town, they started to appreciate that the parastatal might be able to contribute a great deal to the St. Francis Conservancy.

What have we learned?

- Good communication between land owners and researchers is very important. When surveys are conducted on private land, land owners must be given feedback.
- Government environmental agencies must ensure that they have the capacity and resources to help land owners conserve biodiversity on their properties.
- It is important to nest biodiversity conservation initiatives within broader planning processes and frameworks, e.g. LandCare: AWP, local and provincial SDFs.
- Processes like LandCare: AWP show that people from a range of backgrounds and organisations are willing to work together to develop plans to improve their environments. It is essential that these plans are implemented so that the needs of the community are addressed.
- Fine-scale maps are an essential tool to enable proactive and negotiated land use planning, which in turn reduces the need for reactive law enforcement.
- Working through wine cellar masters to contact groups of farmers made the process of fine-scale planning much more efficient than contacting farmers on an individual basis.

Prehistoric finds at Cape St. Francis are evidence of long-term occupation by people of this biodiversity-rich coastline.
To strengthen communication, co-operation and action, a steering committee was set up, quarterly newsletters were produced, a vision and mission were agreed upon, and an interim management plan was developed. Brian observes that it was important to “work with the willing” and “find champions with energy” to be part of the steering committee, rather than to try to drag negative or disinterested people along. The investment in strengthening communication, co-operation and capacity paid off; once the conservancy was established, the steering committee increasingly took over management and governance responsibility for the conservancy.

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Things are happening!
Although the St. Francis Conservancy is newly established, already its members have started making a difference to their environment:
- a management committee has been established to see to day-to-day management of the conservancy;
- the conservancy has conducted educational field trips to increase public awareness of the environment;
- biological control agents have been released to help control the problem of invasive alien plants;
- several land owners have agreed in principle to the formation of a private contract reserve, which will help to secure the biodiversity of the area into the long term;
- additional funding is being raised for conservation management;
- A CREW group (Chapter 4.2) has been actively monitoring rare and endangered plant species in the area.

The process of establishing the conservancy has encouraged land owners to think and act collectively, and not just to focus on each land owner’s individual property. As awareness of the St. Francis Conservancy has grown, more and more land owners have expressed an interest in joining the initiative. A links golf estate, a private airfield, two river sanctuaries and an eco-friendly estate have recently joined the Conservancy. The boundaries of the conservancy are expanding and a new dream is emerging ... one day the conservancy could link properties and habitats from Cape St. Francis to as far as the Tsitsikamma National Park.

What have we learned?
- Getting individual land owners to work together to manage their land as a conservancy can be a complex process; it is advisable to appoint a co-ordinator to facilitate this process.
- Effective facilitation is supportive rather than controlling.
- In order to ensure that land owners play an active role in managing the conservancy, they must be actively involved in its development. Their needs must inform the way in which the conservancy develops.
- Structures and processes that promote effective communication and involvement help land owners to get to know one another, build trust and draw on available knowledge, skills and motivation.
- Where an external facilitator is involved in setting up the conservancy, it is necessary to plan an “exit strategy” that allows external involvement to taper off while the involvement of land owners increases.
- Unlike the Western Cape, where CapeNature is actively promoting stewardship arrangements, in the Eastern Cape the provincial authorities are currently unable to support private conservation initiatives as they lack capacity and are focusing mainly on reserve-based conservation. The conservancy therefore had to source its own funding and management support.
- The Eastern Cape needs to develop an extension service to support off-reserve conservation initiatives.
4.2 Monitoring biodiversity—mobilising civil society action

(i) Baboon monitors

Despite direct persecution by people and the loss of much of their natural habitat, nearly 250 baboons manage to survive on the Cape Peninsula. The creation of the Table Mountain National Park has provided these creatures with a refuge, but unfortunately baboons don’t recognise park boundaries. Their foraging trips often include visits to private homes where the pickings can be good but the reception is usually less than welcoming.

Gruesome pictures of baboons shot, trapped or mutilated by people who have little empathy for their plight have shocked the public. Similarly, incidents where baboons have under unusual circumstances threatened or injured people create fear and anger. But baboons are not high on the agenda when it comes to public spending, so it has been up to concerned individuals and non-governmental organisations to seek solutions to the ongoing conflict.

Jenni Trethowan established the Baboon Monitors project and has worked tirelessly with the small team of monitors to protect the baboons by keeping them away from human settlements. At the same time, by drawing attention to the predicament of the Peninsula’s three baboon troops and by providing guided trails where people can observe them in their natural habitat, the Baboon Monitors have been shifting people’s attitudes towards baboons.

The Baboon Monitors project has provided several local people with employment. From sunrise to sunset, monitors follow the South Peninsula baboon troops and ensure that they don’t enter the villages bordering on the Park. The monitors have learnt an enormous amount about baboons from their daily observations and have gained skills that include darting and relocating injured animals. They have received formal training in site guiding, first aid and driving and recently started offering walking tours for people interested in observing the baboons.

So have the Baboon Monitors made a difference? According to the statistics, most definitely! In 1991, 21 baboons were killed and the response from the media and authorities was almost non-existent. In 2005, four baboons were killed and two maimed—and the response from the public was overwhelming. With documentary film makers like Trevor de Kock working with the Baboon Monitors, people from all over the world are learning to appreciate and respect these beleaguered animals.

Interestingly, the monitors have been so successful at keeping baboons out of the villages that people have started taking less responsibility for making their homes baboon-proof. The next challenge for the Baboon Monitors is to step up public education to ensure that, when baboons do stray into human settlements, open kitchen windows and overflowing garbage bins don’t tempt them to stay. In the end, if we want to avoid conflict with baboons, it’s up to us to behave better.

(ii) Beginning with birds

Involving the public in monitoring biodiversity is not a new concept. From its launch in 1987 until the publication of the Atlas of Southern African Birds ten years later, the Southern African Bird Atlas Project (SABAP) involved thousands of knowledgeable and enthusiastic amateur birders and professional ornithologists in monitoring the distribution of birds across the subcontinent. The Avian Demography Unit (ADU) at the University of Cape Town (UCT) co-ordinated this project and developed considerable expertise and highly effective software systems, which have been adapted to support numerous other monitoring projects, including the Frog Atlas Project, and more specific bird monitoring projects that revel in the acronyms of BIRP, CWAC and CAR!

One of these projects, Co-ordinated Avian Roadcounts (CAR), involves the public in monitoring populations of large conspicuous birds like cranes, bustards, korhaans and storks that can be easily observed from the road. In 1993 the Cape Bird Club and ADU devel-
CAR volunteers also assist with the monitoring of Black Harrier populations. This low-flying endemic bird of prey is easily seen while scanning for large birds. CAR’s data contribute to the Western Cape Raptor Research Programme based at the Percy FitzPatrick Institute of African Ornithology, UCT.

Support from the Mazda Wildlife Fund has been most appropriate when monitoring birds using road counts.

On the road again …

Twice a year, CAR volunteers monitor birds along a distance equivalent to a flight between Cape Town and London—19 000 km!

Jeffrey Arizon, principal of Teslaarsdal Primary School, regularly involves his Grade 7 learners in CAR counts in the Overberg.

James Harrison and Donella Young co-ordinate extensive bird counts using volunteers, providing essential monitoring information.

Donella Young, CAR project co-ordinator, explains that the project relies entirely on volunteers, with about half the routes being monitored by farmers. Because most large birds have extensive ranges, they are not adequately conserved within protected areas; landowners therefore play an essential role in ensuring their survival. Through involvement in CAR, many farmers have become more aware of these birds and have started managing their properties in bird-friendly ways. Farm workers are involved in conservation projects like gathering information on deaths of large birds due to poisoning or electrocution by power lines. They also find and mark blue crane nests to ensure that they are not crushed during grain harvesting. Nature Conservation agencies, NGOs (e.g. Overberg Crane Working Group and South African Crane Working Group) and bird clubs have also been involved and as a result of these actions, the CAR results indicate that populations of this magnificent bird are increasing in some parts of its range, particularly the Overberg and Swartland regions.

For more information on ADU’s projects and results, see their website: http://web.uct.ac.za/depts/stats/adu

What have we learned?

- Volunteer organisers help to co-ordinate bird monitors at a local level and provide very important personal contact, which complements e-mail contact from ADU.
- ADU supports monitors by developing user-friendly instructional materials; it is important that these are available in the languages spoken by the volunteers.
- It is important to recognise volunteer effort and to demonstrate
(iii) Monitoring the slimy and the scaly

Launched at the beginning of 2004, SCARCE (Survey of Cederberg Amphibians and Reptiles for Conservation and Ecotourism) is one of the most recently launched biodiversity monitoring projects in the Cape Floristic Region. It focuses on animals many people find creepy—amphibians and reptiles; but contrary to expectations, the response from the public has been positive and enthusiastic.

Drawing on the monitoring approaches of the Reptile Atlas Project, visitors can send in photographs of reptiles and amphibians in the Greater Cederberg Biodiversity Corridor (GCBC). SCARCE has developed posters, brochures and a website to help the public identify local reptiles and amphibians. Already members of the public may have discovered two new lizard species in the area.

This multi-partner project will feed into the development of strategic management plans for the corridor and provide information in the form of a brochure and a website for the ecotourism industry. It will also help to identify priority areas within the Cederberg corridor requiring conservation action. CapeNature and the University of Stellenbosch are creating and maintaining a database of information on the distribution of amphibians and reptiles in the GCBC, which will eventually be expanded to include the whole Cape Floristic Region.

(iv) The Protea Atlas Project

One of the best known botanical monitoring projects in South Africa was the Protea Atlas Project, an initiative of the Botanical Society co-ordinated by Tony Rebelo at SANBI. Tony explains the rationale for the project: “The Protea Atlas Project was born out of the need to involve the general public in documenting, understanding and conserving our flora.” He explains that proteas were chosen partly because they are flowers that appeal to the public. They are also well represented in the Cape Floristic Region, so could be used as a general indicator of the status of plant biodiversity in the region.

From 1991–2002, more than 400 amateur botanists scoured the CFR, submitting over 250 000 species records and literally discovering lost treasure. Two “extinct” species of the Protea family were rediscovered as well as eight species that were completely new to science. A Protea Atlas is in production, based on the records of all who participated.

The Protea Atlas Project model has been an important influence in the develop-
(v) CREW: Custodians of Rare and Endangered Wildflowers

What is CREW?

Launched in April 2003, Custodians of Rare and Endangered Wildflowers (CREW) is a programme that involves members of the public in monitoring endemic and threatened plants in the lowlands of the Cape Floristic Region, and encourages them to conserve and manage the sites where these plants are found. The programme has expanded from six to eight groups, from Nieuwoudtville in the northwest to the southeast lowlands around Port Elizabeth.

One of the unique features of CREW is the diversity of groups involved in monitoring and conservation activities.

- At Tygerberg, Darling and Port Elizabeth, existing botanical groups have found that being involved with CREW has given focus to their regular outings. They are now systematically monitoring local renosterveld and fynbos remnants, identifying populations of threatened plants and feeding this information back to SANBI’s Threatened Species Programme. In this way, members of the public are helping to update South Africa’s Red Data List of plants and identifying priority areas in need of conservation.

- In the agricultural areas around Caledon and Swellendam, small groups of concerned landowners are working with their neighbours to identify threatened habitats and protect them from development (see box). In Swellendam a small group is conducting plant surveys on farms forming part of the Stewardship Programme.

- Not all the priority areas where CREW works had existing botanical groups that could participate in the project. In Nieuwoudtville (Chapter 5.5) and at Harmony Flats in Cape Town, CREW has been introducing previously disadvantaged communities to the unique flora of their areas and building the capacity of both adults and children to identify, monitor and conserve local plant diversity.

Rare plants rediscovered—or not

CREW has made some exciting discoveries in its first few years of operation, but has unfortunately also recorded many instances where species have disappeared.

- The Fourcade Botanical Group has found a new population of the orchid *Satyrium hallackii*, which only occurs in Cape St. Francis. This discovery has increased the recorded world population from about 25 to more than 300 plants.

- Cameron and Rhoda MacMaster rediscovered *Lachenalia sargeantii*.

Multiple benefits of monitoring projects

Biodiversity monitoring projects have benefits beyond simply updating distribution records of plant and animal species:

- It would be impossible to afford to monitor biodiversity across the country or the region without the involvement of volunteers.

- Monitoring projects are opportunities for members of the public to get involved in a practical environmental project that contributes towards biodiversity conservation.

- Most monitoring projects provide educational opportunities that deepen people’s environmental knowledge, skills and concern. While some training is provided by the project co-ordinators, monitoring projects are also excellent opportunities for peer learning. People generally work in groups and the more experienced members play an important role in helping their colleagues develop knowledge and skills.

- Up-to-date species distribution records contribute to effective land use planning and natural resource management.

- Environmental agencies could simply not afford to undertake large-scale monitoring projects without the involvement of volunteers.

- Monitoring contributes far more than information about the distribution of species; it also deepens our knowledge about species biology, ecosystem functioning and threats to biodiversity, all of which can contribute towards biodiversity conservation. The information can also be used for Environmental Impact Assessments and influence land management practices.

- Involvement in monitoring projects can stimulate an interest in a career in research or conservation.

Lots to monitor!

The CFR has around 1 406 Red Data plant species—plants that are threatened with extinction or that are very rare.
last seen in 1971, between Napier and Bredasdorp; CREW has convinced the land owner to stop mining gravel on the site, as this was threatening half the population.

- The Darling Wildflower Group rediscovered *Wurmbea capensis* at Rondebosch. This species, which was last collected by Acocks in 1932, was thought to be extinct.

- After a long search by members of CREW, Caledon group champion Adriaan Hanekom recently found four plants of the elusive *Erica jasmini-flora*.

**Focusing conservation efforts**

CREW has enhanced lowland conservation by creating a link between the institutions established to conserve biodiversity and members of the public who are passionate about their local environments. The CREW co-ordinators have unlocked the stores of information and expertise held within institutions like SANBI and CapeNature and made this available to people who are in the best position to lobby and take action at a local level in the most critical parts of the Cape Floristic Region.

CREW has provided training programmes and site-specific materials to help groups

**Christi Kloppers—a true C.A.P.E. champion**

The CREW group champion in the lower Breede River Valley is Christi Kloppers (left), a Durbanville vet with a small farm between Swellendam and Heidelberg. Christi is passionate about conserving renosterveld fragments: during the week he clears aliens and lobbies for the conservation of renosterveld remnants in the Durbanville area; on weekends he visits farmers in the Heidelberg district, encouraging them to fence off critical fragments to protect threatened plants from cultivation and grazing. Through Christi’s efforts the local authorities in Durbanville and farmers in the lower Breede River Valley have recognised the value of the unique and threatened plants on their land, and taken action to protect a number of critical remnants. Domitilla Raimondo, CREW’s programme manager, values the huge contribution Christi has made in his personal capacity: “Christi knows more about conservation extension than most of us who are formally employed to do this work. His dedication and persistence make him a true C.A.P.E. champion.”
people making biodiversity work

identify rare, endemic and threatened species in their particular areas. Volunteers have access to resources like aerial photographs, GIS maps, herbarium records and even the Millennium Seed Bank at Kirstenbosch, where seeds of critically endangered species can be stored. On an annual basis, all CREW groups get together for a two-day workshop, which serves as a pit-stop for sharing, learning, planning and renewing enthusiasm.

**From strength to strength**

In its first two years, the CREW teams have had a significant impact on species monitoring, awareness-raising and conservation action in the Cape Floristic Region. The programme has been so successful that SANBI and the Botanical Society have agreed not only to sustain the existing CREW programme beyond the initial three years of CEPF funding, but to expand the programme nationally.

CREW has also been the recipient of a prestigious international conservation award, the BP Conservation Programme (BPCP). They have been given a grant to establish a CREW node in the Tulbagh area. Already the programme manager for the Tulbagh project, Ismail Ebrahim, has attended an exciting training course at the Smithsonian Institution in the United States and produced a map of all renosterveld fragments in the area using satellite imagery. The CREW volunteers are now checking the validity of the map.

**Ismail Ebrahim—CREW Co-ordinator**

Ismail loves working for CREW—especially when it comes to working with the youth and community groups in the field. After completing his horticulture diploma, Ismail decided to apply to the Starfish work experience programme in 1998 and joined the Protea Atlas Project as a volunteer. What started as a six-month internship ended up as a four-year contract, during which Ismail gained far more than skills and experience. “Even though I had been through three years of training, I wasn’t that passionate about plants. The most influential thing was working with Tony Rebelo and the other enthusiasts and experiencing the ‘buzz’ about plants. I was converted to a Protea freak!” he recalls.

When the Protea Atlas Project contract came to an end, Ismail soon realised that running one of the family businesses selling pizzas and renting videos was not for him. The CREW position was the perfect opportunity to build on his Protea Atlas experience. The opportunity to work with groups ranging from school children to knowledgeable amateur and professional botanists to address real conservation issues has made the job “completely enjoyable”. And just as Ismail’s love of plants was inspired by the enthusiasm of the protea atlassers, he is now “spreading the energy” by sharing his passion—especially with the children in the communities where CREW works.

**PROFILE**

It’s never too early to become involved in rare plant conservation.

Wendy Paisley portrays an endangered plant as the CREW volunteers come to the rescue. Wendy is also one of the prime organisers of the annual Fynbos Forum.

Wendy Paisley portrays an endangered plant as the CREW volunteers come to the rescue. Wendy is also one of the prime organisers of the annual Fynbos Forum.
by carrying out surveys on the ground. This project aims to develop a series of maps indicating the conservation value of the renosterveld fragments. This will be a valuable tool to assist the Witsenberg Municipality, CapeNature and the Department of Agriculture with land use decision-making and conservation plans for the area.

What have we learned?

- As a partnership between scientists who have access to information and resources, and members of the public who are committed to conserving their local environment, CREW has proved extremely effective in collecting significant biodiversity data.
- To get local people involved, it helps to use existing networks within the community.
- Working with champions from an area enables CREW to understand community dynamics and customs, and facilitates communication with land owners on whose land threatened species occur.
- The integrated nature of the C.A.P.E. programme enables information gathered by CREW volunteers to be used in a variety of contexts, e.g. LandCare Area-Wide Planning, Conservation Stewardship, municipal Spatial Development Frameworks.
- Sufficient extension officers are needed to support and sustain this growing programme.
- Systems for data capture by volunteers must be simple and not exceed the technological expertise of users.
- Volunteers are motivated by opportunities to learn from scientists and by having their contribution recognised by the conservation community.
- Identifying threatened plants in biologically diverse systems like the CFR is extremely challenging. Volunteers need opportunities to develop their capacity, e.g. identification guides and plant identification courses.

(vi) Where have all the fishes gone?

Although one quarter of all vertebrates on earth are freshwater fish, around the world, this group of animals is in serious trouble. Some species are threatened by fishing pressure, but in most cases, the rivers, streams and lakes in which they live have become so degraded that they simply cannot survive. Scientists fear that by 2025, one third of the world’s freshwater fish species may be extinct. In South Africa the situation is extremely dire: 47% or nearly half of all endemic freshwater fish are threatened with extinction.

Rivers in the Cape Floristic Region contain very few species of freshwater fish (only 19 to be precise) but 85% of these occur nowhere else on earth. Their survival depends entirely on the ecological health of the region’s rivers. This is why, between 2000 and 2005, the River Conservation Unit of CapeNature undertook an extensive survey of more than 200 river sites looking for indigenous freshwater fish.

The results were worrying: in a quarter of the sites surveyed, no indigenous fish were found. Pollution, physical degradation of rivers, over-use of water and the introduction of alien fish species had all taken their toll. Comparing fish populations above and below weirs and waterfalls showed that alien fish like bass have...
a devastating effect on indigenous fish populations, as these results from the Rondegat River in the Cederberg illustrate:

Based on this research, the C.A.P.E. Invasive Aliens Programme has plans to rehabilitate priority rivers in the Cape Floristic Region that are invaded by alien fishes. Rivers have been selected within the main C.A.P.E. conservation corridors and project areas, namely the Greater Cederberg Biodiversity Corridor, the Agulhas Biodiversity Initiative, the Gouritz Initiative and the Baviaanskloof Mega-Reserve. Rivers include the Krom, Rondegat and Twee Rivers in the Cederberg, the Dorps and Paradys Rivers in the Gourits, and Krom River in the Baviaanskloof.

To allow the indigenous species to recover fully in these rivers, all invasive fishes will have to be removed. Prominent angling organisations such as the Cape Piscatorial Society and the Western Cape Bass Angling Association are supporting these projects enthusiastically. They know that the removal of the alien fish in the Rondegat River, for example, will increase numbers of Clanwilliam Yellowfish, an excellent flyfishing species. To ensure the complete removal of alien species, the project team will also need the support of land owners who control access to stretches of these rivers.

The more we study the freshwater ecosystems of the Cape Floristic Region, the more fascinating they become. Conserving this remarkable aquatic biodiversity will require the co-operation of many stakeholders and must focus on conserving the habitat and continued ecological monitoring. Without ecologically healthy rivers, there is no future for the region’s rich and unique fish heritage.
4.3 Caring for the coastal and marine environment

(i) Adopt-a-Beach

Managed by the Wildlife and Environment Society of South Africa (WESSA) and funded by the Department of Environmental Affairs and Tourism: Marine and Coastal Management (DEAT: MCM), the Adopt-a-Beach project ran from 2002 to 2005, involving schools, conservancies, interest groups, Blue Flag Beaches and teams in monitoring and caring for sections of the coast.

With the help of a big blue “toolbox” containing equipment, information, policy documents and record sheets, groups monitored aspects as diverse as the climate, sand movement, biodiversity, historical sites and development pressures. Enthusiastic local co-ordinators from WESSA offices along the coast supported groups that adopted particular beaches, providing training, organising regional workshops and events, and encouraging them to share their stories in Tidal Tales, the regular newsletter of Adopt-a-Beach.

Adopt-a-Beach monitoring activities were based on scientific principles, but were simple enough to be carried out by children and adults with very little training or experience. Groups were free to monitor as many or as few indicators as they wished, on a regular or occasional basis. Some groups living near the coast did monitor their sites regularly, but another important goal of the project was to enable people living further inland, many of whom had never seen the sea before, to experience coastal environments and to appreciate that even people living inland have an impact on the coast. Adopt-a-Beach co-ordinators arranged outings to the sea for groups living up to 100 km inland and adapted the monitoring activities accordingly.

Monitoring for action

Unlike most other monitoring projects, Adopt-a-Beach did not require participants to submit their findings to a central database. Rather, the primary aim of monitoring was to help people to get to know and understand their chosen stretch of coast better. By starting to recognise environmental issues and trends, groups could begin to play a more informed role in local environmental advocacy and action projects. Groups did indeed identify and blow the whistle on issues that concerned them: the Gugulethu group drew the City of Cape Town’s attention to rock blasting at Monwabisi, a Blue Flag beach in Cape Town, and on the West Coast a group managed to stop illegal sand mining activity in Lambert’s Bay. While cleaning up their stretch of beach at the Strand, Forest Heights Primary School learners conducted a litter audit and realised that cigarette butts made up a significant part of rubbish on the beach. So before their next visit, they made ashtrays from two-litre cooldrink bottles and handed these out to smokers on the beach to encourage them to manage their waste more responsibly! And in Kommetjie, members of the Ubuhle Beach CoastCare team now know that there is a white-fronted plover breeding season when they should not use washed-up kelp for dune rehabilitation work.

As Patrick Dowling, National Co-ordinator of Adopt-a-Beach, observes: “Through the project, people have come to appreciate more the meaning of Integrated Coastal Management. We no longer point to an issue and say: ‘Somebody ought to be doing something about that!’ Instead, we have learnt that all our small efforts, informed by increasing local awareness, are meaningful. We can make a difference through participating in the identification and solution of problems with others.”
Co-operative efforts

Adopt-a-Beach was strengthened by the involvement of other environmental organisations and projects. Up and down the coast, organisations like aquariums, CapeNature and SANParks gave their support. Many schools involved in monitoring also joined EcoSchools South Africa (Chapter 6), which encouraged them to make marine and coastal monitoring part of their lessons. The annual Marine and Coastal Educators’ Network (MCEN) workshop became an important capacity building opportunity for Adopt-a-Beach groups.

The Adopt-a-Beach network enabled other organisations to get in touch with coastal environmental groups that were keen to assist with related projects (e.g. the Sustainable Seafood Initiative, biodiversity monitoring projects). The network also strengthened community involvement in campaigns like the International Coastal Cleanup and National Marine Week.

Where to now?

Environmental issues are complex and often difficult for school and community groups to address. Adopt-a-Beach was undertaken to practically implement the Education and Awareness-raising theme of the White Paper on Sustainable Coastal Development. The initiative enabled people to get to know and understand their environment better, and to respond to the issues they identified. Opportunities for people to develop confidence and capacity as environmentally responsible citizens are vital, but they are essentially long-term processes, not short-term projects.

Unfortunately, due to restructuring at MCM, funding for the Adopt-a-Beach project came to an end in October 2005. Other sources of funding could be tapped, and the success of the project is such that there is no doubt that it will be able to attract support. However, the relationship between Adopt-a-Beach and MCM, should they no longer be prepared to fund the project, will need to be negotiated to allow this vital process to continue.

What have we learned?

- In order to involve members of the public in monitoring and caring for local coastal environments, it is essential to make information, training and a comprehensive “toolbox” available. The Adopt-a-Beach activities and materials were designed to be scientifically valid but fun to use.

- A monitoring project that involves people from a wide range of contexts (e.g. coastal / inland; children / adults; schools / conservancies, etc.) must have a flexible project framework that can be adapted according to the needs and abilities of a wide range of users.

- Making explicit links with the curriculum via lesson plans made the project more useful to schools.

- The notion of “adoption” involves taking responsibility to act when necessary. This worked well in the case of groups like conservancies that are responsible for managing the site they monitor; however, schools and interest groups may lack the authority to take direct action to address issues at their monitoring sites and may need to lobby the relevant authorities and enlist the support of local action groups.

- Local co-ordinators were essential to project success; they helped to train and motivate the groups, access local support and allow groups to feel that their findings were being shared with a wider network.

(ii) Sustaining coastal environments and livelihoods

Coastal communities depend to a large extent on the resources and services that marine and coastal ecosystems provide. In the Cape Floristic Region, tourism and fishing are two major industries that depend on effective marine and coastal management for their sustainability. Allowing these environments and resources to become degraded and over-exploited, threatens the livelihoods
of coastal communities. Already many people have lost their jobs as a result of the decline in linefish populations. Damage to coastal environments can also pose a safety hazard, with erosion and flooding threatening properties in some areas. As marine and coastal environments come under increasing human pressure, co-ordinated efforts to safeguard these areas and their resources are desperately needed.

**A C.A.P.E. Marine Task Team**

In 2004 the National Spatial Biodiversity Assessment revealed that South Africa’s existing network of Marine Protected Areas (MPAs) was inadequate to conserve marine ecosystems and sustain populations of harvested species. In 2005 C.A.P.E. established a Marine Task Team to guide the implementation of the marine component of the C.A.P.E. strategy. Co-chaired and supported by the WWF Sanlam Marine Programme and the Department of Environmental Affairs and Tourism (DEAT), the task team aims to consolidate and expand the network of MPAs in the Cape Floristic Region and to ensure that these MPAs are effectively managed. C.A.P.E. Partners like SANParks, CapeNature, the Western Cape provincial government and coastal municipalities are involved in the Marine Task Team, which is giving impetus and cohesion to marine conservation efforts in the region.

Using fine-scale conservation planning techniques, the Marine Task Team aims to evaluate existing MPAs in the Cape Floristic Region in order to establish a more representative and effective network of MPAs. They are also establishing local task teams and developing conservation management strategies and business plans to address issues like responsible tourism, sustainable fishing and effective management of specific MPAs. These initiatives aim to enhance the conservation of biodiversity.

The Kassiesbaai community’s livelihood depends on the sustainability of fishing—declines in fishstocks have created great hardship in the community.

**Fierce fishing pressure**

As the human population has grown and the demand for seafood has rocketed, fishing technologies have become increasingly sophisticated. Over the last 100 years, the populations of many South African fish species have plummeted and catch rates of some fish have declined by more than 95%.
Building MPA management capacity

Expanding the network of MPAs in South Africa is not enough, however. The people who manage these areas must be well equipped to do so. To address the training needs of MPA managers, the WWF Marine Programme in partnership with Rhodes University Environmental Education and Sustainability Unit co-ordinated the development of an in-service training process through which participants deepen their knowledge about marine and coastal environments and develop workable operational plans for their MPAs. The Table Mountain National Park (TMNP) MPA (Chapter 2.2) was selected as the first pilot site for implementation because, having been established in 2004, its management team was very new and in need of training. The first course was so effective that Robin Adams, Operations Manager for the TMNP MPA, describes it as “rock solid training” that should be offered as a National Diploma in Marine Conservation Management. He argues that South Africa, with its commitment to establishing a network of MPAs, needs suitably qualified people to manage these areas, and this course complements the terrestrial emphasis of existing conservation diplomas.

Useful data

After only six months, data collected by community monitors showed that, contrary to what was previously thought, more limpets and periwinkles are being harvested than mussels. Findings like this will help MCM to improve its management guidelines.

Involving the community in marine monitoring

Also in the TMNP MPA, collaboration between the TMNPKommetjie Environmental Awareness Group (KEAG) and WWF Marine Programme (with funding from Vodacom) has spawned a unique project. Ten people from disadvantaged communities on the Cape Peninsula are now employed to monitor the impact of people who use the coastline of the National Park for recreational purposes.

Armed with palm computers, mobile phones and measuring instruments, the monitors patrol harbours, slipways and beaches, counting and measuring fish and shellfish collected by recreational and commercial fishers. They also observe and record how people are using the coast for recreation, and report on any interesting observations. Back at the KEAG office at Imhoff’s Gift Farm, data are fed directly into a central computerised database and are then available to any organisation that needs the information. The data can be analysed statistically in order to reveal trends in populations and use of resources. The TMNP and Marine and Coastal Management will use the information collected by the community monitors to improve management of the health of inshore marine resources and strategic management of the MPA. Although it is early days, this project has been so successful that there is a good chance that it will be implemented nationally.

Value analysis

Do MPAs help to sustain local livelihoods? A research project is under way to estimate how much MPAs contribute to the production of inshore marine resources harvested along the Garden Route.

and ecosystem services, and to ensure that people can continue to enjoy the socio-economic benefits of well-managed marine and coastal environments.

Fish weighing and measuring are important monitoring techniques to improve decision-making regarding use.
Clearing up creatively

KEAG runs the Working for the Coast project on the Cape Peninsula, providing work for 40 people from local townships, who help to keep the beaches, streams and scenic routes of the South Peninsula litter-free. Tired of seeing all the litter they collected simply being dumped in the local landfill site, KEAG manager Wally Petersen invited a talented local artist, Monique Fagan, to share her ideas and inspiration for making crafts from waste. With support from the Community Chest, ten people who started with the Working for the Coast team are now turning brightly coloured plastic bottle tops, lost flip-flops and used milk bottles into a surprisingly funky range of merchandise. And they aren’t selling it at flea markets either; their clients include Spier wine estate, African Image art gallery and even a gift shop on Bondi Beach in Australia.

The challenge for the year ahead is to make this emerging business more sustainable. In addition to developing new product ranges, the team will also be developing their literacy and numeracy skills, so that Ilithalomsa (meaning “a new dawn” in isiXhosa) will become their own fully fledged business.

Bring on the MARINES!

Another innovative project that involves the local community in marine conservation is the Overstrand MARINES (Management Action for Resources of the Inshore and Nearshore Environments). Co-ordinated by the Overstrand Municipality and supported by DEAT and WWF-SA, this project is having a significant impact on the poaching of abalone and rock lobster along a 250 km stretch of coast between Rooi Els in the west and Rietfontein (near Cape Agulhas) in the east.

This area has been at the epicentre of abalone poaching for many years. In fact, poaching has become something of a family business, providing an income for divers, couriers and even the owners of domestic fridges and freezers who rent out cold storage space. The relatively lucrative pickings have attracted more poachers to the area, with the result that pressure on marine resources has reached crisis proportions. Poachers are now targeting the MPAs where the last sizeable animals are to be found.

Project manager of the MARINES, Craig Spencer, recognises that there is more to compliance than heavy-handed law enforcement; information gathering, networking, awareness raising and creating alternative economic opportunities are all part of the compliance strategy. The initial pilot project kicked off in 2003, employing five people in the Kleinmond area. Since then the Overstrand MARINES has grown into a major poverty relief project providing employment for more than 70 people at five different bases.

Illegal fishing threatens both the fish stocks and livelihoods.
Because poachers work around the clock, so do the MARINES. Some man the telephones at the central operations room in Hermanus, giving out information and receiving reports from the public 24 hours a day, seven days a week. Others patrol the coast on foot, in vehicles and by boat, enforcing conservation regulations, gathering data, rescuing injured animals and educating the public about marine conservation. For the MARINES, public awareness and education involves far more than reminding anglers to comply with fishing regulations; politicians and magistrates also need to be kept informed as they play a vital role in the overall compliance strategy.

The wide range of functions carried out by the MARINES necessitates a diverse programme of training opportunities, from peace officer training, firearm handling and advanced driving to understanding marine ecology and environmental legislation. The teams that patrol the different areas of the coast comprise officers with a range of skills and ranks, so within the MARINES there are opportunities to develop knowledge and skills and to progress in terms of responsibility. The MARINES project is obviously making a difference in terms of employment and training opportunities, but is it also addressing the poaching problem? The figures speak for themselves: in just one month (September 2005), the MARINES confiscated 14 221 abalone in the Overstrand area. For Craig, this represents only partial success, however, as abalone removed by poachers do not survive, and are therefore lost to the population. But what he does acknowledge as a success is that during that time they managed to intercept and remove 658 divers from the water before they could destroy any animals. They also instituted 135 legal cases against poachers, which the team is now meticulously following up. The MARINES may not be able to influence the organised crime bosses who benefit most from dealing in abalone, but they do intend to make it so difficult for the divers that they eventually give up poaching and look for other ways of earning an income.

To make sure that sustainable employment opportunities exist, two more job creation projects (with equally clever acronyms) have been launched. Sustainable Harvesting Assuring Revenue and Employment (SHARE) will allow contractors to harvest limited amounts of an indigenous medicinal plant in the Kleinmond Nature Reserve to supply a local pharmaceutical firm. The Poverty Alleviation through the Long-term Management of Inshore Environments for Tourism (PALMIET) project is appointing contractors to manage and maintain access control points along the coast like slipways, picnic sites, Blue Flag beaches and tourist sites, in return for 75% of gate takings. Innovative projects like these don’t just happen; they are the result of the imagination, energy, dedication and cooperation of many role-players. The Overstrand Municipality, through enabling and supporting innovation, is becoming a leader in sustainable development practice in the Cape Floristic Region.

**RISING TO THE CHALLENGE**

All along the coast, marine resources are being harvested at unsustainable rates. While stocks of fish and shellfish decline, the demand for these resources continues to grow. On the Garden Route, for instance, as fish stocks plummet, communities are pressurising the authorities to open the Tsitsikamma MPA for fishing, an act that would be tantamount to environmental and socio-economic suicide. MPAs represent the last sanctuaries for...
the breeding stock of many linefish species and supplement fishing activity and livelihoods outside these protected areas.

The formation of the C.A.P.E. Marine Task Team is an opportunity to share examples of good practice and to address these challenges co-operatively across the region. By strengthening both the network of MPAs and the capacity of people to manage marine and coastal resources more effectively at a local level, we have a chance to sustain the environments and resources on which so many of our livelihoods depend.

Kalk Bay harbour, a marine protected area.

What have we learned?

- The success of the MARINES depends on effective partnerships between agencies representing different tiers of government (e.g. DEAT, CapeNature, Overstrand Municipality).
- Dealing effectively with poaching requires a comprehensive, integrated programme; in addition to effective law enforcement, the programme must respond to the underlying causes of the problem like unemployment and poverty by offering alternative income-generating opportunities.
- Because poaching is often linked to organised crime, people involved in combating poaching can expect to be subject to intimidation. Systems need to be put in place to protect staff and reduce opportunities for corruption to take root.
- Managing a large and decentralised group of contractors can place an enormous burden on the project management team; one of the reasons for the success of this project is that the human resource development department of the Overstrand Municipality manages this function.
- Delays in the availability of poverty relief funding from central government undermine projects; the MARINES project has ensured project continuity between funding cycles by having a project partner who provides bridging loans.
- To encourage compliance with sustainable harvesting regulations, the authorities must make it easy for resource users to access information and obtain permits; resource management must therefore become decentralised.