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## **SANBI Biodiversity Series 4**

# Fynbos Fynmense: people making biodiversity work

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**Pretoria**

**2006**



## SANBI Biodiversity Series

The South African National Biodiversity Institute (SANBI) was established on 1 September 2004 through the signing into force of the National Environmental Management: Biodiversity Act (NEMBA) No. 10 of 2004 by President Thabo Mbeki. The Act expands the mandate of the former National Botanical Institute to include responsibilities relating to the full diversity of South Africa's fauna and flora, and builds on the internationally respected programmes in conservation, research, education and visitor services developed by the National Botanical Institute and its predecessors over the past century.

The vision of SANBI is to be the leading institution in biodiversity science in Africa, facilitating conservation, sustainable use of living resources, and human well-being.

SANBI's mission is to promote the sustainable use, conservation, appreciation and enjoyment of the exceptionally rich biodiversity of South Africa, for the benefit of all people.

*SANBI Biodiversity Series* publishes occasional reports on projects, technologies, workshops, symposia and other activities initiated by or executed in partnership with SANBI.

Design & layout: Sandra Turck  
Cover design: Sandra Turck

### **How to cite this publication**

**ASHWELL, A., SANDWICH, T., BARNETT, M., PARKER, A. & WISANI, F.  
2006. Fynbos Fynmense: people making biodiversity work. *SANBI Biodiversity Series 4*. South African National Biodiversity Institute, Pretoria.**

ISBN 1-919976-29-9

© Published by: South African National Biodiversity Institute.

Obtainable from: SANBI Bookshop, Private Bag X101, Pretoria, 0001 South Africa.  
Tel.: +27 12 843-5000. E-mail: [bookshop@sanbi.org](mailto:bookshop@sanbi.org). Website: [www.sanbi.org](http://www.sanbi.org).

Printed by United Litho, 22 Eland Street, Koedoespoort, Pretoria, 0186 South Africa.

# Foreword

**F**ourteen years after the Rio Summit, South Africa is hosting The Global Environment Facility (GEF) Assembly, with delegates addressing key environmental issues in one of the world's "hottest" biodiversity hotspots, the Cape Floristic Region (CFR). The Cape region is the location of several fascinating GEF-funded projects where biodiversity is being successfully integrated into social and economic development.



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South Africa has had an extraordinary political and development history. The change in government and democratization in 1994 led to a realization that biodiversity conservation must be more inclusive and linked to socio-economic development. Programmes such as Working for Water have led the way in innovation, linking clearance of invasive alien species to ecosystem services, poverty alleviation and job creation. Development and conservation are often considered trade-offs, yet South Africa has demonstrated how biodiversity concerns can be mainstreamed in development efforts. These successes can be attributed to four main factors: good scientific information and subsequent awareness raising; institutional capacity and commitment; strategic cross-sectoral coordination and public-private partnerships; and entrepreneurship by the conservation community in seizing opportunities to demonstrate that good biodiversity management is good for the economy, good for local development, and good for business. Many of these attributes are present in biodiversity projects which South Africa has designed for GEF funding.


The World Bank is proud to have been associated with the development of a rich and innovative GEF portfolio of projects in South Africa. The portfolio spans two, uniquely South African, biodiversity hotspots (Cape Floristic Region and Succulent Karoo) as well as exciting transboundary initiatives in the Maloti-Drakensberg highlands linking South Africa and Lesotho. The Bank's GEF portfolio has supported the expansion of national parks and protected areas in the Cape Peninsula, Namaqualand, Addo and Baviaanskloof as well as creative off-reserve solutions and new partnerships with private and community landowners. South Africa has been a leader in integrating biodiversity in production landscapes, especially through partnerships under the Cape Action for People and the Environment program (C.A.P.E.) and the Succulent Karoo Ecosystem Partnership (SKEP). The Critical Ecosystem Partnership Fund (CEPF) has supported conservation planning and engaged civil society in active partnerships for conservation in the production sector, including private and community lands. A suite of GEF medium-sized projects have demonstrated good practice in conservation farming, conservation planning, and greater engagement of local communities in establishing community conservation areas. Many of the lessons from earlier projects are being scaled up and replicated under the current C.A.P.E. Biodiversity and Sustainable Development project, within the Cape Floral Kingdom.

This volume, illustrates the results achieved on the ground of the ongoing partnership of C.A.P.E. and will contribute to disseminating lessons learned from the C.A.P.E. programme to other bioregional programmes worldwide. The inspiring stories presented here provide examples of creative thinking in promoting biodiversity conservation in the context of sustainable development. Many of the case studies have relevance to other countries and other sectors, demonstrating synergies between conservation and the fight against poverty, innovative solutions to shared needs, and opportunities to make biodiversity an indispensable part of ordinary people's lives.



*Katherine Sierra*  
Vice President, Sustainable Development

*The World Bank*



*Gobind Nankani*  
Vice President, Africa Region

*The World Bank*

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# Message

from the South African Minister of Environmental Affairs and Tourism

South Africa launched the Cape Action for People and the Environment Programme (C.A.P.E.) in 2000 in response not only to its obligations to secure globally significant biodiversity for the international community, but driven by the opportunity that the rich resources of the region offer for social and economic development of our people. Underlying the programme is a desire to unlock the opportunities for economic development while ensuring much greater involvement and participation among local communities and other stakeholders in decision-making and in sharing the benefits of sustainable use of biodiversity.



The C.A.P.E. Strategy set out the challenges. Government and non-governmental organisations at every level have stepped in to provide the appropriate enabling environment for rapid implementation. From the perspective of government, rapid steps were taken to develop the National Environmental Management Biodiversity Act and the National Environmental Management Protected Areas Act. Among other functions, these far-reaching laws provide the context for the development and publication of bioregional plans that empower programmes like C.A.P.E. and set the standards for the designation and management of protected areas that fully represent and maintain biodiversity across the regional landscape. These have been followed by the National Spatial Biodiversity Assessment and the adoption of the National Biodiversity Strategy and Action Plan.

The most striking innovation however, is coming from the partners and communities themselves who are contributing directly to conservation stewardship on private and communal lands, through industry best practices and innovations, such as the Biodiversity and Wine Initiative and through mobilising government, business and stakeholders to partner in ensuring that sustainable development is achieved at a local level.

South African businesses are yet to fully embrace and harness the economic opportunities that biodiversity offers, but there are signs that this is changing. In addition to industry role players, there are also striking examples of how local communities are seizing opportunities such as the flower harvesting in association with tourism on the Agulhas Plain and the development of the Hoerikwaggo Guides, creating new jobs and increased revenue in the Table Mountain National Park.

South Africa's projections of a growing economy expressed in strategies such as ASGISA are founded on the continued sustainable use of natural resources, and the value that biodiversity creates in the economy. Growing the biodiversity-based economy requires that new and innovative means are found to identify and add value to South Africa's globally unique resources, without depleting them, and while expanding social benefits. The stories and lessons reflected in this publication record some of the enormous diversity and creativity, but also commitment of South Africans—all Fynbos Fynmense—to find workable responses to the problems and opportunities of sustainable development in a globally significant biodiversity hotspot.

*Minister Marthinus van Schalkwyk*  
*Minister of Environmental Affairs and Tourism*

# Message

from Mbulelo Songoni, the Eastern Cape Provincial Minister for Economic Affairs, Environment and Tourism

The Eastern Cape is at the eastern end of the Cape Floristic Region, where it intersects with four other biomes in South Africa, making the Eastern Cape unusually rich in habitats and species. The Eastern Cape government realizes that this diversity, matched only by the variety of people and interests in the region, is a source of pride but also opportunity. For this reason, as a founder signatory of the C.A.P.E. programme, the Eastern Cape has invested in several conservation and development flagship projects, notably the Baviaanskloof Megareserve. While the Baviaanskloof is a component of the Cape Floristic Region World Heritage Site, it is also the source of water for the Nelson Mandela Bay metropole and a place where farmers and other communities derive their livelihoods. This means that the way in which conservation is undertaken in the region must accord with the social and economic development needs of the Eastern Cape. Planning for the Baviaanskloof Megareserve has become a model for other large landscape initiatives elsewhere in the Eastern Cape and in the rest of the Cape Floristic Region.



In line with the C.A.P.E. Strategy, the Eastern Cape has undertaken a review of environmental and nature conservation functions and proudly launched the Eastern Cape Parks Board earlier this year as the agency that would ensure that it met its biodiversity responsibilities, while seeking appropriate investment in development, and successfully integrating these. The pilot activities that C.A.P.E. has undertaken in the Eastern Cape are being closely examined by provincial and local government in the Eastern Cape as a source of lessons and capacity-building across the region. In particular, the Eastern Cape has established an Eastern Cape Implementation Committee for Bioregional Programmes and will be guiding and driving a range of important initiatives, including C.A.P.E., STEP and the Wild Coast Initiative.

# Message

from Tasneem Essop, the Western Cape Provincial Minister for Environment, Planning and Economic Development

The astonishing richness and diversity of the Western Cape's natural resources is matched only by the resourcefulness and diversity of its many people. Historical patterns of unsustainable use of resources have led to the Cape Floristic Region being listed as one of the world's threatened bioregions, and the scars are deeply etched in the land and its people. Now the people of the Western Cape are exploring new and sustainable ways to value and benefit from these globally important assets. It is no secret that the biodiversity of the Western Cape underpins the regional economy, generating value in excess of R10 billion per annum, a large part of which is captured in the growth of tourism in the region, based principally on the scenic beauty and the jewels that are our protected areas. These assets are the cornerstone of the "environmental economy" of the Western Cape and can play an important role in the regeneration of the soul of our people.



More important, is the need to deepen the involvement and participation of all of the people of the region, resulting in improved livelihood opportunities that are translated into sustainable employment and quality of life. To this end the provincial government has adopted a Provincial Spatial Development Framework that fundamentally recognizes the importance of the natural environment. It sets out a pattern for improving human settlements and avoiding urban sprawl, but also recognizes the development opportunities of appropriate land-uses that will diversify economic opportunities in the rural landscape. The Western Cape Provincial Government has supported the roll-out of the C.A.P.E. Programme as one of the initiatives underpinning our Sustainable Development Implementation Plan. We expect the programme to pilot, analyse and recommend appropriate approaches, while securing effective participation and involvement of all of our people. The stories in this volume are evidence of the growing commitment and mobilization of our "fynbos fynmense" in support of sustainable development.

# Message

from Helen Zille, Executive Mayor of the City of Cape Town

The City of Cape Town is well aware of its unique position in the Cape Floristic Region. It has also taken seriously its responsibility to reverse the trends that have led to the City having one of the highest densities of threatened species on earth. The City has come to understand that biodiversity can be a powerful driver of tourism, economic growth and social upliftment. We recognize the benefits of being one of the few places in the world where two natural World Heritage Sites and an entire National Park are contained within a single municipal boundary.



One of the most important steps taken by the City of Cape Town was to prepare its Integrated Metropolitan Environmental Programme (IMEP), one component of which was to declare its commitment to biodiversity. Since then, the City has developed a Biodiversity Strategy that provides a framework for linking the important ecological systems across the City and providing nodes for innovative programmes such as Cape Flats Nature—our successful partnership programme targeting community conservation on the Cape Flats—and the consolidating of Table Mountain National Park. The Biodiversity Strategy also provides the basis for co-ordination across the many sectors that provide services in the City and meeting the needs for public recreation, water management and disaster management.

The City of Cape Town is also proud to have initiated Local Action for Biodiversity, an international partnership project joining 15 world cities focused on enhancing the protection, management and appropriate use of biodiversity within municipal boundaries, and also on working towards reversing the global trend towards species extinction by 2010. As one of the founding signatories of the Cape Action for People and the Environment Programme (C.A.P.E.), the City of Cape Town is taking full responsibility for providing opportunities for its own “fynbos fynmense” to participate and benefit from making biodiversity a part of all Capetonians’ lives.

# Message

from Monique Barbut, CEO of the Global Environment Facility

The richness of biodiversity found in South Africa's Cape Floristic region is legendary, and the unique nature of the fynbos biome has been celebrated by biologists, conservationists, development experts, and ecologists worldwide.



The Global Environment Facility (GEF) has a strong and mutually-supportive partnership with the Government of South Africa. We are proud that our project portfolio covers a broad spectrum of issues—biodiversity conservation, climate change, eliminating of toxic chemicals, improved management of international waters, and others—that are directly linked to, and supportive of South Africa's sustainable development agenda.

Through the work of our implementing agencies—United Nations Development Program, United Nations Environment Programme, and The World Bank—GEF-financed projects are making a positive difference in people's lives while protecting the global environment. Notable examples are the Agulhas Biodiversity Initiative, Cape Action for People and Environment (C.A.P.E.) project, Succulent Karoo Ecosystem Partnership (SKEP), including among others, the Small Grants Program (SGP) which is helping link local communities to national development goals.

We are delighted that South Africa is hosting the Third GEF Assembly in Cape Town, the first time that we are meeting on the African continent. The launch of this volume at the Assembly is indicative not only of the importance of biodiversity conservation, but also broad-based partnerships that mobilize public, private and civil society efforts in protecting the global environment for the benefit of all. The GEF is pleased to be a part this partnership which is helping overcome poverty and help achieve the internationally-agreed Millennium Development Goals.





introducing C.A.P.E.



# 1

## CHAPTER 1 Introducing C.A.P.E.

The Cape Floristic Region includes plant and animal communities of astonishing diversity.

### 1.1 The Context of C.A.P.E.

#### (i) South Africa: a society in transition

South Africa's transition to democracy in 1994 ushered in a new institutional dispensation that has transformed approaches to biodiversity conservation as well as other functions of government. In the first ten years of democracy many new policies and laws were developed to give expression to the goals of the new society. One of the important driving forces of this change was the Reconstruction and Development Programme (RDP), which aimed to ensure that processes were people-driven, that reconstruction and development were linked and that there was a deepening of democracy in the state

and society. Perhaps most importantly for biodiversity conservation, there was an imperative that an integrated and sus-

tainable programme for South Africa's development would be implemented at national, provincial and local levels by government, as well as by parastatals and organisations of civil society.

A profound consequence of this transition for the conservation world was a move towards greater co-operative governance, not only within sectors, such as environment and nature conservation, but also among sectors, such as agriculture, water, land and environment. The RDP also created an awareness and sense of urgency for change that would promote development that was sustainable and just, and that would involve people in decision-making for the use and beneficiation of natural resources. In the Cape Floristic Region (CFR), the stage was set for a quiet revolution regarding the way in which the biodiversity riches of the region were regarded and how people from all walks of life would begin to address the opportunities and constraints of their management.







The Cape Floristic Region is the smallest of the world's six floral kingdoms and the only one contained within the borders of a single country.

## (ii) International obligations and opportunities

South Africa's political transition also signalled its return to the international community of nations. The imperative was to catch up with the many international conventions and processes that had been underway, especially since the Rio Earth Summit in 1992. South Africa ratified the Convention on Biological Diversity (CBD) in 1997, and in doing so, endorsed the objectives of the convention, which included the mainstreaming of biodiversity into all governmental policies, plans and programmes.

It also meant that South Africa became eligible to access funds from the Global Environment Facility (GEF). As a country with exceptional biodiversity and human capacity, coupled with its agenda for social and economic transformation, South Africa was quickly identified by the implementing agencies of the GEF as a recipient of funding for priority programmes that would conserve globally significant biodiversity. Preconditions were the development of a new biodiversity policy for the country, and the identification of country priorities. These included the CFR, the only one of the world's six floral kingdoms located

in a single country, as well as the Maloti-Drakensberg Mountains and the Greater St Lucia Wetland Park. During the development of the White Paper on the Conservation and Sustainable Use of South Africa's Biological Diversity, a significant stakeholder process involving key organisations was mobilised. The resulting actions included a drive to garner GEF resources for the CFR.

## (iii) A heritage of fynbos research

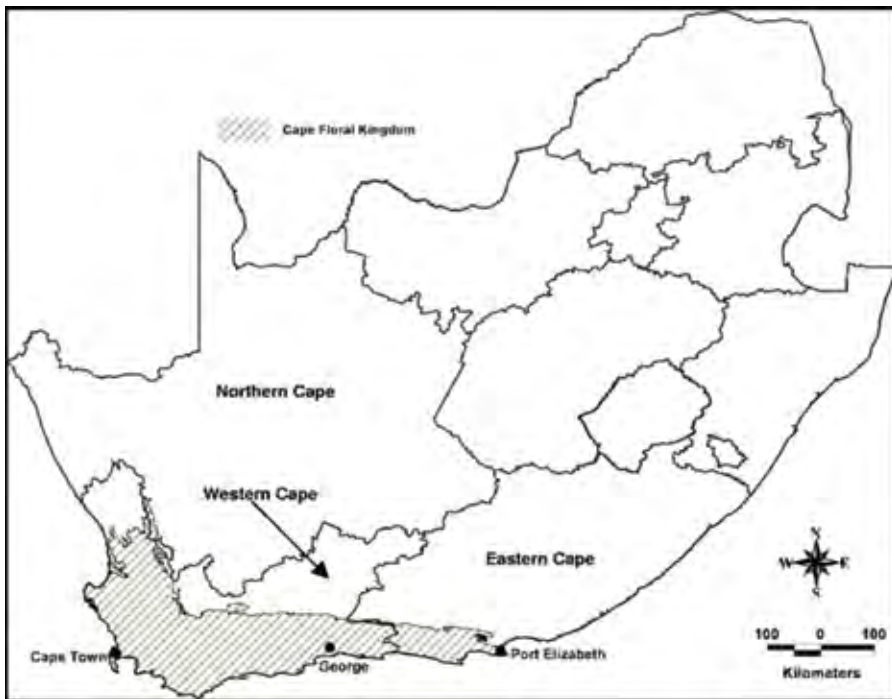
During the 1990s, there was growing concern about challenges facing the fynbos ecoregion. This had its roots in the substantial development of knowledge and understanding of the complexity of this uniquely diverse, globally rich ecoregion, the threats facing it and the management imperatives that were required. Since the 1970s, investment in scientific research had yielded a remarkable body of scientific literature and expertise, not only on the composition of the biodiversity of the fynbos region, but also on the dynamics of fire as a crucial driving force of ecosystem structure and function. In addition, the insidious and long-term impacts of the ever-increasing infestations of invasive alien plants were identified and understood.

## What is fynbos and who are these fynmense?

*Fynbos is a rather loose collective term referring to the uniquely diverse CFR characterised by signature plants such as proteas, ericas and restios. It has come to mean more than that though, as the region encompasses the unique Cape Fold Mountains, tea-coloured streams with their endemic fish, coastal wetlands and adjacent marine environments.*

*Coupled with the Cape's astonishing biodiversity are the people of the region who, over thousands of years, have developed a deep attachment to the fynbos region and who identify with the Cape as their unique heritage. These are the "fynmense" who hold the future of the CFR in their own hands.*

*The expression "fynbos fynmense" was captured by Brett Myrdal and Xola Mkefe of the Table Mountain National Park, to symbolise the profound linkages between people and nature in the region. It has come to symbolise the essential goal of C.A.P.E., which is to conserve the environment while ensuring that people are involved in and benefit from conservation activities. Fynmense is a play on words meaning fine (great) people.*




The Cape Floristic Region at the southern tip of Africa straddles three of South Africa's provincial boundaries.



The rock walls and sandstone ramparts of the Cederberg.

**PROFILE**

**Brian Huntley**  
 Professor Brian Huntley, now CEO of the South African National Biodiversity Institute (SANBI) was one of the architects of the Co-operative Scientific Programmes in the 1970s. Who could have predicted that 30 years later, SANBI under his leadership would be the home for South Africa's bioregional conservation programmes, including C.A.P.E.?



An inspired group of biological scientists contributed to this growing body of research and literature, with a significant contribution being the authoritative work stimulated and coordinated by Richard Cowling and his colleagues during the 1980s and 1990s. Much of this initial ecological research was supported by the Fynbos Biome Project, funded in part by the Co-operative Scientific Programmes of the Council for Scientific and Industrial Research (CSIR), which in addition to conducting primary research on ecosystem structure and function, brought together scientists and managers to discuss and debate the findings of their research and consequences for ecosystem management.

The Fynbos Biome Project has had a lasting impact, having led to the establishment of the Fynbos Forum. This annual meeting of scientists and managers has been in existence for over 20 years and continues to set the pace of discussion for fynbos research and management (Chapter 7). The Fynbos Forum has spawned many creative endeavours, not the least of which is the world-renowned Working for Water programme (Chapter 3) as well as the development of the Cape Action Plan for the Environment.

## 1.2 What makes the Cape Floristic Region so special?

### Globally significant biodiversity

The CFR in South Africa is the smallest and richest of the world's six floral kingdoms. What makes it unique is that this floral kingdom is found exclusively within a single country (Figure 1). This means that it is entirely up to the people of South Africa to protect this global treasure. The region is also one of the world's 25 most threatened biodiversity hotspots. These hotspots are places that harbour exceptionally high levels of biological diversity, but where, unfortunately this diversity is also highly threatened.

The CFR is particularly rich in plant diversity, with some 9 600 species of plants on record. Huge numbers of these plants are endemic to the CFR, meaning that they do not occur naturally anywhere else on earth; of these, many are restricted to very small areas. The region is also home to numerous unique and highly specialised invertebrates, many of



which depend on particular plant species plants for their survival.

A reason for this exceptional species diversity is the wealth of different habitats in the region, each with its unique topography, soils and climatic conditions. Natural environments range from semi-arid ecosystems that experience less than 500 mm of rain per year, through remnant temperate moist forests along the east coast, to magnificent mountains that soar to 2 300 metres above sea level. In addition, there are unique wetland, freshwater, estuarine and marine environments. Travel from west to east or from north to south in this region and you will be amazed by the diverse landscapes you encounter; no two areas are completely alike.

The CFR comprises a relatively narrow strip of land that stretches from Nieuwoudtville in the northwest to the Nelson Mandela Metropole in the east, always within about 200 km of the sea. The oceans therefore have a profound influence on the region. The two major oceanic currents, the warm Agulhas Current on the East Coast and the cold Benguela Current on the West Coast, have their confluence on the Agulhas Bank off Cape Agulhas, the southernmost point in Africa. Even areas of land or sea that look very similar at first glance have markedly different characteristics in different parts of the region. Consequently, conservation efforts must take place in every part of the region, as no single area could ever fully represent the diversity across the regional landscape.

The characteristic mountain ranges of the CFR consist of two major groups. In

the western part of the region the Cape Peninsula mountain chain, the Hottentots-Holland range, the Groot Winterhoek Mountains and the Cederberg lie along a north-south axis. In the south are the east-west trending Rivierosonderend, Outeniqua, Groot Swartberg, Langeberg and Baviaanskloof ranges. The rivers arising from these diverse mountains are all unique, harbouring 19 species of endemic or near-endemic fish. Virtually all these mountains fall within protected areas, including designated mountain catchment areas in private ownership. The existing protected area system therefore favours the conservation of mountainous areas, largely because these were identified as water catchment areas and also lacked agricultural potential. Unfortunately the lack of emphasis placed on lowland ecosystems has meant that reservation of these areas falls markedly short of essential conservation targets.

#### A threatened ecosystem

The rich biodiversity of the CFR is under serious threat. Vast areas have been converted to permanent agriculture and rangelands for cattle, sheep and ostriches, while inappropriate fire management, infestation by alien species and rapid and insensitive infrastructural development have caused further transformation. Over-exploitation of natural resources including wild flowers, water and marine resources, have also had an impact on terrestrial, freshwater and marine habitats. In addition, the deleterious impacts of pollution and the insidious effects of climate change on the region are all taking their toll.



The Cape Peninsula contains one of the highest concentrations of species on earth in a spectacular land and seascape, now part of a World Heritage Site.



In the Eastern Cape, the fynbos blends with subtropical thicket in the Baviaanskloof.



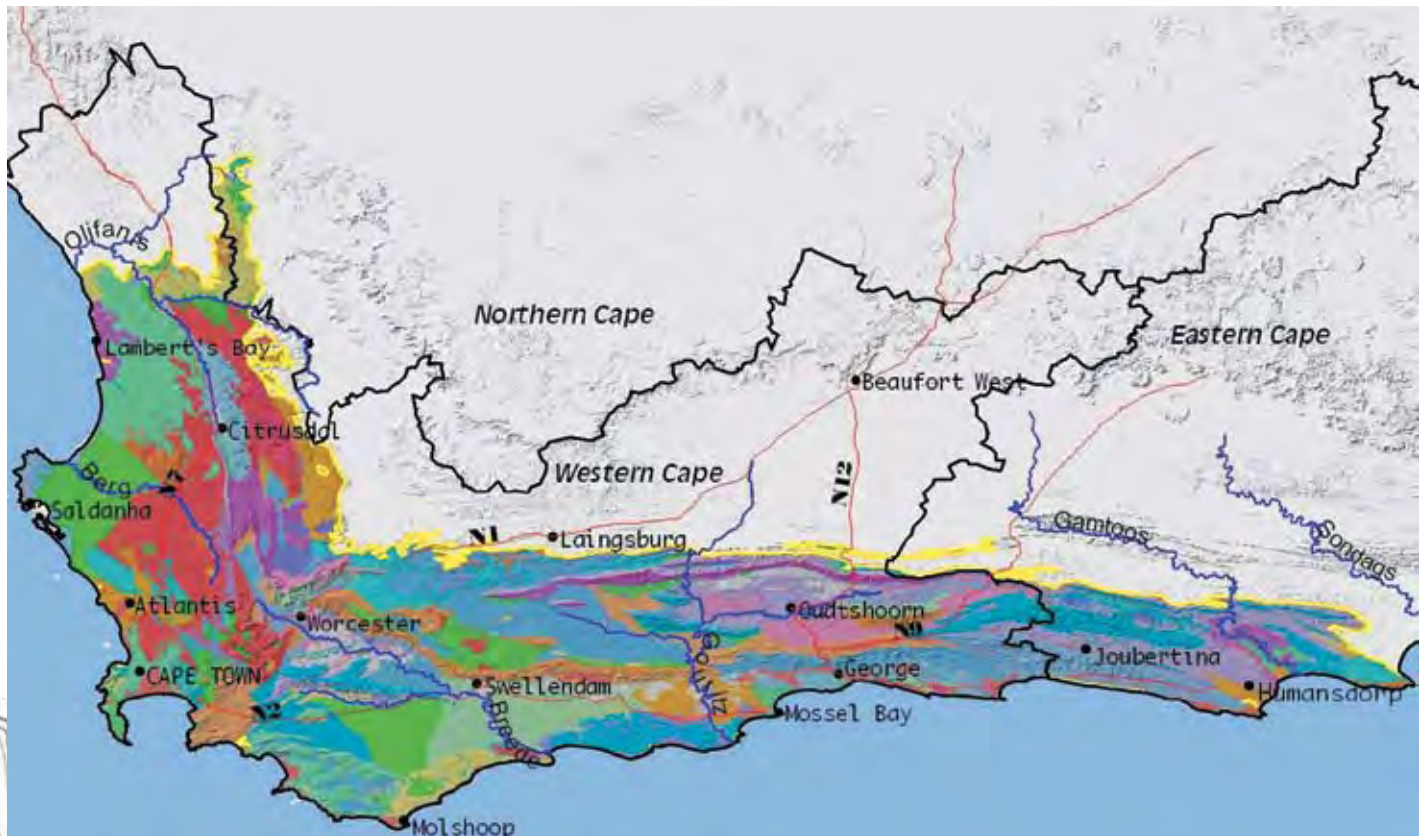
## PROFILE

### Richard Cowling

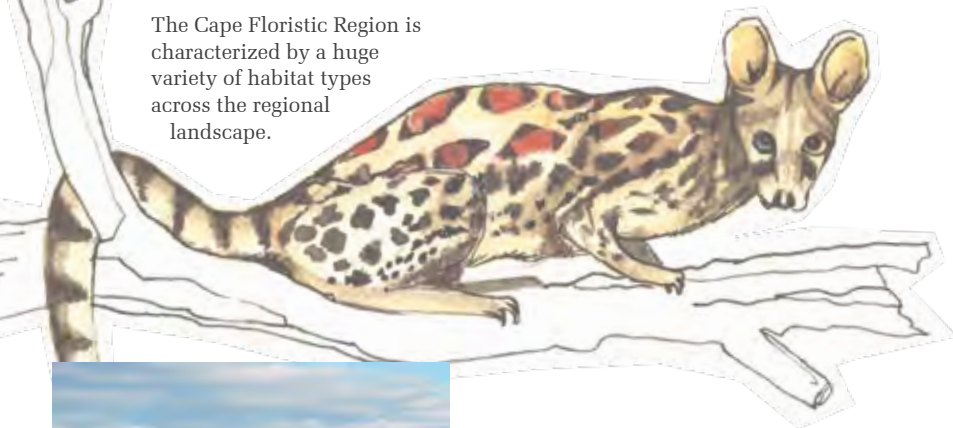
Richard Cowling was honoured with a C.A.P.E. Gold Conservation Award for his exceptional contribution to biodiversity conservation planning and development in South Africa over the last two decades. His contribution through active research, mentoring of students and active participation has resulted in massive and significant conservation efforts being realised in the Cape Floristic Region, the Succulent Karoo and the Sub-Tropical Thicket Biomes. A number of important conservation initiatives currently being implemented across the country, some under the C.A.P.E. banner, have all been positively influenced by Prof. Cowling's considerable energy and passion for conserving this country's unique natural heritage. He has provided exceptional research leadership and mentorship, and exceptional personal effort beyond the call of duty to promote the conservation of the Cape Floristic Region. He has influenced a whole generation of scientists, and his innovative work in the field of conservation planning has provided the foundation for the C.A.P.E. strategy and implementation programme.







The Cape Floristic Region is characterized by a huge variety of habitat types across the regional landscape.



Vast areas of the lowlands are stripped of all biodiversity and ecosystem processes are affected.

With less than 5% of land in the lowlands enjoying any conservation status whatsoever, some important terrestrial habitats have been reduced to less than 10% of their original extent. The CFR therefore has the dubious honour of being recognised as one of the world's 'hottest' biodiversity hotspots. Unless a carefully targeted long-term intervention is undertaken there are likely to be severe negative consequences for both biodiversity and the people whose livelihoods depend on biodiversity.

#### Social and economic realities

The CFR spans the provinces of the Western Cape and Eastern Cape and has an estimated population of approximately 5.2 million people. Some 20–30% of the population resides in rural areas, which harbour the greatest biodiversity,

although many urban communities also reside in or adjacent to biologically significant areas. The population is dispersed across a wide area and is ethnically, linguistically and culturally diverse. There are huge disparities in people's socio-economic conditions, skills and access to resources, with sizable pockets of poverty in both rural and urban areas. Many poorer rural communities are dependent upon wild resources, particularly marine resources and medicinal plants for subsistence purposes and income generation. There is a range of land tenure arrangements, including large, medium and small free holdings, state-owned land under different management arrangements, and a small proportion of communal land. As much of the biological heritage rests on land outside the public land estate, it is necessary to develop tailor-made models that encourage conservation on private and communal lands. These models must accommodate small, medium and large landholders from diverse communities.

South Africa confronts numerous pressing social and economic problems, most notably widespread poverty and socio-economic inequities. The country is moving to address its obligations under



Rapid land settlement can result in risks for people and nature.



Insensitive use of fragile landscapes continues unless controlled by effective management.



the CBD within a larger framework for sustainable development. This framework seeks to address the root causes of biodiversity loss, and therefore focuses on ameliorating poverty, promoting the development of sustainable livelihoods, and securing the participation of all sectors of society in implementation. This strategy is consistent with the plan of action agreed on by world leaders at the 2002 World Summit on Sustainable Development (WSSD) in Johannesburg.

### 1.3 What is the C.A.P.E. programme?

Starting with a strategy, C.A.P.E., which stands for Cape Action for People and the Environment, is South Africa's innovative programme to conserve the CFR. It is based on the Cape Action Plan for the Environment or C.A.P.E. 2000 Strategy, a systematic conservation plan and strategy prepared with the assistance of the GEF through the World Bank, and adopted by the South African government. The strategy analysed the state of conservation of the region's globally significant biodiversity and the factors that threaten it, and identified interventions that would address the key constraints and opportunities for achieving both conservation and sustainable economic development.



The C.A.P.E. Biodiversity Strategy and Action Plan was adopted by government at the C.A.P.E. Conference in September 2000.

The C.A.P.E. 2000 Strategy realised that:

- i. conservation efforts in the past had been largely successful in achieving the representation of mountain ecosystems in the system of protected areas, but that the linkages necessary for maintaining ecosystem processes from mountains to lowlands were weak;
- ii. lowland ecosystems were poorly conserved and highly threatened;
- iii. fragmented institutional frameworks for biodiversity conservation were a key factor impeding effective conservation management in the CFR;
- iv. the people who use and benefit from the CFR's resources must become more involved in the management and decision-making regarding these resources and be fully aware of their value and the risk of their loss.

During the preparation of the strategy, it was clear that a piece-meal approach to conservation would not work, and that a large-scale "ecosystem approach" would be required to meet conservation goals.

## What is the ecosystem approach?

*The application of an ecosystem approach to conservation has resulted in the extensive development of bioregional or ecoregional conservation programmes around the world. Examples of these are the biodiversity hotspots recognised by Conservation International, the Global 200 Ecoregions identified by WWF and the extensive development of transboundary protected areas worldwide. This recognises that ecosystems are not bound by human definitions, laws and management regimes. It also acknowledges that factors impacting on ecosystems can operate at extremely large scale, e.g. the effects of climate change and habitat transformation. It emphasises that to achieve effective conservation requires linkages between the different elements of the landscape such as mountains, lowlands, wetlands, rivers and oceans. More than ever before, it underlines that conservation depends on working with institutions, markets, development opportunities, people and political systems in the region.*



A summary of the C.A.P.E. 2000 Strategy	
Themes	Strategic Components
1. Conserving biodiversity in priority areas.	<ul style="list-style-type: none"> <li>□ Strengthening on- and off-reserve conservation</li> <li>□ Supporting bioregional planning</li> </ul>
2. Using resources sustainably.	<ul style="list-style-type: none"> <li>□ Conserving biodiversity and natural resources in catchments</li> <li>□ Improving the sustainability of harvesting</li> <li>□ Promoting sustainable nature-based tourism</li> </ul>
3. Strengthening institutions and governance.	<ul style="list-style-type: none"> <li>□ Strengthening institutions</li> <li>□ Enhancing co-operative governance</li> <li>□ Promoting community involvement</li> </ul>

### Mobilising support for C.A.P.E.

Key institutional drivers during the development of the C.A.P.E. Strategy and action plan were WWF-SA and the University of Cape Town's (UCT) Institute for Plant Conservation (IPC). This partnership brought together WWF's international programme for priority global ecoregions (the Global 200 Ecoregions), and the researchers at the IPC who were rapidly developing expertise in systematic conservation planning. WWF-SA was the only WWF national organisation with direct responsibility for the Fynbos Ecoregion. Under the leadership of Ian Macdonald, it established the Table Mountain Fund (TMF) to act as a funding facility for its ongoing work (Chapter 7). Initially the TMF focused its attention on the spectacular diversity of the Cape Peninsula mountain chain. It launched a successful appeal to local donors, initiated an urgent process to address the inadequacies of the management of the mountain chain, and provided the necessary critical mass to convince international donors of the merits of further support for fynbos conservation.



It was agreed that the first GEF grant to South Africa would address three priorities within the CFR:

- support the development of the Cape Peninsula National Park (now the Table Mountain National Park);
- increase capital investment in the TMF and extend its applicability to the whole of the CFR;
- develop a strategy to determine conservation priorities and an action plan to address the most important issues facing the CFR.

This latter component resulted in a process to develop the Cape Action Plan for the Environment, also known as the C.A.P.E. Strategy. It enabled a complete appraisal of the biodiversity priorities of the Fynbos Ecoregion, as well as the legal, institutional, social and economic conditions in the region that were contributing to the ongoing loss of biodiversity. Its main purpose, however, was to determine the case for an intervention that would in the medium term arrest the decline of globally significant biodiversity. The strategy would establish a programme to sustain appropriate long-term management and use of resources that would accord with national and international priorities.

WWF-SA appointed Amanda Younge to co-ordinate the preparation of the C.A.P.E. Strategy, the IPC under Richard Cowling to develop the systematic conservation plan, and the CSIR to undertake the legal, institutional, social and economic studies, and to integrate these with the outcomes of the conservation planning process. A large number of spe-

PROFILE

### Ian Macdonald

As CEO of WWF-SA, Ian Macdonald, was instrumental in calling attention to the need to conserve the Cape Floristic Region, and it was under the guidance of WWF-SA that the C.A.P.E. Strategy was prepared. He is seen here signing the C.A.P.E. Memorandum of Understanding.



cialists were involved with the analysis and preparation of the strategy, supported by an extensive public participation programme and guided by a Steering Committee and Technical Working Group. The names of all of those involved in the technical guidance of the C.A.P.E. Strategy are listed in Appendix 1.

## 1.4 The Cape Action Plan for the Environment

One of the most important outputs of the strategy development phase of C.A.P.E. was the agreement of a goal by all relevant governmental and non-governmental stakeholders, namely that:

“the natural environment of the CFR and adjacent marine environment will be effectively conserved, restored wherever appropriate and will deliver significant benefits to the people in a way that is embraced by local communities, endorsed by government and recognised internationally”.

The plan included not only targets for in situ conservation of the region’s biodiversity, but also a series of broad programme activities which would be undertaken over a 20-year period to address the threats and institutional weaknesses. A strength of the plan was that it recognised that many significant efforts were being undertaken by a range of organisations throughout the region and that, with co-ordination and co-operation, these could be aligned and give effect to the strategy. The manner in which co-operation was

achieved and co-ordination effected is described more fully in Chapters 7 and 8.

The C.A.P.E. 2000 Conference adopted the C.A.P.E. Strategy with acclaim in September 2000, and interim arrangements for implementation were convened by WWF-SA and the CSIR.

Once it became apparent that co-ordination for implementation was necessary, WWF-SA secured the appointment of Trevor Sandwith as C.A.P.E. Co-ordinator, with office facilities provided by the National Botanical Institute at Kirstenbosch and transport provided by the Mazda Wildlife Fund. During the three-year period from 2001–2004, activities consistent with the C.A.P.E. Strategy were accelerated by the partners, employing project and funding resources supported by the TMF, Green Trust and in particular the Critical Ecosystem Partnership Fund (CEPF). A rapid scaling up of the level of programme implementation was supported by the steady growth of the C.A.P.E. Co-ordination Unit (CCU) (Chapters 7 & 8), the signature of a Memorandum of Understanding (MoU) among the main implementing agencies, and a successful approach to the GEF for funding.

In 2002, the GEF provided a preparatory grant that resulted in the closer definition of the activities to be supported by the GEF, initially described in a three-phase 20-year programme. By 1 June 2004, all of the preparatory and approval steps had been completed and a five-year Phase 1 project had been negotiated. Its goal,



One of the most serious threats is the impact of invasive alien plants which are now being intensively managed.



Effective fire management is crucial for ecosystem functioning and human security.



### Amanda Younge

Amanda Younge took responsibility for the development of the C.A.P.E. Strategy. As a professional town and regional planner, she was uniquely qualified to do this, understanding that space is the most powerful integrator of people and ideas. Amanda’s experience in the trade union movement, in political activism and in grappling with the highly complex issues of town planning in the City of Cape Town gave her the experience and the vision to pull together the C.A.P.E. Strategy. She realised that a plan that brought together the interests of the powerful and disempowered stakeholders that make up the population of the CFR would become the most important instrument in aligning these interests. Having cut her teeth on the plan, Amanda has continued to be a pillar of strength, ideas and energy in support of the programme, and has expanded her activities to include work for WWF’s Global Ecoregions Programme and the

World Bank’s preparation and review of projects. She has nevertheless invested time and energy in helping community groups get involved in C.A.P.E. and has supported SKEP and STEP bioregional programmes with strategic planning and project development. For a long time Amanda was C.A.P.E. and her influence, drive and passion will always underpin the programme.





## What is "mainstreaming"?

*The Convention on Biological Diversity commits countries to putting biodiversity in the mainstream of all sectoral policies, plans and programmes. In effect this means that the importance of the diversity of genes, species and ecosystems would underpin all decisions regarding sustainable development. At a GEF workshop held in the Cape in 2005, it was defined as "to internalise the goals of biodiversity conservation and the sustainable use of biological resources into economic sectors and development models, policies and programmes and therefore into all aspects of human behaviour".*

consistent with the C.A.P.E. Strategy was that:

- "the implementing agencies, with support from the GEF and the CEPF, will accelerate the implementation of the C.A.P.E. 2000 Strategy by enhancing the policy and institutional framework for conservation in the CFR and by undertaking carefully targeted conservation demonstrations in selected biophysical, socio-economic and institutional contexts, especially involving civil society partners."

The planned activities would ensure that:

- Capable institutions co-operate to develop a foundation for mainstreaming biodiversity in the CFR into economic activities; and that
- Conservation of the CFR is enhanced through piloting and adapting models for sustainable, effective management.

The programme has six interrelated components that together will meet these objectives. On the one hand, to ensure that capable institutions co-operate to develop a foundation for mainstreaming biodiversity in the CFR into economic activities, there is a need for enabling activities including:

- i. institutional strengthening;
- ii. conservation education; and
- iii. programme co-ordination, management and monitoring.

Enhancing the conservation of the CFR will be achieved, on the other hand, through piloting and adapting models for sustainable, effective management in certain priority sites, by:

- iv. unleashing the socio-economic potential of priority protected areas;
- v. establishing the foundations of a biodiversity economy and ensuring conservation stewardship in priority areas; and
- vi. integrating biodiversity concerns into watershed management.

The six components of the programme are described more fully below. For communication purposes, the programme partners depicted the programme as a simple graphic, shown opposite. Essentially the programme aims to help build an economy based on biodiversity by unleashing the potential of protected areas and facilitating conservation stewardship, while seeking to mainstream biodiversity in the production landscape.

## 1.5 The components of the C.A.P.E. Programme

No description of the C.A.P.E. Programme can fully take into account the diversity of efforts being undertaken by C.A.P.E. Partners. The following short descriptions should be regarded as "hangers" onto which the various projects, activities and investments can be hung, some of which are described in the various chapters making up this book. The full extent of the funded programme is summarised on page 30.

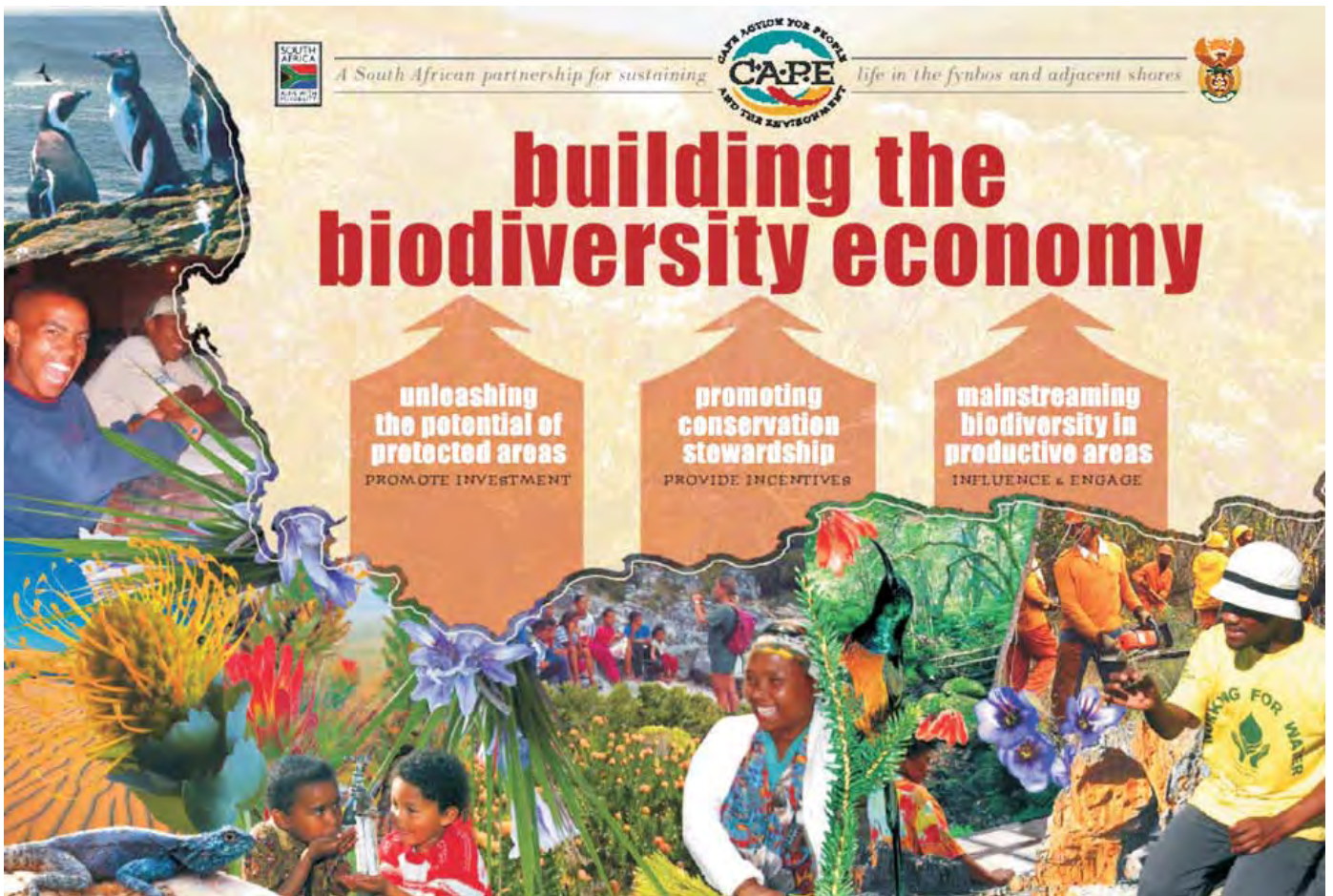
### (i) Strengthening the institutional framework for coordinated conservation management in the CFR

C.A.P.E. 2000 proposed a suite of institutional strengthening mechanisms to foster a better co-ordinated and integrated approach to conservation management and decision-making in the CFR. It proposed the co-ordination of C.A.P.E. Partners, capacity-building for organisations and individuals, the development of an integrated information management strategy, collaborative and co-management arrangements to improve efficiency and co-ordinated performance monitoring and review.

In the Baviaanskloof the fynbos and subtropical thicket interface with each other.







Despite the complexities of the C.A.P.E. Programme, its message is clear: recognise that biodiversity underpins the economy of the region, and the livelihoods of its people.

These activities are being scaled up to enhance the strategic alignment of the C.A.P.E. Partners and increase their capacity to undertake integrated bioregional conservation management in the CFR supported by comprehensive performance management and information management. In particular, efforts have been directed at building the capacity of new and emergent conservation managers through a combination of tertiary education support, short courses and mentored internships.

Planned activities include enhancing inter-agency co-operation and strategic planning for conservation management in the CFR. A priority task is to determine the financial needs of implementing agencies for all conservation management activities, and to identify and select appropriate funding mechanisms, targets and strategies for implementing agencies.

This will involve assessing the contribution of protected area-based tourism to the sustainability of conservation management programmes. As nature-based tourism has the ability to sustain

conservation management, there will be an emphasis on developing appropriate forms of tourism use that enhance the value of fragile environments such as mountains, where indiscriminate actions can have enduring consequences. A key emphasis will be the development of opportunities to create nature-based entrepreneurial opportunities and employment.

### (ii) Conservation education

A conservation programme at ecoregional scale is faced with significant challenges regarding participation. The stakeholder group is vast, dispersed across a wide area and characterised by diversity in terms of language, culture, history, and relationship to the land and sea. The population displays significant disparities, including socio-economic and educational, and in terms of tenure, skills and access to resources.

While government agencies and large, regional organisations can participate in conservation programmes taking place at regional scale, it is difficult for







*Pam Yako, who comes from the eastern part of the Cape Floristic Region in Grahamstown, took over as Director-General of DEAT in 2006, and has promoted the preparation of the National Biodiversity Strategy and Action Plan (NBSAP) as well as acting as Chair of the C.A.P.E. Co-ordination Committee.*



local stakeholder groups to do so, being more suited to participating in local projects. To prevent local groups being marginalised from the broad-scale policy and strategy aspects of the programme, C.A.P.E. is undertaking a suite of sub-regional and local awareness-raising, communication and participation activities linked to the major spatial conservation initiatives.

Over the past 20 years, a number of resources have accumulated in the region to provide environmental education, including practitioners and tertiary courses. New legislative and policy provisions require community well-being to be promoted through environmental education and the raising of environmental awareness. A shift to outcomes-based education in schools has led to the design of a new curriculum which includes an emphasis on environmental education.

Environmental education activities in the CFR, however, have remained largely unco-ordinated, poorly resourced and at times poorly articulated. The C.A.P.E. Programme has established a conservation education focal point in the CFR for facilitating co-ordinated programmes at individual project and site levels; developing and disseminating materials that focus on CFR biodiversity and C.A.P.E. Programme components to support curriculum and educators; and training environmental educators and teachers to use the materials developed. In particular, the emphasis is being placed on active participation and learning, by engaging communities and other stakeholders in key environmental issues that affect their own lives.

### (iii) Programme co-ordination, management and monitoring

The number, size and complexity of the C.A.P.E. activities and implementing agencies demand effective co-ordination, management and monitoring. The CCU was established in 2001 at NBI, and consists of a Co-ordinator, Programme Developer, Project Developer, Financial Manager and administrative support.

While the CCU's main responsibility is to enable the partners to collaborate to achieve major parts of the C.A.P.E. Strategy, it has had to develop a project management system to enable the complex suite of projects being implemented within the programme to be efficiently managed. C.A.P.E. project teams require a user-friendly means of reporting on project progress according to predefined indicators and deliverables; and decision-makers and C.A.P.E. Programme management staff must be able to monitor project progress and attainment of conservation objectives.

A further function is to communicate with programme partners and the general public about the activities being undertaken in the programme and the lessons that are being learned through implementation. To address this need, publications such as this one have been prepared and there is an ongoing programme of brochure and newsletter production, website development, media releases, presentations and displays. It is hoped to scale these up to become an enduring learning network involving all implementers.

#### (iv) Unleashing the potential of protected areas

The current protected area system is inadequate to achieve global conservation targets for biodiversity in the CFR. In the C.A.P.E. Programme, efforts are being supported to establish several large protected area corridors that, together with a representative sample of smaller protected areas widely distributed across the landscape, will achieve conservation targets in the CFR, and also enable adaptive learning about protected area establishment in different biophysical, geographical and institutional contexts.

Currently the Table Mountain National Park and the Agulhas Biodiversity Initiative (ABI) operate in coastal mountain fynbos and lowland dryland habitats respectively. The Baviaanskloof focuses on the major transition zone in the eastern part of the CFR, including grassy fynbos, mountain fynbos, thicket biome and coastal lowland fynbos, the Garden Route and Gouritz Initiatives address the highly impacted south coast renosterveld and afromontane habitats, and the Cederberg represents largely intact inland mountain fynbos associated with northwestern strandveld. The C.A.P.E. Programme is investing in efforts in each of these areas to consolidate land-holdings and to promote efficient and effective protected area management.

Ensuring that there are adequate finances for effective protected area management remains a priority. There is an opportunity to use the globally significant key attractions of the CFR to develop new and diversified tourism products. While government and private sector investors are prepared to contribute to the development of tourism products and supporting infrastructure, the C.A.P.E. Programme will work to ensure that this results in responsible tourism, which minimises negative impacts and maximises the benefits.

Large protected areas provide the most immediate source of direct benefits to communities who live in and around them. The planning and development of large protected areas provides an ideal means to involve/include local communities in the design and expansion of these areas, and in the business and employment opportunities that result. Piloting participatory approaches to protected area establishment is one of the ways in which the C.A.P.E. Programme is build-

ing the capacity of both authorities and communities to play significant roles in ensuring an equitable flow of benefits.

#### (v) Conservation stewardship and laying the foundations of a biodiversity economy

Most remaining conservation-worthy land consists of small fragments, which continue to be threatened by land transformation, poor land management and invasive alien species. Increasing the size of large protected areas is essential for conserving landscape level processes, but will not capture these highly dispersed and fragmented habitats. A representative sample of smaller protected areas, widely distributed throughout the CFR is required to maintain this pattern into the future. Considerable additional analysis at a finer scale is being conducted to ensure the design of an adequate system of protected areas in the lowlands, and to influence the use of other land-use planning processes.

Both government agencies and municipalities play an important role in land use decision-making in South Africa. Municipalities have undergone successive waves of restructuring and boundary demarcation over the past decade, in the process of creating unified non-racial local government structures. The devolution of responsibility to the local level requires the production of new Integrated Development Plans (IDP). A key aspect of an IDP is the Spatial Development Framework (SDF), which guides land use decision-making in the municipal area. The production of these plans is the most important strategic opportunity available to the C.A.P.E. Programme. Efforts are being accelerated to incorporate biodiversity data and conservation planning outputs into municipal land use planning and decision-making, based on early pilot projects.

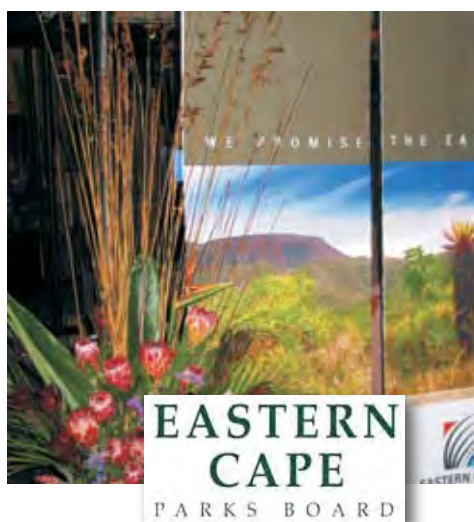
The development of a representative protected area system in the CFR requires extensive support by private landowners and sectors such as agriculture in priority areas. With support from C.A.P.E., efforts are being made to ensure that extension staff from agriculture and conservation agencies are effectively co-ordinated at district level, and assisted to deliver an effective service that meets both stewardship and area-wide planning goals. In the priority conservation corridors, a process has been initiated to identify and quan-



*Crispian (Chippy) Oliver took over as Director-General of DEAT at the time that the C.A.P.E. Strategy was finalised. As GEF Focal Point for South Africa, he was instrumental in providing the endorsement of Government for the C.A.P.E. Programme, and in ensuring that appropriate legal strengthening for biodiversity and protected area management was achieved in South Africa in support of the Strategy (See Chapter 7).*







tify the amount of land that could switch from intensive agriculture to ecotourism or sustainable harvesting of CFR products.

The mechanism of developing payments for ecological services has considerable potential in the CFR and has already been implemented under the Working for Water programme which involves the removal of alien plants and the provision of employment and other social benefits while increasing the quantity and quality of water flows.

C.A.P.E. will engage with this problem by spatially identifying the different uses of the land and

the hydrological relationships between mountains and lowlands. By identifying the beneficiaries of hydrological flows and other ecological services, it will investigate the possibility of payments for such services.

### (vi) Integrating biodiversity concerns into watershed management

Recognising that water is a limiting factor in the nation's development, the government has taken steps to improve water resource management, including the establishment of new Catchment Management Agencies (CMAs) for five designated Water Management Areas (WMAs) in the CFR and the setting aside of an "Ecological Reserve" of water for ecosystem maintenance in all aquatic systems. There is, however, no guarantee that these initiatives will by themselves advance biodiversity conservation objectives and therefore C.A.P.E. is working towards the mainstreaming of biodiversity priorities into the functions of the CMAs.

The threat analysis carried out during the C.A.P.E. planning process identified several significant shortcomings in the current management of watersheds and water resources in the CFR, including the perpetual threat of dams on key rivers in mountainous areas to meet the burgeoning demand.

In addition to the institutional and market-based mechanisms for catchment management and payments for ecological services, C.A.P.E. is undertaking interventions to:

- i. increase the effectiveness of the "Ecological Reserve" measure in water resource management in key water-

sheds, and incorporate biodiversity concerns into the new fire management systems being implemented across the CFR;

- ii. create an alien invasive species management strategy and business plan for the entire CFR and pilot the control of invasive alien fish in certain priority freshwater ecosystems; and
- iii. design and test a CFR estuarine management program, based on relevant case studies.

## 1.6 The purpose and structure of this book

The C.A.P.E. Partners are actively involved in implementing every component of the programme described above. Three major donor portfolios support the many projects that give effect to the C.A.P.E. Strategy:

- the CEPF portfolio of projects;
- the C.A.P.E. Agulhas Biodiversity Initiative;
- the C.A.P.E. Biodiversity Conservation and Sustainable Development Project

These efforts are supplemented by an array of projects and volunteer contributions supported by the Table Mountain Fund, the Green Trust, the Mazda Wildlife Fund, the Development Bank of South Africa and other donors.

This book is a tribute to the many "fyn-mense" whose involvement as C.A.P.E. Partners is giving life to every component of the C.A.P.E. Programme (Appendix 1). The projects reported here are as diverse as the landscapes and life forms of the region: large and small, state-led and private, involving children and political leaders, stretching from Nieuwoudtville to the Nelson Mandela Metro, focusing on fish, fowl or flowers ...

The stories, although many, represent only a small sample of the multitude of activities that committed and concerned members of the C.A.P.E. community are involved in. It has proven impossible to either know about or give sufficient credit to every contribution that has been made. In an attempt to record and acknowledge those organisations and individuals who are making significant contributions, the C.A.P.E. Implementation Committee is continuously updating its database of C.A.P.E. contacts. If we don't know about you yet, please contact us! While every



effort has been made to report accurately and to recognise every contribution, it is clear that there will be gaps and inaccuracies. These are not intentional, and the reader is encouraged to help address any deficiencies by contacting the C.A.P.E. Co-ordination Unit either directly at [info@capeaction.org.za](mailto:info@capeaction.org.za) or by visiting the website [www.capeaction.org.za](http://www.capeaction.org.za) and using the interactive communication tools to correct, improve or provide missing information.

We are also acutely aware that we have only managed to capture a snapshot in time of a host of very dynamic projects. No sooner has the ink dried on the page but the story is out of date. It is for this reason that the C.A.P.E. Co-ordination Unit also intends publishing these stories in electronic format on the C.A.P.E. website, making it possible to update the information regularly.

This book has been designed to report on progress with the various components of

the C.A.P.E. Strategy, with chapters covering the major management objectives and enabling activities. However, as with most integrated programmes, many of the stories could have been told in other sections of the book. To address this, we have tried wherever possible to cross-reference stories. We believe that the high degree of cross-referencing illustrates in a very practical way that C.A.P.E. is indeed managing to achieve a more co-ordinated and integrated response to the challenges facing biodiversity conservation and sustainable development in the CFR.

In addition to sharing stories of "Action for People and Environment" in the CFR, another purpose of this book has been to draw out lessons that have been learned in the course of programme implementation. All contributors were asked to share their "lessons learned" and these have been recorded in an attempt to build up an archive of perspectives, knowledge and learning that will mark the rites of passage of this important programme.



## A note on privacy



*We learn much from sharing our stories, and hope that the ideas and inspiration recorded here will encourage further networking and sharing among C.A.P.E. Partners. However, we are acutely aware of our responsibility to protect the privacy of contributors and not to publish e-mail addresses, which may then be picked up by the sultans of spam!*

*We have therefore taken the decision not to publish people's e-mail addresses. Website addresses are provided and, should you wish to contact a particular individual, you are encouraged to contact the C.A.P.E. Coordination Unit ([info@capeaction.org.za](mailto:info@capeaction.org.za)) and we will pass your request on to the person in question, who will have the option to respond.*



**B**y the year 2020, the natural environment and biodiversity of the CFR will be effectively conserved, restored wherever appropriate, and will deliver benefits to the people of the region in a way that is embraced by local communities, endorsed by government and recognised internationally.

<b>Strengthen institutions and governance</b>
*strengthen institutions*
*promote community involvement*
*enhance co-operative governance*

<b>Conserve biodiversity in priority areas</b>
*protected areas*
*conservation stewardship*

<b>Promote sustainable use of resources</b>
*catchment management*
*sustainable use of natural resources*
*responsible tourism

<b>1. Institutional strengthening</b>
1.1 Legal and institutional strengthening (SANBI)
1.2 Capacity Building (SANBI)
1.3 Financial sustainability (SANBI)
1.4 Information management and knowledge

<b>4. Protected areas: Baviaanskloof (WF)</b>
4.1 Baviaanskloof planning and consolidation
4.1 Baviaanskloof management effectiveness
4.1 Baviaanskloof stewardship
4.1 Baviaanskloof responsible tourism
4.1 Baviaanskloof business plan and sustainability

<b>5. Biodiversity economy</b>
5.1 Fine-scale planning
5.2 Land-use planning
5.3 Conservation stewardship
5.4 Foundations of the biodiversity economy

<b>2. Conservation education (Rhodes Univ)</b>
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<b>4. Protected areas: Cederberg (CapeNature)</b>
4.1 Cederberg planning and consolidation
4.1 Cederberg management effectiveness
4.1 Cederberg stewardship
4.1 Cederberg responsible tourism
4.1 Cederberg business plan and sustainability

<b>6. Watershed management</b>
6.1.1 Ecological reserve determination
6.1.2 Fire management
6.2.1 Invasive alien strategy
6.2.2 IAS Centres of excellence
6.3 Estuarine PAs and estuarine management

<b>3. Co-ordination and monitoring (SANBI, CCU)</b>
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<b>4. Protected areas: Garden Route (SANParks)</b>
4.1 Garden Route planning and consolidation
4.1 Garden Route management effectiveness
4.1 Garden Route stewardship
4.1 Garden Route responsible tourism
4.1 Garden Route business plan and sustainability
4.1 Garden Route Marine Protected Areas

<b>7. AGULHAS BIODIVERSITY INITIATIVE</b>
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<b>4. Protected areas: Kogelberg (CapeNature)</b>
4.1 Kogelberg responsible tourism
4.1 Kogelberg business plan and sustainability
4.1 Kogelberg Coastal Co-management

7.1 Conservation management
7.2 Sustainable harvesting regime
7.3 Responsible tourism
7.4 Awareness raising

SD 1: Institutional strengthening
SD 4: CEPF Capacity-Building Programme

CEPF SD 1: Conservation management in corridors
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CEPF SD2: Involve private sector in conservation activities
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**unleashing the potential**  
of protected areas



## The C.A.P.E. 2000 Strategy

*identified the need for an “ecosystem approach” to conservation in the Cape Floristic Region (CFR), which would conserve both biodiversity itself and the ecological and evolutionary processes that sustain biodiversity across this exceptionally diverse region.*

*This Chapter tells the story of how C.A.P.E. Partners are working together to consolidate and expand the network of protected areas across the CFR. Conservation priorities include the two largest urban areas in the region, namely the City of Cape Town and the Nelson Mandela Metro; the Kogelberg and Cape West Coast Biosphere Reserves; and the Agulhas Plain, Baviaanskloof, Cederberg, Garden Route and Gouritz regions. What makes the C.A.P.E. process different from earlier nature conservation initiatives is that these conservation corridor initiatives are not attempting to establish exclusive protected areas, but rather to create “living landscapes” that integrate formally protected state land, private property and communal land.*

*The principles of sustainable development are central to the consolidation and expansion of these protected areas. Biodiversity conservation must involve and benefit people in tangible ways, and these stories demonstrate that protected areas are important focal points for job creation and poverty alleviation, education and capacity building, tourism development and recreation.*

## CHAPTER

# 2

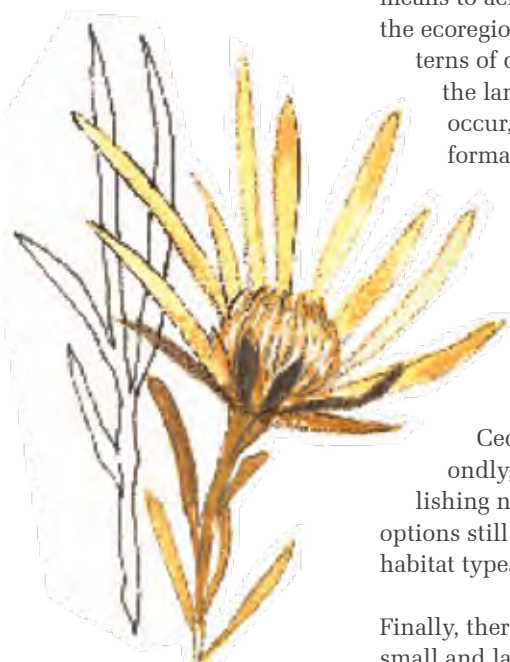
## Unleashing the potential of protected areas

### 2.1 What's the issue?

**T**he C.A.P.E. Strategy identified that setting aside protected areas in the CFR was an essential means to achieve conservation targets for the ecoregion. Bearing in mind the patterns of diversity across the region, the landscape-level processes that occur, and the high levels of transformation of lowland habitats, the conservation plan indicates a mixture of three options for establishing protected areas. Firstly there are options for developing large landscape-scale corridors building on existing large protected areas, e.g. the Cederberg Wilderness Area. Secondly, there are options for establishing new protected areas where options still exist to represent important habitat types.

Finally, there is a need to conserve the small and large fragments of lowland ecosystems, working in partnership with landowners and communities.

The approach suggested by the C.A.P.E. Strategy diverges strongly from that associated with South Africa's past, where it is often quoted that the majority of South Africans did not have access to protected areas. So why set aside more land, when there remains a sense of past injustice and exclusion? The answer has two main aspects. Firstly, if the conservation goals are to be achieved, then this will never be solely the responsibility of the State, and new ways need to be found to involve people in establishing and managing protected areas. If you like, this is a process of widening responsibility for biodiversity conservation, but also giving away some of the authority to mandated agencies of civil society, whether these are communities or the private sector. In reality, co-management arrangements for protected area establishment and management are likely to emerge. Secondly, protected areas in the region have not been very accessible to people, let alone those who may have felt excluded from using and enjoying them. There is a need to unleash the social potential of protected areas and to reconcile communities with them and grow and deepen the ways in





Urban sprawl in the City of Cape Town has left only tiny fragments of biodiversity on the Cape Flats.

which, when sustainably used, they can benefit the widest spectrum of society.

### (i) Expanding protected areas

Dedicated protected areas represent the best opportunity to protect biodiversity. Efforts are being made to create and expand protected areas in priority regions where unique (endemic) or threatened species survive. One of the most inspirational stories of consolidating and expanding a protected area in the CFR is the creation of the Table Mountain National Park. Another flagship project in the region is the establishment of the Agulhas National Park in the lowlands of the Agulhas Plain. These protected areas are benefiting not only biodiversity but also many of the communities surrounding them.

### (ii) Developing biodiversity corridors

We have seen that it is difficult to conserve biodiversity and sustain ecological processes in small, fragmented natural areas. But we also know that in most cases it is too late to set aside large, pristine areas for conservation. Even where tracts of undeveloped land remain, diminishing budgets leave conservation agencies in a position where they can no longer afford to establish and manage additional protected areas.

If the existing network of protected natural areas is not sufficient to conserve the natural assets of the CFR, then the onus is on all of us who live and work in the region to play a role in managing the landscape as a whole sustainably. We need to create viable networks comprising formally conserved natural areas linked by sustainably managed productive areas. These networks of lived-in living landscapes are known as biodiversity corridors. As a result of large-scale habitat transformation, limited opportunities



Spectacular renosterveld bulb species remain in roadside verges.

remain to create these linkages in the CFR, but conservation agencies and landowners are making a start in regions such as the Cederberg, Baviaanskloof, Garden Route and Gouritz.

### (iii) Managing biodiversity in the production landscape

In addition to setting aside protected areas and biodiversity, there is a need to ensure that biodiversity in the wider production landscape is protected. In some cases, stewardship on private and communal land may result in better strategies for protection, but it is also the way in which agricultural, commercial and urban development takes place that ensures that biodiversity in the wider landscape persists over time. Small, isolated habitat fragments may have limited biodiversity value; but when viewed as part of a corridor connecting larger conservation areas, even indigenous gardens at home and school can contribute to regional-scale conservation.

To read more about how community groups, private landowners and industry are helping to create biodiversity corridors, see Chapter 4: Enabling Conservation Stewardship and Chapter 5: Building the Biodiversity Economy.

## 2.2 Consolidating the Table Mountain National Park

### (i) Table Mountain National Park — establishing a park for all forever

It is appropriate that our first case story should focus on the Table Mountain National Park (TMNP). Not only is Hoerikwaggo—the mountain in the sea—an icon of the CFR, but the creation of this National Park was the first bold step in launching the C.A.P.E. Programme. From its inception the TMNP



Wheatlands with fragments of renosterveld.



*Erica verticillata* was re-established after going extinct in the wild.



The alien invasive plant *Acacia saligna* resprouting after fire.







Table Mountain is one of a few World Heritage properties completely surrounded by a city.

has piloted new approaches to conservation and heritage management and provided lessons for application across the region.

In August 1998, the Global Environmental Facility (GEF) granted \$12.3 million through the World Bank for the Cape Peninsula Biodiversity Conservation Project. This grant:

- supported the establishment and consolidation of the TMNP
- part-capitalised the Table Mountain Fund (TMF), a major supporter of conservation in the CFR, which was established by WWF-SA, and
- funded the development of the C.A.P.E. Strategy.



Looking at a map of the TMNP today, it is easy to forget that, prior to its establishment in April 1998, the Cape Peninsula Protected Natural Environment (CPPNE) was made up of a patchy, unconsolidated assortment of conservation areas managed by 14 different authorities. Starting with the proclamation of 14 000 hectares in 1998, the Park has grown steadily and now comprises 24 000 ha of the 29 000 ha of the CPPNE, plus 1 000 km<sup>2</sup> of Marine Protected Area.

### The first step: putting resources in place

Consolidating public and private conservation-worthy land in and around the CPPNE into the TMNP has been a complex and lengthy process that, seven years after the Park was proclaimed, is still not complete, with 5 000 ha outstanding. To undertake this task, the Park put the following resources in place: it established a land consolidation working group with its conservation partners, appointed a land negotiator and legal advisor, put in place a land consolidation strategy, and prepared a comprehensive data base of property information.

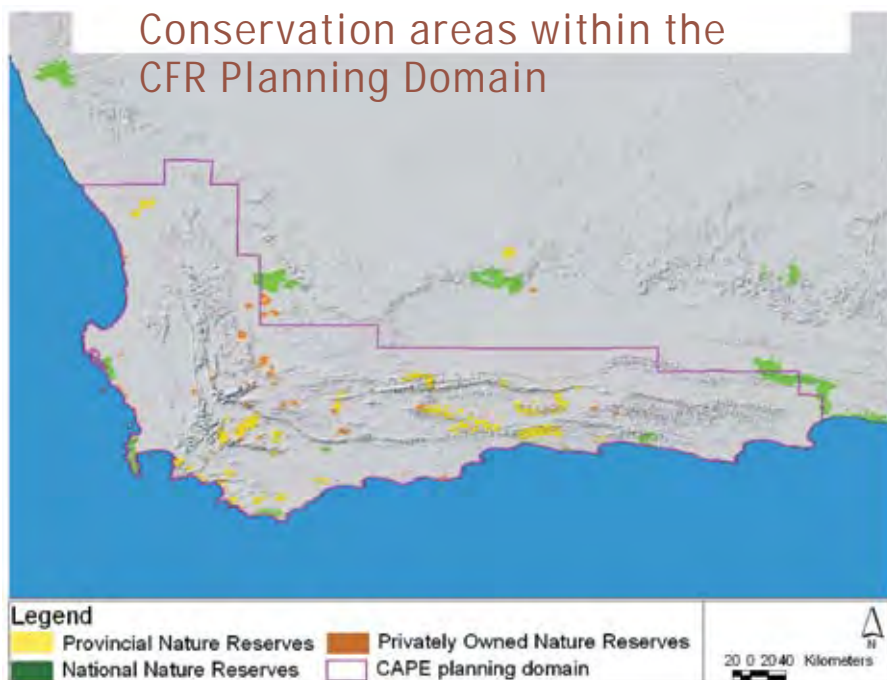
### Consolidating public land

The first stage of creating the Park entailed consolidating state and local authority land under South African National Parks' (SANParks) management. Agreements were signed with previous management agencies and SANParks were given the mandate to manage, consolidate and expand the Park. The City of Cape Town, which had previously managed the largest tracts of conservation land on the Peninsula, became an important funding partner, contributing annually to the TMNP's operational budget. Consolidating public land has been far from easy. The process is fraught with legal and cadastral complications and negotiations around infrastructure. Although most public land in the CPPNE has been declared as National Park, a few complicated properties are yet to be incorporated.

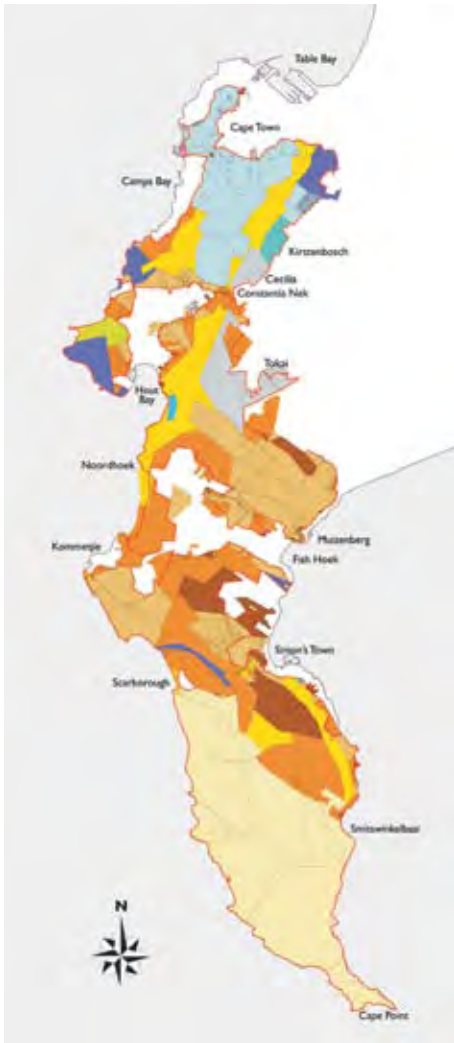
### Involving private landowners

The more challenging aspect of Park consolidation and expansion has been incorporating privately owned conservation-worthy land into the TMNP. Recognising the need to build good relationships with its neighbours, the Park's land consolidation strategy seeks to "conclude mutually beneficial partnerships with stakehold-

## Conservation areas within the CFR Planning Domain



## So, how did we get from THIS ...



The Cape Peninsula prior to 1998: A patchy, unconsolidated assortment of protected natural areas.

ers". Forceful tactics like expropriation have not been an option to date. But in an economic climate of sky-rocketing real estate prices, it has not been easy to convince landowners to sell at conservation-friendly prices or donate valuable land to the Park. So the Park's Private Land Consolidation Working Group developed a flexible set of land consolidation options, including purchase, donation, contracts and co-operation agreements, which can be tailored to the circumstances of individual landowners.

The Park also provides incentives to encourage landowners, who may not wish to sell or donate their land, to contract it into the Park. The land owner retains title to the land and, in exchange for agreeing to conserve their land in

## ... to THIS?



The Cape Peninsula In June 2005: Table Mountain National Park manages 24 000 ha of land plus nearly 1 000 km<sup>2</sup> marine environment as a consolidated unit.

the long term (99 years), the Park assists with alien clearing, fire management, erosion control and footpath maintenance. Landowners enjoy free entry to the Park and have access to SANParks specialist scientists. The Protected Areas Act and Property Rates Act also exempt the conservation-worthy portion of a property from rates if contracted into the National Park.

One of the factors that have made contracting land into the Park an increasingly popular option is the enforcement of legislation requiring landowners to remove invasive alien plants from their properties (Conservation of Agricultural Resources Act (Act No. 43 of 1983)). The devastating fires on the Cape Peninsula in January 2000 illustrated as never before



Private landowners who contract their land into the TMNP can benefit from free alien plant clearing, which protects property against wild fires.



**G**ary de Kock



**H**oward Langley



**P**aul Britton

*Howard Langley and Paul Britton between them contributed over years to the development and consolidation of the Table Mountain National Park, and to the establishment of reputable management programmes that provide lessons for protected areas throughout the CFR. At their retirement party, they are seen here with new Regional Cluster Manager Gary de Kock.*



## Land consolidation highlights

*Diverse processes have contributed to the consolidation and expansion of the Table Mountain National Park, as these highlights illustrate:*

- *Murdock Valley (27 ha on Swartkop Mountain above Simon's Town): donated to the Park by two private landowners.*
- *Sandy Bay Nek (200 ha of Sandy Bay): ABSA DEVCO donated the property to the Park, becoming the first corporation to receive WWF-SA's Gift to the Earth award.*
- *Redcliff Property & Kommetjie Estates (260 + 180 ha of the Noordhoek-Kommetjie wetlands): WWF-SA raised R23 million to purchase the key properties that links the northern and southern sections of the Park.*
- *Clovelly Zone C (37 ha on Peers Hill, Silvermine): In partnership with the Silvermine Valley Coalition, the Park negotiated the purchase of this important property at a "conservation friendly" price of R450 000.*
- *Grootkop (340 ha on the plateau above Misty Cliffs): contracted into the Park on a 99-year lease. This is remote mountain land comprising pristine fynbos.*



*F*ashioning a National Park out of an amalgam of private and public landholdings has been the "ultimate learning experience for all involved", says Mike Slayen, Manager of Conservation Planning for the Table Mountain National Park. "Working in an incredibly complex urban and natural environment, we have had to be creative and responsive to get results. I'm amazed by how far we've come."

the fire hazard posed by woody invasive alien plants. However, with average alien clearing costs at around R6 000 per hectare, many landowners are unable to meet their responsibilities. The TMNP can access public funding available for alien clearing through the Working for Water and Expanded Public Works programmes, so private properties contracted into the Park can be cleared at no cost to the land owner and under the supervision of experienced conservation managers.

### Strategy meets opportunity

Expanding and consolidating the TMNP has required both strategic planning and the ability to respond to opportunities. One of the most powerful opportunities available to Park management has been the support and commitment of members of the public. Stakeholders and volunteers have assisted in raising funds, negotiating with developers and contributing specialist expertise via the Private Land Consolidation Working Group. People have figuratively "lain in front of bulldozers" to help the Park achieve its vision.

With limited funds available for land acquisition, the Park had to make every cent count. The Working Group oversaw the preparation of a comprehensive property database and the development of a land consolidation strategy, both of which have enabled the Park to set priorities. But land negotiations are slow and the Park faced problems from neighbouring alien-infested private properties. So the Ukuvuka Campaign made funding

available to appoint an independent land negotiator to introduce landowners to the land consolidation programme, listen to their needs and concerns, develop formal proposals and negotiate agreements between the Park and private landowners. The time and skill invested in this process has borne fruit: today the Park is only 5 000 ha from its goal of 29 000 ha, and a hiker can now walk from "Tip to Top" of the TMNP through land managed by SANParks.

### A Representative Park Forum

The TMNP is close to the hearts of many Cape Town residents but due to the peculiarities of South Africa's history, it took a long time to establish a broadly representative Park Forum. The public participation process involved a series of workshops of the Park Forum Plenary, which involved representatives of about 100 organisations. This group drew up a Terms of Reference for the committee and identified portfolios. Both life skills and formal training were recognised as important selection criteria when deciding on portfolio representatives. The TMNP Forum Steering Committee will help Park management build support for biodiversity conservation, advise the Park on policy issues and create a link between the people of Cape Town and the Park. There are 17 portfolios, ranging from land consolidation and legal matters to environmental education and community benefits, marine issues, recreational users. Each portfolio has a working group and a permanent staff member linked to it. The portfolios were established according to the core functions of the Park.

### (ii) Protecting Marine Resources

There's more to the TMNP than the Peninsula mountain chain. In June 2004, after much research and public participation, the TMNP Marine Protected Area (TMNP MPA) was declared, adding 138 km of coastline and 1 000 km<sup>2</sup> of ocean to the area managed by the TMNP. Being the meeting place of the cold Benguela and warm Agulhas Currents, this area is tremendously rich in marine species; but people place almost unbearable pressure on the marine environment, and over-harvesting, pollution and coastal development are threatening the survival of species and the health of ecosystems.

The TMNP MPA stretches from Mouille Point to Muizenberg. In most areas, lim-



ited fishing and harvesting are allowed if you have the necessary permits, but there are six restricted areas (no-take zones) within the TMNP MPA where no fishing or harvesting of any kind is permitted. Declining fish stocks have had a devastating impact on fishing communities and career fishers, so in addition to the conservation imperative, there are compelling social and economic reasons why the stocks should be protected and given a chance to recover.

In order to garner support for marine conservation, the Park's Marine Team is building positive relationships with Marine and Coastal Management (MCM), fishing communities, the South African Police Services (SAPS), the South African Navy, recreational user groups and voluntary organisations. MCM funds a partnership with SANParks who run the TMNP MPA, with deliverables like the appointment of Marine Rangers to patrol the MPA, the checking of permits, advising the public and reporting illegal activities. A training course funded by WWF-SA and driven by Dr Deon Nel is being piloted by the University of Cape Town and Rhodes University to equip the TMNP MPA officials to carry out their responsibilities effectively. The TMNP has erected attractive information boards along the coast to inform the public about the TMNP MPA, restricted areas and fishing regulations.

Monitoring, public awareness, education and training are all essential strategies to conserve biodiversity in the TMNP MPA. However, for Marine Operations Manager Robin Adams, there is an additional urgent challenge, and that is dealing with the catastrophic impact of poaching on marine resources. Unscrupulous commercial and recreational fishers and criminal syndicates are stripping the MPA of marine life. Unrestrained by conscience, they are oblivious to logical arguments or emotional appeals to harvest sustainably.

With the support of the South African Navy, MCM, SAPS, the South African Revenue Service, the Courts and Public Prosecutors, the TMNP's Marine Team is stepping up patrols, making arrests, seizing vehicles and equipment and issuing fines. Having been entrusted with safeguarding the marine living resources of the TMNP MPA, the Park is using every means at its disposal to save threatened species from extinction.

## What have we learned?

- *Having a dedicated conservation authority (SANParks) mandated to manage the process;*
- *Working with partners—both individuals and organisations—and benefiting from their time, expertise and funding;*
- *Being guided by the Private Land Consolidation Working Group, which represents key partners: the City of Cape Town, the Park Forum, the TMF, WWF-SA and, until recently, the Ukuvuka Campaign;*
- *Having a clear but flexible strategy that informs prioritisation and fundraising;*
- *Having a comprehensive database of property information to inform the planning process;*
- *Employing an independent negotiator who can dedicate time and expertise to developing mutually beneficial agreements;*
- *Providing a suite of land consolidation options that enable negotiation;*
- *Taking a principled, pragmatic and targeted approach to land consolidation;*
- *Communicating and celebrating achievements in a way that acknowledges effort and honours partners.*

### (iii) Building Parks—building people

#### The wisest investment

In 2004 the Department of Environmental Affairs and Tourism contributed R35 million from its Expanded Public Works Programme (EPWP) to the TMNP. Now both the Park and more than 400 people from local communities are benefiting from a three-year labour-intensive programme that includes building and maintaining roads and paths, erecting game fencing around the Groote Schuur Estate, install-



The Table Mountain National Park Marine Protected Area includes this stretch along the Noordhoek Long Beach.



**W**WF-SA is supporting a country-wide marine programme that is building capacity among marine protected area managers and determining priorities for further protection and management. Deon Nel and Aaniyeh Omaidien have pioneered this programme and contribute to the C.A.P.E. Marine Task Team.



*The TMNP Marine Unit has been fully staffed since 1 March 2005. In the following five months its anti-poaching operations netted the following:*

- 40 arrests made
- 1 182 abalone seized: commercial value ~ R 120 000.00
- 116 crayfish seized: commercial value ~ R 2 900.00
- 86 crayfish tails seized: commercial value ~ R 1 290.00
- 8 vehicles seized
- 34 warnings issued in terms of the Marine Living Resources Act (MLRA)
- Various fines levied for marine violations in terms of the MLRA



Funding from the French agency FFEM has enabled the TMNP to purchase two semi-rigid patrol boats, scopes, cameras and other equipment to address the serious poaching problem facing the TMNP MPA.

*This is just the beginning. The TMNP Marine Team plans to develop a volunteer section and to strengthen its education, training and outreach programmes so that it will become even more effective at safeguarding marine life in the TMNP MPA.*



Through the Expanded Public Works Programme, people are being trained and employed to build paths on Table Mountain.

ing interpretative signage, renovating buildings and rehabilitating afro-montane forest.

The major component of the EPWP project is footpath construction and the TMNP has welcomed this opportunity to rationalise its network of paths. Of the existing 700 km of footpaths on the mountain, the Park would like to upgrade 500 km, close the rest and restore the natural vegetation in these areas. EPWP funding has enabled the Park to start

work on the first 340 km of footpaths. Priority is being given to paths making up sections of the exciting new Hoerikwaggo Trail, which will link Cape Town to Cape Point via the Peninsula mountain chain.

More than 250 of the people appointed through the EPWP project are involved in path-building and maintenance. As in the case of other poverty relief programmes, the TMNP provides the path-building teams with on-site training, a training allowance and basic equipment. The first

PROFILE

Xola Mkefe

It's a calling ...

It's obvious that Xola Mkefe loves what he does. He regards working as Manager of People and Conservation for the TMNP as more of a calling than a job. "It combines all my interests: I'm a community developer by heart, a teacher by training—and an outdoor junkie. It all comes together in this job—and they still pay me!"

Xola considers the Park's poverty relief programme to be one of the most exciting parts of his job: "You see unemployed people being recruited without any knowledge or experience of the mountain or of their new job. They come in with no confidence, scared of heights and terrified of snakes. Many are exposed to the mountain for the first time in their lives. We provide skills training, a bit of environmental education, and encourage trainees to share their indigenous knowledge about mountains. A few months later, they start bringing their families to the Park to show them what they've done."

"It's not just about the money; they are really interested in what they're doing," he continues. "You can see them going through the job specifications, arguing about the right way of solving a problem, correcting one another. The mountain absorbs them and they really start taking ownership—picking up litter, providing security. Already we've had two instances where contractors have apprehended muggers on the mountain! This is the part of my job that really fulfils me."



## The Hoerikwaggo Trail

*“The Hoerikwaggo Trail isn’t just a trail—it’s a journey,” says Xola Mkefe. “You will begin your journey at the Mandela Gateway. From a boat in the harbour you will catch your first glimpse of Hoerikwaggo—the Mountain in the Sea.”*



Where are we? Developing mapwork skills during the Hoerikwaggo trail guides’ training programme.

*Originally planned as a six-day, five-night trail from Cape Town’s Waterfront to Cape Point, the Hoerikwaggo Trail will in time incorporate four separate trail opportunities. A one night People’s Trail caters for the youth and complements the Park’s Environmental Experiences outreach programme (Chapter 6.3 ii). It is managed by a consortium*

*including SEEP (Chapter 2.3 iii), Pride of Table Mountain, the Cape Flats Hikers Network and the TMNP. A luxury three-day, two-night Table Mountain Trail will cater for the tourist market and will be fully catered, guided and portered. Two five-night trails are also planned, one from Cape Point to the City with overnight accommodation in tents, the other in the reverse direction with accommodation and services similar to the Table Mountain Trail. Xola Mkefe, Manager of People and Conservation at the TMNP, is up-beat about the additional employment opportunities the Hoerikwaggo Trail will provide: “In addition to the trail guides, we will also need to employ porters, cleaners and caterers to service the trail. This will enable our contractors to learn new skills and tender for a greater range of jobs in the Park.”*



The Hoerikwaggo trail guides made a hit at the C.A.P.E Partners’ Conference in 2005.



The Hoerikwaggo trail guides led a group of environmentalists and journalists on a hike in Orange Kloof to celebrate the opening of a youth trail on Table Mountain.

independent footpath contractors have been appointed and visitors to the Park are delighted with the quality of the new footpaths, boardwalks, signage and erosion control. In areas of difficult terrain, the TMNP engages experienced engineering companies with the necessary equipment to bring in the materials and build structures in a way that will do minimal damage to the environment. In order to promote skills transfer at this level, the TMNP appoints a Black Economic Empowerment company to work with the more established company. Wherever possible, the EPWP path-building contractors are also involved in these more challenging projects.

Poverty relief wages are very low, especially in an urban context, and the work done by most of the contractors and workers is physically demanding. The TMNP was concerned that people employed on EPWP contracts might not

be adequately nourished, and decided to provide each person with a balanced meal three times per week. Woolworths donated the services of one of its dieticians to draw up appropriate menus. Using EPWP funding, the TMNP set up community kitchens in seven townships to prepare meals for people involved in poverty relief programmes in the Park.

### Hoerikwaggo—Trails within a Trail

Poverty relief projects in the TMNP are not restricted to labour intensive programmes like alien plant clearing and path building. In 2004 the Park also invited people from neighbouring townships to train as guides for the proposed Hoerikwaggo Trail. After an intensive selection process 15 were chosen to undergo training to become THETA-accredited trail guides. Eleven graduates were recently offered twelve-month contracts with the TMNP. With knowledge of



*Colin Attwood has virtually single-handedly carried a torch for improved status and more effective management of marine protected areas. In addition to the existing marine protected areas, Colin and his colleagues in Marine and Coastal Management are investigating the potential for designating new marine protected areas in the Cape Floristic Region.*



## Waste not, want not!

*Sandstone rock collected after blasting on Chapman's Peak Drive is being used to build attractive, durable interpretative signs throughout the TMNP.*

natural and cultural history, skills ranging from story-telling to first aid, and a passion to share what they have learned, the Hoerikwaggo Trail Guides promise to provide a unique hiking experience.

An early success of this programme is that the Hoerikwaggo Trail Guides training programme made such an impression on the National Department of Labour that they offered to take over financial support of the programme. They not only agreed to fund the second intake of 15 trainee guides (2005/6), but also refunded the training costs of the first group of guides, enabling this funding to be redirected to the path-building project.

### Plant a seed—restore a forest

The Afromontane forests on the Cape Peninsula came under pressure in the earliest years of European colonisation, when trees were harvested for everything from ship-building to firewood. Most of the indigenous forests were eventually replaced by plantations of trees from other continents, like pines and eucalypts. Within the last ten years, unsustainable bark-stripping started threatening species with medicinal properties, including the few remaining stinkwood trees. Finally, after more than 350 years of exploitation, people are starting to give the forests a helping hand.

In 2000, with funding from Ukuvuka, the TMNP employed and trained three people to start collecting and propagating the seeds of indigenous trees from Newlands Forest. The project has grown and SAPPI now funds the nursery project, which provides training and employment for seven full-time staff.

One of the most important features of the Newlands Forest nursery is that all seed is locally collected. In the past, forest rehabilitation on the Cape Peninsula was sometimes undertaken using plants sourced from areas like George in the southern Cape, resulting in the introduction of non-indigenous species or subspecies of trees like the yellowwood and keurboom. The TMNP is now able to plant locally indigenous forest plants from their Newlands Forest nursery in other parts of the Park, and make plants available to local schools and communities. Project Manager Mbali Mthethwa is encouraged by the many volunteers who are enthusiastically helping the Park to plant out thousands of tree seedlings and restore the ancient indigenous forests of Table Mountain.

### A time to heal

A nursery of a different kind is taking root close to Newlands Forest at the Groote Schuur Estate. Unsustainable harvesting (e.g. bark stripping, bulb collection) was threatening to wipe out the very plants that amaXhosa and Rastafarian traditional healers use for medicine. In 2004 the TMNP approached traditional healers to seek solutions to this problem. While some healers remain skeptical about the potency of nursery-grown plants, most recognise that new approaches must be found if indigenous knowledge systems (and indigenous species) are to survive the dual pressures of urbanisation and commercialisation.

The TMNP is currently setting up a nursery in the Groote Schuur Estate where traditional healers will be able to propagate many of the plant species they require. The Park is providing induction



*Project manager Mbali Mthethwa says that "we are currently propagating 25 forest species and hope eventually to be able to propagate all the tree species that originally grew in the forest. The nursery has already produced about 35 000 trees and rehabilitated about 12 hectares of river banks, forest patches and cleared sites in Newlands Forest."*

## PROFILE

### A fascination with forests

Pixie Littlewort may be in her seventies, but she can out-hike most people less than half her age. Her deep fascination for forest plants and ecological processes has made her a tireless champion of the afromontane forest. Pixie started the Afromontane Information Forum (AMIF) to share information and promote public concern for the forest. She has taken countless children, teachers, conservation students and scientists into Newlands Forest to draw their attention to the impact of everything from bark collection to dog-walking. When the TMNP decided to gradually remove alien trees from the upper sections of Newlands Forest and restore the indigenous forest, Pixie realised that so few indigenous trees remained that a planting programme would be necessary to supplement natural forest regeneration. She has been able to share her knowledge and skills with the seed collectors and propagators employed in the TMNP's Newlands Forest nursery, and see her vision start becoming a reality.



courses to introduce 30 traditional healers to the TMNP and to provide them with horticultural skills. The healers have in turn drawn up a priority list of plants they want to propagate. In time, the healers may start to grow some of the plants they need in their own gardens, thus helping to sustain both the plants and the practices that are an integral part of the lives of the people of Cape Town.

Whatever the long-term effect of this project, Mbali reports that, since 2004, no more bark stripping has been reported in Newlands Forest!

### The Poverty Relief catalyst

Poverty relief funding is the key that has enabled the Park to build relationships with its neighbours, make a contribution to skills development, achieve a number of its management goals (e.g. alien clearing, path building) and invest in a long-term tourism project that will enhance the experience of the Park for both local and overseas visitors.

As pointed out in a recent study conducted by the University of Cape Town's Graduate School of Business, an approach that focuses on skills development and stimulates job creation causes ripple effects through the economy. The report estimates that the TMNP has, directly or indirectly, contributed R377 million to Gross Domestic Product over the last six financial years and created between 300 and 600 direct jobs.

## 2.3 Lowland Conservation in the City of Cape Town

### (i) Making a plan for biodiversity on the Cape Flats

#### Conserving biodiversity where we live

**A**cross the CFR, lowland biodiversity is under threat and often very poorly conserved. The Cape Flats is a case in point: it has the highest concentration of threatened plants per area of remaining vegetation in the world, and

## What have we learned?

- *Nature conservation has the potential to become the lead sector in terms of poverty alleviation because it is labour intensive and can provide many jobs. The Government's biggest challenge is to alleviate poverty—nature conservation can be the vehicle.*
- *Institutions involved in poverty relief programmes should strive to create a variety of employment opportunities to broaden the range of skills that are developed and accommodated.*
- *Poverty relief programmes have the potential to employ large numbers of people, as each independent contractor who is trained will in turn employ about ten others.*
- *Not every contractor wants to become a business person. Institutions should look for alternative ways of providing employment to contractors; for example, some may be better suited to a training or mentorship role.*
- *Don't underestimate the importance of Adult Basic Education and Training (ABET). Where possible, build ABET courses into funding proposals. Alternatively, encourage trainees to attend free adult literacy, numeracy and life skills classes, which are supported by the Department of Education. Be prepared to provide guidance and monitor progress.*
- *Invest adequate management capacity and resources in the education and training aspects of poverty relief programmes.*

its remnant natural areas are under enormous pressure from relentless development and the massive migration of people to the City.

Despite habitat loss, an astounding 1 466 plant species still survive in the 1 874 km<sup>2</sup> that make up the lowlands of metropolitan Cape Town. A lack of systematic conservation planning in the past, coupled with extremely rapid urbanisation since the mid-1980s, has resulted in the natural biodiversity of the Cape Flats battling to survive on a motley collection of small nature reserves, servitudes, road verges and undeveloped open spaces, most of which have been inadequately



Rapid urbanisation has put enormous pressure on lowland habitats in the City of Cape Town.

### PROFILE

**Julia Wood** moved from the City of Cape Town's Environmental Management Department where she made a big impact on wetland restoration, to become the second Table Mountain Fund Manager. She also enthusiastically took up the responsibility of Chair of the Fynbos Forum. Bringing her own particular style of enthusiasm and energy, Julia has now taken over one of the most important conservation portfolios in C.A.P.E., as the Director of Nature Conservation for the City of Cape Town.





*It was with great sadness that everyone who worked with Lindile Mdokwana in the City of Cape Town's Nature Conservation Branch and Cape Flats Nature, and other community champions for conservation action he interacted with, heard that he passed away in February 2006. At his memorial service, he was remembered for the pioneering role he played in championing nature in his community. Lindile will always be remembered for saying: "We thought the struggle would be over when we achieved democracy. But now we have our democracy, we have learnt that there is a struggle we didn't know about before—to care for our natural areas like Macassar Dunes and Wolfgat Nature Reserve so that we all can continue to live".*



*Andile Senayi impressed upon C.A.P.E. Partners that community volunteers could be enabled to play a key role in conservation activities if small community projects were catalysed with small grant funding.*

managed to protect this phenomenally unique biodiversity. It is hardly surprising that the largest city in the CFR holds a world record for endangered species: Kenilworth Race Course has the highest number of Red Data plant species per square metre in the world!

### Focusing attention on the Cape Flats

Although there is no room for complacency, the story of how energy and intention became focused on lowland conservation in the City of Cape Town is a tribute to visionary, committed individuals and productive partnerships. In an article entitled "Conserving an embattled flora", Kristal Maze, Tania Katschner and Brett Myrdal tell the fascinating tale of how, after numerous botanical surveys, conservation reports and much political lobbying, the City of Cape Town agreed to pursue securing conservation status and management for the 38 Core Flora Sites on which almost all the City's remaining lowland plant diversity was represented.

We can learn much about the politics of biodiversity conservation processes from this case study, and the full story is well worth reading. Some of these lessons learned are summarised below.

## What have we learned?

- *Sometimes it just isn't the right time. An important initiative may fail because the environment is not yet receptive; elements that need to be in place include political support, institutional capacity, the availability of information and resources, and key individuals.*
- *Effective conservation planning relies on accurate scientific surveys and reports; but without a receptive political and institutional environment, even the best reports will have little effect.*
- *If conservation proposals are prioritised and pragmatic, they are more likely to be taken seriously. Planners and decision-makers must know which sites are essential to safeguard biodiversity, and what the possible trade-offs are.*
- *Institutional capacity within local authorities is essential for effective biodiversity conservation; the establishment of the City of Cape Town's Environmental Management Department enabled the City to respond to the concerns of the Botanical Society, local universities and independent consultants, and to develop its own proactive strategies.*
- *A dedicated working group can really make things happen! Representatives from the Botanical Society, City of Cape Town and CapeNature drove the Cape Flats Flora Project and kept it on the City's agenda.*
- *Many departments within local, provincial and national government have an impact on biodiversity; conservation plans must be communicated widely within government structures to ensure that they are implemented effectively.*
- *To gain political support for conservation initiatives, you must make an effort to inform and involve your public representatives. The Botanical Society and the City of Cape Town organised an annual spring tour to expose City Councillors to the biodiversity and amenity value of the Cape Flats core sites, which raised the profile of this issue among local decision-makers.*
- *The City of Cape Town and Botanical Society took a people-centred approach to conservation, investing in public awareness and environmental education programmes around the core sites. The positive community awareness that resulted helped to strengthen political support for the core sites.*
- *During periods of transition, the lack of continuity of people in decision-making positions requires an even greater commitment to communication and advocacy.*
- *The City of Cape Town has been introducing a new*



*approach to urban nature conservation, which integrates both socio-economic development and conservation. This is proving more appropriate than previous approaches that tended to view conservation and development as incompatible. The approach encourages appropriate development that maintains and enhances healthy living environments, and sees biodiversity conservation as everybody's business.*

- *Urban nature conservation can no longer rely entirely on formally protected areas. The biodiversity network must integrate diverse open spaces, which support multiple land uses in mutually beneficial ways.*

## (ii) A Biodiversity Network for the City of Cape Town

### A new paradigm for conservation

The City of Cape Town's Integrated Metropolitan Environmental Policy (IMEP) has guided the development of a Biodiversity Strategy and detailed conservation plans for the City in 2003. One of the key outcomes of the City's Biodiversity Strategy is the establishment of a city-wide Biodiversity Network. The Biodiversity Strategy sets out to "introduce a paradigm shift" in biodiversity conservation in the City, and its principles have informed the development of the Biodiversity Network.

The Biodiversity Network demonstrates that biodiversity is not just conserved in formal protected areas, but also in a range of open spaces across the City, on both private and public land. Some of the City's unique species are found amidst the essential infrastructure of the urban area, including freeway interchanges and power line servitudes. Other plants and animals coexist with people in recreational areas like parks, racecourses and wetlands. Open spaces that are essential for conserving biodiversity also fulfil a variety of social needs, providing the people of the City with places to meet, work, play, relax and learn. The Biodiversity Network seeks to provide an integrated system of accessible, multi-functional spaces that benefit both people and nature.

The Biodiversity Strategy also calls for "the equitable distribution of, and access to, our biological wealth" and "improved and redistributive benefits arising directly from the conservation of our unique biodiversity to disadvantaged communities". Through programmes like Cape Flats Nature (Chapter 2.3 iii) communities on the Cape Flats are starting to experience the benefits of biodiversity, from recreational, environmental education and youth development experiences, to limited harvesting of natural materials and employment opportunities.

### Development of the Biodiversity Network

During 2001 and 2002, a systematic conservation planning study identified 261 sites (including all 38 Core Flora Sites) that are critical for safeguarding a minimum representative sample of Cape Town's unique biodiversity. These sites, which make up the City of Cape Town's Biodiversity Network, are a mixture of protected areas, privately owned land, and public land of various descriptions, from servitudes to road verges.

Areas in the Biodiversity Network have been divided into three categories for land use management purposes. Guidelines have been drawn up for each category of sites to assist with land use planning and management. This system provides positive, proactive guidance on what kind of land use and activities are appropriate in the different category areas.

- Category A: Key biodiversity areas that must be protected. They include existing nature reserves and other areas that meet the established criteria and will be managed primarily for the maintenance of biodiversity.
- Category B: Areas that are managed for maintenance of biodiversity but which will also support other appropriate activities and land use types.
- Category C: Areas not primarily managed for the maintenance of biodiversity, but which primarily support an activity or land use that is compatible with this function.

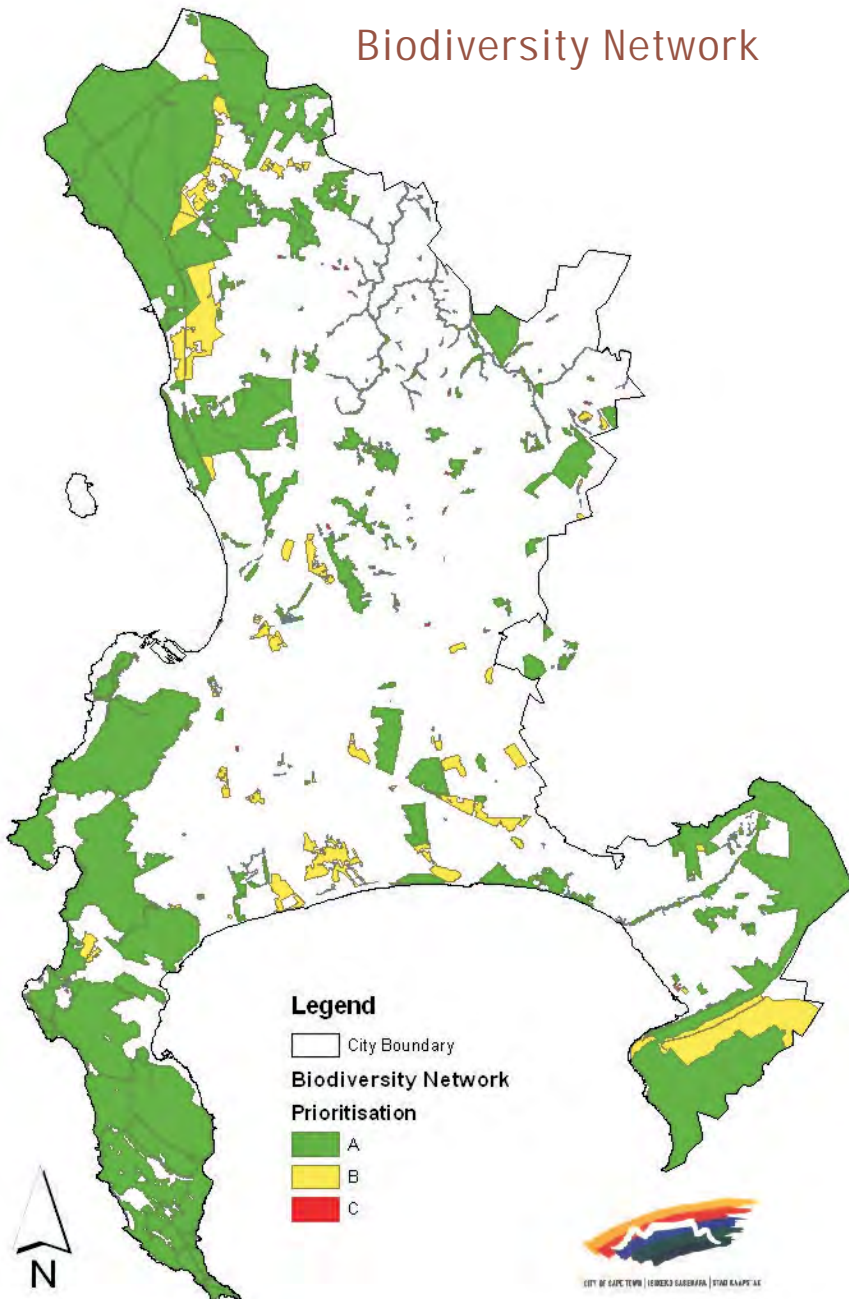
### Safeguarding biodiversity at a local level

Municipalities have a vital role to play in protecting biodiversity, as it is at the local level that land use planning and development take place. By proactively defining a Biodiversity Network, the City of Cape

## Features of the City of Cape Town's Biodiversity Network

- *The Biodiversity Network comprises the minimum set of areas needed to meet the City's biodiversity targets. Together, these sites will conserve a minimum set of the full range of biodiversity in Cape Town.*
- *All identified areas are prioritised into Categories A, B and C; this mechanism enables implementation of the network to respond to the multiple social and economic needs and pressures within the urban context.*
- *Biodiversity Nodes have been identified; these flagships of biodiversity conservation in the metropolitan area represent the core anchors of the network.*
- *The framework guides the establishment of corridors at the macro scale. (Corridors and pathways at the micro scale will be identified during localised implementation of the network.)*
- *The City has drawn up development planning and land use guidelines to assist with implementation.*

## Biodiversity Network



The Biodiversity Network study identified nine conservation nodes linked by 19 corridors. Some nodes are large conservation areas, while others are clusters of small natural remnants.



Town is creating a framework within which development planning can proceed in a more sustainable manner.

The City is ensuring that biodiversity issues are given priority by integrating the Biodiversity Network into other statutory planning processes, such as the City's Metropolitan Open Space System (CMOSS), its Spatial Development Framework (SDF) and the Integrated Zoning Scheme. All the sites in the Biodiversity Network have been "red-flagged" in the planning approval process, ensuring that none of these areas can be developed without further research and discussion. To ensure that all staff members are aware of the Biodiversity Network, information is available on the City's Intranet.

## Communicating nationally

*The City of Cape Town recognises the importance of bringing its Biodiversity Network Programme in line with the National Spatial Biodiversity Assessment (NSBA). It has therefore analysed the sites in terms of the four NSBA categories: critically endangered, endangered, vulnerable and least threatened. It turns out that most of the City's Biodiversity Network falls into the critically endangered category and that the Lowland Fynbos found in the City is one of the most severely under-protected categories nationally. This confirms the national significance of the City of Cape Town's Biodiversity Network.*



## It's everybody's business

In the face of pressing socio-economic challenges in the City of Cape Town, you might think that it would be difficult to keep biodiversity conservation on the City's list of priorities. But as human pressure on the natural environment becomes more intense, the value of biodiversity to the well-being of all the people of Cape Town is also becoming increasingly clear.

Community consultation and opportunities for participation and co-operation are starting to complement the traditional approaches to nature conservation that rely more on law enforcement. As organisations like the City of Cape Town and SANParks manage protected areas better



and offer improved facilities, programmes and opportunities, people across the City are recognising the value of biodiversity and getting more involved in conserving it. An approach that sees biodiversity conservation as “everybody’s business” is likely to be the most sustainable and effective way of safeguarding biodiversity in the Mother City.

### (iii) Cape Flats Nature—community conservation catalyst

The question is not “How well did we conserve biodiversity using the tool of social engagement?” but “How well did we engage, socially, around conservation? And what have the consequences of this been, for all of our beneficiaries, including nature in the Park?” (Cape Flats Nature mid-term evaluation report, September 2005).

Cape Flats Nature, a unique partnership between the City of Cape Town, the South African National Biodiversity Institute, the Table Mountain Fund and the Botanical Society of South Africa, was established in September 2002. Through pilot projects in four conservation areas on the Cape Flats, Cape Flats Nature has been learning how to manage biodiversity fragments in an urban environment in ways that benefit neighbouring communities, particularly in poorly serviced, low-income areas.

With offices at Edith Stephens Wetland Park, Cape Flats Nature has also been involved at Wolfgat Nature Reserve, Macassar Dunes and Harmony Flats Nature Reserve. These are all conservation sites in the City’s biodiversity network, a carefully selected minimum set of sites of environmental significance that are needed to conserve Cape Town’s biodiversity. As yet, most of these sites lack visitor facilities, but they do offer valuable educational and recreational opportunities as well as limited employment opportunities for neighbouring communities.

Through an initial intensive period of community consultation around each of the sites, Cape Flats Nature identified local champions, existing initiatives and opportunities for action. A proposal to CEPF (Critical Ecosystem Partnership Fund) generated funding that enabled Cape Flats Nature to appoint a group of young, enthusiastic nature conservators to manage the pilot sites in ways that contribute positively to surrounding communities. Since then the project has been all about action!



*George Davis has invested wisely in recording and communication processes of community engagement in conservation on the Cape Flats. Not only do his video productions capture the essence of community participation, they effectively carry the message to a much wider audience.*

Cape Flats Nature plays a catalytic role, helping to leverage funding, ensuring community participation and creating a nurturing environment for conservators working in urban settings. However, it was never the project’s intention to take over the City’s responsibility for managing its natural areas. Initially, conservation officers funded by Cape Flats Nature were seconded to the City to be supervised by City Parks and Nature Conservation. Eventually, in July 2005, the City took responsibility for employing the conservators with funding from Cape Flats Nature until June 2007, and a commitment from the City to endeavour to employ them permanently from July 2007. Cape Flats Nature will continue to provide support to the conservators as they manage these conservation sites in ways that both inspire and benefit local communities.

### Edith Stephens Wetland Park—a community asset

Situated between Vanguard Drive and Lansdowne Road, Edith Stephens Wetland Park is the culmination of a bold vision to transform a stretch of urban wasteland. A tiny seasonal wetland where illegal dumping threatened the last population of a rare and ancient water fern; a dilapidated farmhouse on a stretch of land infested by Port Jackson willow; and a retention pond built to store storm-water runoff and prevent flooding—these have been consolidated, restored, renovated and upgraded into a vibrant conservation, education and recreation asset.

Since Cape Flats Nature moved into the renovated farmhouse at Edith Stephens



The Cape Flats Nature management team brings a strong “people orientation” to the challenge of urban conservation.



*The City of Cape Town is well-served by an emerging group of women conservators, such as Carina Potgieter and Lewine Walters.*



*Project manager Tanya Goldman was previously involved with the labour and women’s movements.*



*Capacity Building Manager Paula Hathorn has a background in horticulture and social activism.*





A holiday programme offered by the Avian Demography Unit at the University of Cape Town caught the interest of the local youth.

Lying between two major arterial roads, Edith Stephens Wetland Park is an oasis for people and nature on the Cape Flats.

Wetland Park, the site has become a hive of activity. A victim of its growing popularity, you are more likely to find the venue double-booked than standing empty. Being accessible to many Cape Flats communities, “Wetlands” is a popular venue for workshops and meetings.



*City of Cape Town conservator Luzann Hendricks believes that Edith Stephens Wetland Park has huge potential as a recreational area for neighbouring communities. So every holiday she organises activity programmes for children from Manenberg, Hanover Park and Guguletu.*

Ironically, Kirstenbosch and TMNP often use this venue in preference to their own relatively inaccessible meeting places on the slopes of the mountain!

The Primary Science Programme has built offices on the premises and most afternoons the venue is full of teachers participating in a range of professional development programmes; Working for Wetlands has established one of its rehabilitation nurseries on the property; the place is buzzing!

Inspired by a holiday programme presented by the Cape Bird Club and the Avian Demography Unit, some children have formed a bird identification club that regularly monitors birds from the hide at the pond. An urban agriculture group is developing a demonstration garden, and Luzann Hendricks is encouraging local clinics to bring their patients to the park to enjoy some light exercise in the beautiful surroundings. In all these ways, Edith Stephens Wetland Park is making a positive difference to both biodiversity conservation and the quality of people’s lives on the Cape Flats.

“Changing Lives”—the Schools Environmental Education Programme (SEEP)

One of the community groups that are working in partnership with Cape Flats Nature is the Schools Environmental Education Programme (SEEP). What started as a hiking club at Crestway High School in Retreat now involves teachers and learners from 15 schools on the Cape Flats. Educators committed to broadening







SEEP's Willie Leith believes that "a culture of co-operation and caring for the environment will 'seep' down to the children right here on the Cape Flats."

the horizons of their learners have been taking groups hiking in the mountains for many years, but a few years ago, they discovered a unique hiking opportunity right in their own backyards. In partnership with Cape Flats Nature, SEEP started leading hikes each term along the coast through Wolfgat Nature Reserve, then via the Philippi horticultural area to Edith Stephens Wetland Park. On this fascinating urban hike learners could retrace the ancient footsteps of the Khoi, who would have collected shellfish along the coast, hunted wildlife and used local plants for food and medicine.

So why would a teacher who has to deal with huge classes all week volunteer to lead hikes on weekends? It's simple really; teachers like Roland Jethro, Solly Adriaans and Willie Leith of SEEP know that these experiences have the power to change children's lives. Already the SEEP hikes have inspired youth organisations in Mitchell's Plain and Khayelitsha to organise clean-up hikes through Wolfgat, and this has resulted in a programme to train youth volunteers to lead future hikes.

### Macassar Dunes Community Awareness Campaign

The rapid influx of people to Cape Town looking for a better life is putting the squeeze on lowland biodiversity remnants in the City. One of the most threatened sites in the City's biodiversity network is the last major dune system on the Cape Flats at Macassar. This dune area, just over 1 000 ha in extent, supports Strandveld vegetation, including the last stand of Milkwood trees on the False Bay coast, and is part of the False Bay Corridor Initiative. Despite being severely impacted by sand mining and invasive alien plants, the Macassar Dunes support a high diversity of plants, including many that are endangered.



In 2004, land invasions threatened to destroy this part of the City's biodiversity network. Instead of the invasion being halted and people being offered alternative land, political mismanagement led to the loss first of a buffer zone and later parts of the Macassar Dune itself. This was the acid test for Cape Flats Nature: in the face of the huge demand for housing, could conservation of the Macassar Dune be justified?

The Macassar Dunes provide the vast township of Khayelitsha with a vegetated windbreak, protecting people and property from the ravages of the southeasterly winds in summer. The veld provides local traditional healers with a variety of medicinal plants. And in an area where sprawling informal settlements leave little land for recreation, the high dune provides spectacular views and an opportunity to withdraw, reflect and restore the soul. The message to the people demanding land for housing was clearly that other land would have to be found.

Zwai Peter, Communications Manager at Cape Flats Nature, recalls the overwhelming experience of having to tell a public gathering of over 100 people needing shelter that the Macassar Dunes were

Satisfying the urgent need for housing as well as the need to conserve threatened habitats is a challenging task for urban planners.



Traditional healers are engaging with the challenge of sustainably managing populations of indigenous healing plants.





Rare species at Harmony Flats

not the appropriate place to settle. As he explained the value of the dunes, the people listened; they understood. Coming from the rural areas where they lived with, rather than separated from, nature, they explained that they wanted to live in a similar way in their new home.

Since that meeting, Cape Flats Nature has been working with the Khayelitsha Youth Development Council and a community-based organisation Ilitha Lomso to develop a community awareness programme. Thirty volunteers have been identified and trained, and will be conducting a three-month door-to-door campaign to inform residents of the risks associated with establishing their homes in unfavourable areas like the dunes and seasonal wetlands. At the same time, Cape Flats Nature is negotiating with the City of Cape Town's housing department to make more appropriate sites available. Already one group of residents has agreed to move if land can be found. The traditional healers' association has come

up with a creative way of re-establishing a buffer zone between the Macassar Dune and the remaining residential area; they want to establish a medicinal plant nursery to produce commonly used herbs and take pressure off the veld.

### Harmony Flats—a secret place revealed

Jan Geldenhuys describes Harmony Flats as “a very secret place”, and through the long hot summer when most of the plants are dormant it is indeed a well-kept secret. Only 9 ha in extent, this tiny core conservation area lies hidden among the houses of Casablanca and Rusthof, residential areas near Gordon's Bay. Come spring time, however, and the secret is out! The veld blazes with all the jewel colours of the bulbs and daisies of this remnant of West Coast Renosterveld and Sand Plain Fynbos.

Harmony Flats survived development because it was once declared a special reserve to protect the endangered geo-

PROFILE

## Zwai Peter—A C.A.P.E. Champion

At the C.A.P.E. Partners' Conference in June 2005, Mzwandile (Zwai) Peter, Communications Manager for Cape Flats Nature, was the popular recipient of one of C.A.P.E.'s special Gold Awards. Project Manager Tanya Goldman nominated Zwai for this award and these extracts from her motivation are a fitting tribute to one of the true “fynmense” of C.A.P.E.:

Zwai has pioneered community partnerships for conservation action on the Cape Flats ... [he] works with communities from a position of humility, understanding that other peoples' knowledge of and perspectives on biodiversity, conservation, and protected areas are likely to be very different from his own—but equally valid. Whether he is communicating with a local Development Forum, Youth Council, community-based organisation, youth or learners still at school, Zwai is able to talk to people about what is important to them and show them how taking care of nature is part of addressing their needs in other areas. He does this with a passion and integrity that immediately builds trust.

Zwai is most comfortable working at community level, helping nature conservators and community members find a way of creatively ensuring that people's needs and those of precious natural remnants in the City can be met in a way that both benefit. Yet he is as able to inspire politicians and high-level decision-makers to play their part in caring for the biodiversity of the Cape Flats.

As Cape Flats Nature's Communications Manager, Zwai has shown consistent dedication to his work, deepening relationships with community partners by maintaining regular contact, reliably following through on commitments he makes, and providing constant encouragement to conservators and partners alike to work together with enthusiasm and passion for conservation and community development.

Zwai is a charming and competent young man who could quite capably fly up the ranks of any institution at high speed. Yet he has chosen to develop and share his skills close to the ground, building a solid foundation for himself at the same time as making an enormous contribution to building community partnerships for conservation action. He will serve as a role model to many and his pioneering contribution should be recognised.







Children at Harmony Flats investigate some eggs.

metric tortoise. In those days community consultation was not considered necessary; a fence went up around the reserve to protect the tortoises, effectively cutting off a well-used short cut across a field. Not unexpectedly, the fence was destroyed, the tortoises disappeared and the reserve failed to attract the necessary funding to ensure that it was properly managed.

Although people walked across that stretch of veld for decades, Jan Geldenhuys recalls, they just thought of it as bush. The veld provided the occasional bird to eat, but they took the plants for granted and couldn't imagine that anything special was growing there between the houses.

In 2002, things started to change. Cape Flats Nature invited people living around Harmony Flats to a workshop to discuss the conservation of the area and possible community benefits. A community working group was formed to start putting ideas into action. At the same time, Luzann Hendricks, then a student conservator, was appointed to manage Harmony Flats for her internship year.

In response to requests, the community was trained and equipped to fight the frequent veld fires that threaten both property and biodiversity at Harmony Flats. Residents are now able to take immediate action when a fire breaks out. The working group has also been involved in alien clearing, further reducing the risk of fire and restoring the indigenous vegetation.

In addition to helping to manage the site, the neighbouring community is also starting to enjoy what it has to offer recreationally and educationally. The working



Auntie Julian shares her knowledge of local plants with children at Harmony Flats.



Community fire-fighting training.

group has marked out paths to improve access and reduce disturbance, and developed a children's play area in a degraded part of the site. Interest in the plants of the area has grown since Custodians of Rare and Endangered Wildflowers (CREW) ran workshops for the residents teaching them how to identify and press plant specimens and make their own herbarium. Residents now offer an annual Arbor Week programme for schools in the area, introducing hundreds of children to the strange and wonderful plants that are part of their heritage. Since learning and sharing knowledge about the plants, the community has developed a real love for the plants and their habitat. The next project is to develop the tourism potential of the site during the spring flower season.



*Jan Geldenhuys joined the Harmony Flats Working Group two years ago; today he says he is grateful for that tortoise reserve so that "now we at Cassablanca can learn—even me at 50 years old."*





**T**ania Katzschner and her colleagues in the City of Cape Town's Environment Directorate ensured that not only does Cape Town have a biodiversity strategy that forms part of the Integrated Metropolitan Environmental Plan, but that there is an active programme to develop the planned Biodiversity Network throughout the City, including not only places but key partnerships for implementation.



**A**untie Julian Brits is an inspiration in her community that lives and works adjacent to Harmony Flats. Effective citizen action for fire management protects both people and biodiversity.

## What have we learned?

The Cape Flats Nature pilot programme underwent a mid-term evaluation during 2005, and has been sharing the lessons learned in the project as widely as possible. Some reflections are summarised here:

### **Institutional arrangement:**

- Small projects can be more innovative and responsive, and take more risks than large institutions. Cape Flats Nature has been able to experiment with new approaches in ways that would have been more difficult for its larger partners. However, its partners have been able to learn from the innovative approaches and experiences of Cape Flats Nature.
- Partnerships provide many benefits but require considerable time, effort and commitment. Multi-stakeholder partnerships can cause project staff to suffer an identity crisis, as they are unsure which institution they actually work for. In this case, unexpected restructurings within one partner organisation added to the confusion. To deal with these challenges, both inter-agency agreements and relationships between responsible officials need to be strong, accountable and responsive.
- Working with community groups to implement conservation projects can be very challenging and conservators need ongoing support and skills development to deal with emerging situations. A regular weekly team gathering provided a "safe space" to share challenges, experiences and learning.
- Having the project offices based at one of the pilot sites kept project staff in touch with neighbouring communities and able to respond to opportunities.

- Despite the need for pilot projects to prove their worth, it is important that both successes and failures are reported, as well as how problems were addressed.
- Being a "special project" that is not entirely located within any particular organisation may set up tensions in terms of who takes responsibility for particular elements of implementation. In under-resourced situations, project management needs to hold tenaciously to the project brief to avoid losing focus.

### **Conservation impacts**

- Conservation sites can only really be given a chance of survival if they are brought into meaningful relationship with the communities that surround them.
- The "social" emphasis of Cape Flats Nature and the lack of adequate conservation management mentorship of the young conservators contributed to a deterioration of the conservation status of the four sites.
- Biodiversity conservation cannot be the sole objective of urban nature areas; they also need to be managed to provide recreational and educational opportunities for surrounding communities. Ultimately the social and conservation aims should become one.

### **Action counts**

- Cape Flats Nature has been building community involvement in conservation by focusing on action first. They found that most people were not interested in attending meetings that did not show results. So, instead of spending a lot of time setting up co-management forums around each site, the conservators chose to start working with existing groups on projects that directly benefited the community. Community participation and decision-making became more focused and purposeful in a context of local action.



- *Action projects don't have to be ambitious; by starting small and letting projects grow naturally, local champions emerged who will be able to sustain local conservation and education actions beyond the pilot phase of the project.*

### **Build local leadership**

- *The role of Cape Flats Nature is a catalytic one—to alert communities to the value of local biodiversity areas and to build local capacity to conserve and derive benefits from these sites in the long term. All activities are therefore hosted in partnership with community members or organisations who have an ongoing interest and presence in these areas and who can sustain initiatives.*
- *A Capacity Building Manager can work with community groups to strengthen skills of project planning, implementation, financial management and evaluation.*
- *A quarterly Champions' Forum has been a valuable opportunity for conservation champions from each site to meet and share experiences and lessons learned. Evidence of the effectiveness of the capacity-building processes is that, at the most recent Champion's Forum, representatives from the pilot sites said that, if Cape Flats Nature withdrew support, they could continue running their programmes themselves.*



## Development limitations

*How has the BCA managed to avoid falling prey to the developers of imitation Tuscan villas? Firstly the area falls outside the urban edge, and secondly, being within a 10–15 km radius of the Koeberg Nuclear Power Station the density of development is limited.*

*The idea of a conservation area around Blaauwberg Hill has been on the agenda since 1981 when it was suggested as part of the structure plan for the area. Eventually in 1998 work began on the actual development plan and the City of Cape Town started purchasing environmentally significant land along the coast and on Blaauwberg Hill. Local and provincial government, parastatals and NGOs are involved in implementing the development plan, and a small management team has been appointed to co-ordinate management and development activities and prepare the BCA for proclamation under the Protected Areas Act.*

*The first priority for this developing protected area has been to halt environmental degradation and prevent it from becoming worse and more expensive to address. The team has concentrated its efforts on controlling erosion and removing relatively light infestations of invasive alien plants from endangered vegetation types like Renosterveld and Sand Plain Fynbos.*



The old blockhouse on Blaauwberg Hill provides a window on Cape Town's two World Heritage Sites—Table Mountain, representing the CFR, and Robben Island.

### (iv) The Blaauwberg Conservation Area

*A protected area in the making*

Nature Conservator Adelé Pretorius believes that the Blaauwberg Conservation Area (BCA), with its breathtaking views across Table Bay to Table Mountain and Robben Island, has the potential to become one of Cape Town's most spectacular tourist sites. The BCA concept plan shows the proposed protected area stretching from the sea, across the coastal plain and right over Blaauwberg Hill. Recognised as an important node in the City's biodiversity network, the area boasts three vegetation types, over 530 different plant species, numerous cultural and historical sites and is suitable for reintroduction of a number of game animals.



*The City of Cape Town has worked hard to build understanding among City Councillors, officials and communities by holding regular Councillors' tours to key project sites. At the Blaauwberg Conservation Area, Councillors discuss ways in which this prime scenic and biodiversity asset can be sensitively developed as a gateway to the city from the West Coast.*





In addition to temporary employment, the workers benefited from an extensive capacity-building programme. WESSA developed a curriculum covering everything from literacy, numeracy and life-skills to environmental knowledge and job-related skills. Members of the group grew in confidence and by the end of their contract some were even presenting talks to visiting groups.

### Partners in restoration

Two of the major threats to the BCA are invasive alien vegetation and off-road vehicles. Large areas have become severely infested with invasive alien plants, threatening the indigenous vegetation. Off-road vehicles have caused extensive damage to the dunes and, particularly since vehicles were banned from driving on beaches, parts of Blaauwberg Hill itself. Up to 40 vehicles were recorded on a single day, tearing around on the hill, causing serious erosion and damage to the vegetation. Luckily, both problems are being addressed and great strides have been made with the clearing of alien vegetation and the prevention of illegal off-road vehicle access. In fact, a year has passed since a 4 x 4 vehicle last accessed Blaauwberg Hill illegally! Adel is full of praise for the many people who have been working with the management team to address these problems and restore the BCA to a more natural state.

The Wildlife and Environment Society of Southern Africa (WESSA), with funding from the CEPF, appointed 15 workers from Du Noon near Table View on an 18-month contract to assist with development work in the BCA. They have made a noticeable dent in the alien problem and already, less than two years later, indigenous vegetation is starting to recover in the cleared areas.

### (v) Conservation Friends

The Friends of the BCA was established in 2002. This group of enthusiasts has made a huge contribution to securing, restoring and promoting the BCA. One notable achievement has been helping to solve the problem of illegal, destructive off-road vehicle activity in the BCA and rehabilitating Blaauwberg Hill. Even before the Reserve Manager was appointed, Roy Fuller-Gee from the Friends group enlisted the help of the conservation units of the Four Wheel Drive Club of SA and the Land Rover Club to start tackling







problems of access control, eroded vehicle tracks and demarcation of the parking area on Blaauwberg Hill. Later, when conservation staff and contract labourers were appointed and funding from CEPF became available, rehabilitation work continued and access control was improved. It took Reserve Manager Cliff Dorse countless weekends of confronting drivers and informing them about the conservation area, but the problem of illegal off-road vehicles has finally been solved and the deep scars on the hillside are starting to heal.

#### Building community awareness

In a community where many people are unaware of the BCA and others are finding their previous recreational uses restricted, the management team has been working hard to develop local support for the BCA. Although the area has neither been consolidated nor officially proclaimed, it has been important to encourage people to visit and benefit from the BCA during the development phase.

For this reason, the reserve management team has already developed one hiking trail and is planning a second trail that will be accessible to all. To further improve access to the BCA, in January 2005 Lizanne Engelbrecht, an intern appointed through a Department of Environmental Affairs and Tourism programme, started developing an environmental education programme for schools and other groups.

The Friends of the BCA have also played a crucial role in raising public awareness of the historical, cultural and ecological value of the area by offering regular talks and guided walks and encouraging people to participate in action projects like hacks. The quarterly newsletter *BCA Focus* has been very effective in keeping interested parties informed of developments and programmes. As the message spreads, more and more people are starting to visit the BCA to enjoy its spectacular scenery, biodiversity and cultural sites.

What a wonderful place to learn! Learners celebrate World Environment Week with a visit to the BCA.



## Friends as catalysts

*Committed, enthusiastic and well informed amateurs form the backbone of volunteer groups like Friends of Tokai Forest. They are able to act quickly and decisively in the face of challenges and therefore play an important catalytic role in initiating projects. However, some projects grow to a point where they are better managed by, or in collaboration with, established conservation organisations.*

### Consolidating the BCA

The BCA includes remnants of some extremely threatened habitats like Renosterveld and Sand Plain Fynbos. Less than 3% of the original extent of Renosterveld survives, and less than 2% is formally conserved. Sand Plain Fynbos is in an even more precarious position, with less than 1% remaining and less than 0.03% of the original vegetation being conserved. The City is in the process of trying to consolidate the BCA in order to provide the highest possible level of protection for these remnants. Two properties have already been purchased by the City for the Blaauwberg Conservation Area, and an active programme is underway to consolidate the remaining properties that comprise part of the Primary Conservation Zone of the BCA. Land consolidation will contribute to more effective management of the BCA, which will enhance both biodiversity conservation and the visitor experience. For example, the portion of Blaauwberg Hill that the City owns, and which is arguably the City's premier view site, is surrounded by private land and only accessible by prior arrangement with the landowners. Were these properties to become part of the BCA, the City would be able to plan and develop appropriate tourism infrastructure that will unlock the potential of this unparalleled and inspirational view site.

### Friends of Tokai Forest: promoting public participation

"The aims of the Friends of Tokai Forest are to promote public participation in caring for Tokai Forest; foster resonance among the differing users of the forest; identify the species and habitats of the area; conserve the environment for the benefit of present and future generations; and to assist in the development of the Table Mountain National Park."

### Revealing hidden treasures

Indigenous vegetation can be remarkably resilient. In 1998, fire destroyed about a hectare of the lower section of the Tokai Plantation in Cape Town. Knowing that there were a few plants of the Red Data List endemic Cape Flats silkypuff (*Diastella proteoides*) growing on the site, the Friends of the Tokai Forest prevailed upon the forestry company not to replant this section. Sand Plain Fynbos started to regenerate and chairman James Forsyth reports that there are now about 30 *Di-*



Members of the Burning Spear Movement worked with Friends of the Tokai Forest to clear alien vegetation and restore a wetland.

*stella* plants growing on the site. After struggling for nearly a century to survive beneath the pines, this highly threatened type of Cape Flats vegetation is starting to flourish again.

Encouraged by this success, the Friends of Tokai are now preparing to resuscitate another 2 ha this summer. After the forestry company clear-fells the site, the Friends plan to set fire to the area to stimulate regeneration of fynbos. It isn't easy to convince neighbours of the need for a fire on the urban edge in midsummer, but fire-prone habitats like fynbos and grassland must burn if they are to survive. The Friends of Tokai are working with SANParks, the forestry company and a crack team of fire fighters from Mpumalanga to address this management challenge.

Plantations of alien trees within the TMNP are being decommissioned; within 20 years all trees will have been harvested and the Department of Water Affairs and Forestry will transfer the land to SANParks to manage. The Friends have therefore appointed a consultant to conduct ecological restoration studies to ensure that lessons learned during the resuscitation of these small parcels of land will contribute to the rehabilitation of the entire site.

### Mountain to sea—restoring the link

Close to the *Diastella* site at the Tokai Plantation is a wetland that represents an ambitious long-term vision for the South Peninsula: to restore a natural corridor between the Constantiaberg and False Bay via rivers and wetlands. Together with members of the Tokai forestry workers' village, Rastafarians from the Burning Spear Movement and contractors from the Working for Wetlands project, the Friends of Tokai Forest have felled, chipped and removed 1.5 ha of aliens



*James Forsyth is one of the driving forces of the Friends of Tokai which has worked with community partners to restore important lowland fynbos habitats. Here he discussed priorities for future work with one of the Hoerikwaggo Guides and with Donnie Murray, Cape Town City Councillor and member of the Cape West Coast Biosphere Reserve.*





from the Soetvlei Wetlands. Now regular visitors can “adopt-a-plot” and help to maintain the area by pulling out alien seedlings, removing rubbish and planting indigenous wetland plants supplied by the Working for Wetlands nurseries. In time, this wetland will be able to supply plant material to rehabilitate other sections of the river as it wends its way towards Zandvlei and the sea.

Up-river, the Friends hope to start replanting afro-montane forest trees along the Prinseskasteel Stream. Perhaps the Tokai Arboretum, established in the nineteenth century to investigate the potential of alien plantation trees, will one day be transformed into a nursery dedicated to re-establishing natural forest patches on the Constantiaberg.

### Die Oog: ducks, a dam and so much more

Another wetland in the south Peninsula that has benefited from the attentions of a Friends group is Die Oog. One of the oldest dams in Cape Town, Die Oog was built in a natural seepage area in the early eighteenth century. It supplied water to Bergvliet Farm until the property was subdivided in the 1980s. The Bergvliet and Meadowridge Ratepayers Association has taken an active interest in this public open space since the late 1980s.

In 2003 a group of ratepayers decided to form a Friends Group in order to coordinate efforts to rehabilitate Die Oog. Friends of Die Oog consulted widely, raised funds from the CEPF and the Rowland and Leta Hill Trust (through WWF-SA), and received help from Working for Wetlands and the City of Cape Town. In just 18 months, Die Oog has been trans-



At the “Big Duck Launch” Friends of Die Oog thanked the donors who had enabled them to fulfil their plans to rehabilitate this well-loved community asset.

formed from an overgrown, eutrophic pond into a suburban nature sanctuary. In order to address a serious algal problem caused by the accumulation of nutrient-rich sediments over a couple of hundred years, the City of Cape Town drained and dredged the pond. The Friends fixed the dam wall, removed the alien carp and restocked the dam with indigenous fish (*Galaxias zebratus*). They replaced alien mallards with indigenous ducks, eradicated alien plants, planted indigenous trees, repaired the fence and gates, and installed benches and tables for visitors. They also appointed a gardener to help them look after the site. In 2004 the Friends formed Die Oog Partnership with officials of the South Peninsula Administration and other environmental agencies; they meet regularly to ensure ongoing effective management of Die Oog.



## Bernard Brown

### Sustaining nature—sustaining culture

Bernard Brown of the Burning Spear Movement looks at the cave above the Tokai Plantation that some call Elephant’s Eye. He speaks of a Khoi princess who once sheltered in this cave, and whose memory is celebrated in the name of the Prinseskasteel Stream. His dream is to cultivate in this fertile valley healing plants like buchu and kooigoed that the Khoi people of the Cape and their descendants have used for thousands of years. He hopes to secure land to farm these plants locally in order to take the pressure off wild plants on the mountain that are harvested to treat the many people who rely on nature’s cures.





The more the Friends explore Die Oog, the more they discover about its biodiversity value. The dam now attracts about a thousand roosting birds and the Friends regularly monitor their populations on behalf of the Avian Demography Unit. The wetland is a breeding area for the endangered leopard toad, which is endemic to the South Peninsula. Clearing aliens from the site has revealed remnants of a rare form of fynbos that grows

on granite-derived soils. Each discovery has generated more enthusiasm and created a further reason to safeguard this precious community asset. "We started off 18 months ago wanting to replace a few ducks on our pond," says Prof. Dennis Davey, Chairman of Friends of Die Oog. "Then we discovered the leopard toad, fynbos and roosting cattle egrets. It's opened up a new world for us."

#### A focus on WESSA Friends

Friends of Tokai Forest, Friends of Die Oog: who are these groups that are working so tirelessly to care for their local natural areas? Michelle Preen of WESSA recalls: "In the early 1980s there was great concern that a lack of resources was threatening the survival of some of our provincial and local nature reserves. Ann Bean, a committee member of the Western Cape branch of the Wildlife Society, believed that the public had a crucial role to play in working with the authorities to safeguard these protected areas. Thanks to Ann's vision, the Wildlife Society launched its Friends of Nature Areas project in 1985. Later the Friends project expanded beyond the borders of protected areas; new Friends groups were formed to help to monitor, manage and rehabilitate a range of local natural and semi-natural areas."

Friends groups encourage communities to become more involved with the local environment and to take responsibility for its continued well-being. Environmental projects range from species monitoring and alien clearing to clean-up campaigns, path development and ecological rehabilitation. Friends present educational programmes to schoolchildren, lead guided walks for the general public, give talks and produce regular newsletters. They also encourage public participation in opposing inappropriate activities or developments that threaten the environment. Friends groups are affiliated to WESSA and guided by its mission statement, policies and position statements. WESSA provides support and expertise as required and creates a forum for groups to share with and learn from one another. It also plays an oversight role, ensuring that Friends groups adhere to WESSA policies.

#### (vi) Rondevlei Nature Reserve

##### A critical natural area

In 1952 the Rondevlei Nature Reserve was established as a bird sanctuary to enable the study and conservation of

## WESSA Western Cape Friends Groups (2005)

- *Afro Montane Information Forum*
- *Boland Environment Forum*
- *Durbanville Environment Forum*
- *Friends of Bain's Kloof*
- *Friends of Constantia Valley Green Belts*
- *Friends of Die Oog*
- *Friends of Helderberg Nature Reserve*
- *Friends of Lion's Head & Signal Hill*
- *Friends of Meadowridge Common*
- *Friends of Newlands Forest*
- *Friends of Rietvlei*
- *Friends of Rondebosch Common*
- *Friends of Silvermine Nature Area*
- *Friends of Simon's Town Coastline*
- *Friends of the Blaauwberg Conservation Area*
- *Friends of the Botriver Estuary & Environs (Botfriends)*
- *Friends of the Cape of Good Hope*
- *Friends of The Glen*
- *Friends of the Liesbeek*
- *Friends of the Paarden Eiland Wetlands*
- *Friends of Tokai Forest*
- *Friends of Tygerberg Hills*
- *Hope Group (Hillside-Highway Organisation for Protection of the Environment)*
- *Montagu Nature Garden Association*
- *Scarborough Conservation Group*
- *The Simon's Town Flora Conservation Group*



## Amazing diversity

Rondevlei Nature Reserve is home to many species (including 27 Red Data species)

Mammals	21
Birds	235 (6 Red Data)
Reptiles	29 (1 Red Data)
Amphibians	9 (2 Red Data)
Fish	8
Plants	320 (17 Red Data)



wetland birds in particular. By 1990 the focus had broadened to the management of the full spectrum of biodiversity present in the 290 ha reserve. Today Rondevlei is the primary breeding area for water birds in the City of Cape Town and, along with Zeekoevlei and the Strandfontein Water Treatment Works, is listed as one of the Important Bird Areas of southern Africa. About 10 000 people live along the margins of the reserve, and Rondevlei is responding creatively to both the challenges and opportunities of being an urban nature reserve.

### It takes commitment

Rondevlei Nature Reserve is managed by the City of Cape Town, a city that has for many years been in a state of political and institutional transition. This context has had a severe impact on the provision of both staff and resources in many of the City's departments, and the Department of Nature Conservation has been particularly hard hit. The fact that City nature reserves are well managed and an asset to the community is due mainly to the creativity and determination of the highly committed staff who have become skilled at "making a plan". Rondevlei Nature Reserve is an example of a protected natural area that, despite its skeleton staff, manages to offer a range of services to the public—and it does so mainly through partnerships with its local community.

### Developing local tourism

Invubu Nature Tours ([www.invubu.co.za](http://www.invubu.co.za)) is named after Rondevlei's famous hippos. This small independent tourism company based at the reserve has greatly enhanced the visitor experience by offering a range of services, from guided walks and boat trips to carp fishing and camping on an island in the vlei. It has also been the catalyst that has enabled local entrepreneurs to benefit from the reserve.

The company was formed after Rondevlei, which was looking for someone to develop tourism opportunities in the reserve, ran a short course in tourism for people from the local community. Joy Bennett and Graham Arendse, who were unemployed at the time, obtained seed funding from the poverty relief fund of the Department of Environmental Affairs and Tourism to establish their company in 2001. Their success can be measured not only in terms of the tourism and entrepreneurship awards they have received, but also in the fact that Graham has recently become Head of Tourism in the South Peninsula.

As a matter of policy, Invubu Nature Tours sources all goods-and-services, such as catering or bed-and-breakfast accommodation, from local businesses. Another participant on the tourism

WESSA Friends Groups are volunteer groups affiliated to the Wildlife and Environment Society of Southern Africa (WESSA) that encourage public participation in conservation.







Eight Zeekoevlei residents now share responsibility for conserving about 15% of the world population of Cape Flats conebush (*Leucadendron levisanus*).

course went on to set up Fay's Catering Company, which is now the service provider of choice for all events at Rondevlei. Imvubu also helps Rondevlei to make optimal use of its facilities by hiring out the education centre and boma for meetings and functions. In this way, an area of which the primary purpose is biodiversity conservation is providing the local community with tangible benefits and opportunities.

In addition to creating and sustaining jobs in the local community, part of Imvubu's lease is given as a donation to help support the Zeekoevlei Environmental Education Programme (ZEEP), (Chapter 6.2 i).

This helps to keep fees low so that many schools and youth groups, especially from the Cape Flats, can enjoy overnight education programmes at Zeekoevlei and Rondevlei.

#### Restoring habitats—restoring hope

Conserving biodiversity in an urban environment as developed as Cape Town cannot be limited to defending the few existing protected natural areas. Biodiversity must infiltrate and recolonise the spaces between protected areas where people live; it must become once again part of the fabric of our every-day lives. Sometimes restoring biodiversity in our backyards

can be as simple as planting a few locally indigenous plants. At other times, the process may be more radical. They may not be the tool of choice in all ecological restoration work, but Dalton Gibbs has used them to great effect in an inspiring project at Zeekoevlei.

#### A suburban sanctuary

Lying next to Rondevlei, Zeekoevlei is a designated but highly urbanised nature reserve, with over 130 homes abutting on the reserve. Recently eight new homes were built on the banks of the vlei, and one resident approached the local nature conservator for permission to build a jetty. The request triggered a process that has resulted in the eight properties working together with nature conservation to transform the waterfront sections of their properties into a sanctuary for biodiversity.

During the annual drawing down of Zeekoevlei, Dalton brought in the bulldozers. They ripped out the entire shoreline of all eight properties to a depth of one metre, removed builders' rubble, alien trees and grasses, and replaced it with clean sand. With the assistance of Working for Wetlands contractors, the new shoreline was reshaped, a seasonal wetland constructed, and about 7 000 locally indigenous plants planted. An area that once supported a monoculture of lawn grass is now home to over 40 indigenous plant species, including seven Red Data species.

The property owners have entered into an agreement with the City of Cape Town's Department of Nature Conservation and, in exchange for this ecological makeover, will be responsible for managing their



## PROFILE

### Dalton Gibbs

Dalton Gibbs, manager of Rondevlei Nature Reserve, is of the opinion that "bulldozers can be your friends"! Dalton is one of a special breed of conservationists who work at a strategic level and keeping his feet on the ground. He has been extremely influential in developing Rondevlei Nature Reserve as the premier centre of lowland and wetland conservation on the Cape Flats. He is also an extremely engaging speaker and has the ability to keep his audiences in stitches while imparting serious conservation lessons. His annual performances at the Fynbos Forum are not to be missed. But this belies his serious work in investigating, restoring and managing conservation priorities. He has a particular talent for blending science and observation with practical conservation measures and for inspiring others to take up the challenge too.



“special interest zone” with advice from the reserve manager. They are extremely proud of their small sanctuary, which conserves Sand Plain Fynbos and wetland plants that once grew along the northern shore of Cape Town’s largest wetland. The residents have reaped some unexpected benefits, including improved security for their properties—and even a jetty that all eight properties now share.

#### Part of the social fabric

The role of Rondevlei Nature Reserve has changed a great deal since the 1950s when it was established as a bird sanctuary. Then few people from the local area visited or identified with the reserve; it benefited a handful of people who were interested in watching and studying birds.

Dalton believes that their education and outreach programme, which began 25 years ago, has been instrumental in helping the local community to identify with Rondevlei and in mitigating environmental impacts like wild fires, littering and poaching. Children who have visited the reserve with their schools pester their parents to bring them on weekends for the reptile shows; families enjoy walking along the paths and climbing the observation towers; and many a twenty-first or wedding reception has taken place in the boma. These activities have helped to integrate the reserve into the social and historical fabric of the neighbourhood.

While the wetland continues to attract numerous local and international birders, the venue is growing in importance as a multi-purpose community asset offering a wide range of recreational, educational and entrepreneurial opportunities. Dalton explains: “We need to tie the reserve into the social fabric in ways that don’t compromise the biodiversity.” Rondevlei seems to have found a way to achieve this balance.



## Let’s put the “heath” back in Heathfield!

*The beauty of the Cape Flats Erica was its undoing, but may eventually prove to have been its salvation. This tall, beautiful summer-flowering erica once grew along the edges of seasonal wetlands at the western end of the Cape Flats. By the 1940s, however, it was extinct in the wild due to the combined pressures of habitat destruction and over-harvesting for the cut-flower market. Only the name of the suburb of Heathfield bore witness to its passing.*

*Tantalising tales of single plants in cultivation started to filter through to the horticultural community—one plant in a municipal park in Pretoria, another at Kew Gardens in London, one behind the Braille Trail at Kirstenbosch and, most recently, two specimens in a botanical garden in Vienna, Austria. The latter plants had been propagated by cutting for over 200 years, since it was first collected at the Cape in 1793! Such is the attention paid to things of great beauty.*

*Anthony Hitchcock at Kirstenbosch National Botanical Garden has had great success propagating the Cape Flats Erica from cuttings, but nobody knew what growing conditions would suit it in the wild. The erica originally grew in the Rondevlei area, so this became the obvious site for growing trials. Transect studies showed that this beauty was fussy about where she wanted to live, preferring to grow along the fringes of seasonal wetlands in acid sands, now an extremely rare habitat on the Cape Flats.*

*A suitable site was found at Rondevlei, and a batch of 100 plants from Kirstenbosch was planted out. Despite being left to their own devices, a healthy proportion of the original plants has survived. Mr Scout, a resident of Grassy Park, has since told Rondevlei that he remembers that pink ericas, which grew to head height, used to grow on this exact field in the 1920s and ‘30s when he was a child!*

*Plants from three of the Erica clones have now been established at Rondevlei, and the southern double-collared sunbirds and hawk moths have been doing an effective job of pollination. There was great excitement recently when the first viable seed was produced. About 200 tiny seedlings are now growing in seed trays—the first to germinate on the Cape Flats in over 50 years. This is a homecoming worth celebrating!*







Rondevlei Nature Reserve is a significant breeding site for water birds in Cape Town.



Invvubu Tours has enhanced the tourism potential of Rondevlei by offering various activities like nature trails, boat rides and carp fishing.



The Cape Flats Erica, once extinct in the wild, is now flourishing again at Rondevlei.



Less than a year after the bulldozers, Bottom Road residents are enjoying their own vlei-side nature reserve.

## What have we learned?

- *Protected area managers in urban areas need to diversify reserve activities, providing opportunities for the whole community to benefit without compromising biodiversity.*
- *Rondevlei has developed three clear priorities, which inform all decision-making and resource allocation; these are, in order of priority, biodiversity conservation, environmental education and tourism / recreation. These priorities apply to all partner organisations and activities on the reserve.*
- *Environmental education has played a vital role in introducing the local community to Rondevlei and overcoming a perception that the reserve was only for people interested in birds.*
- *Because staffing and budgets are limited, Rondevlei uses its personnel and operational budget to conserve biodiversity, provide some environmental education and maintain its infrastructure. It then outsources to partner organisations functions like tourism and overnight environmental education, which it could otherwise not afford to offer.*
- *Despite the successes, the reserve faces some crucial obstacles; for example, regardless of an abundance of rhetoric as to the value of partnerships, the process of actually entering into effective partnerships with the private sector is compromised by administrative hurdles.*
- *Without more effort to communicate the value of protected areas to make the local community aware of the uniqueness and value of their reserves and biodiversity, local action will be undermined.*



Both the fynbos and subtropical thicket vegetation types of the Nelson Mandela Metro are recognised as conservation priorities.

## 2.4 Lowland Conservation in the Nelson Mandela Metro

### (i) The Nelson Mandela Metropolitan Open Space System (NM MOSS) Project

Nelson Mandela Bay (previously the Nelson Mandela Metropolitan Area) covers an area of nearly 2 000 km<sup>2</sup> and incorporates the city of Port Elizabeth and the towns of Uitenhage and Despatch. Lying at the southeastern corner of the CFR, this metropolitan area has the unique privilege of being South Africa's only "five biome city". Driving around the largest metropolitan area in the Eastern Cape Province is like enjoying a condensed tour of South Africa. In just one day you can experience typical Eastern Cape subtropical thicket; forests of the type that made the Garden Route famous; grasslands that have for centuries supported the region's cattle herds; the semi-arid Nama-Karoo; and the proteas, restios and ericas that are typical of the fynbos.

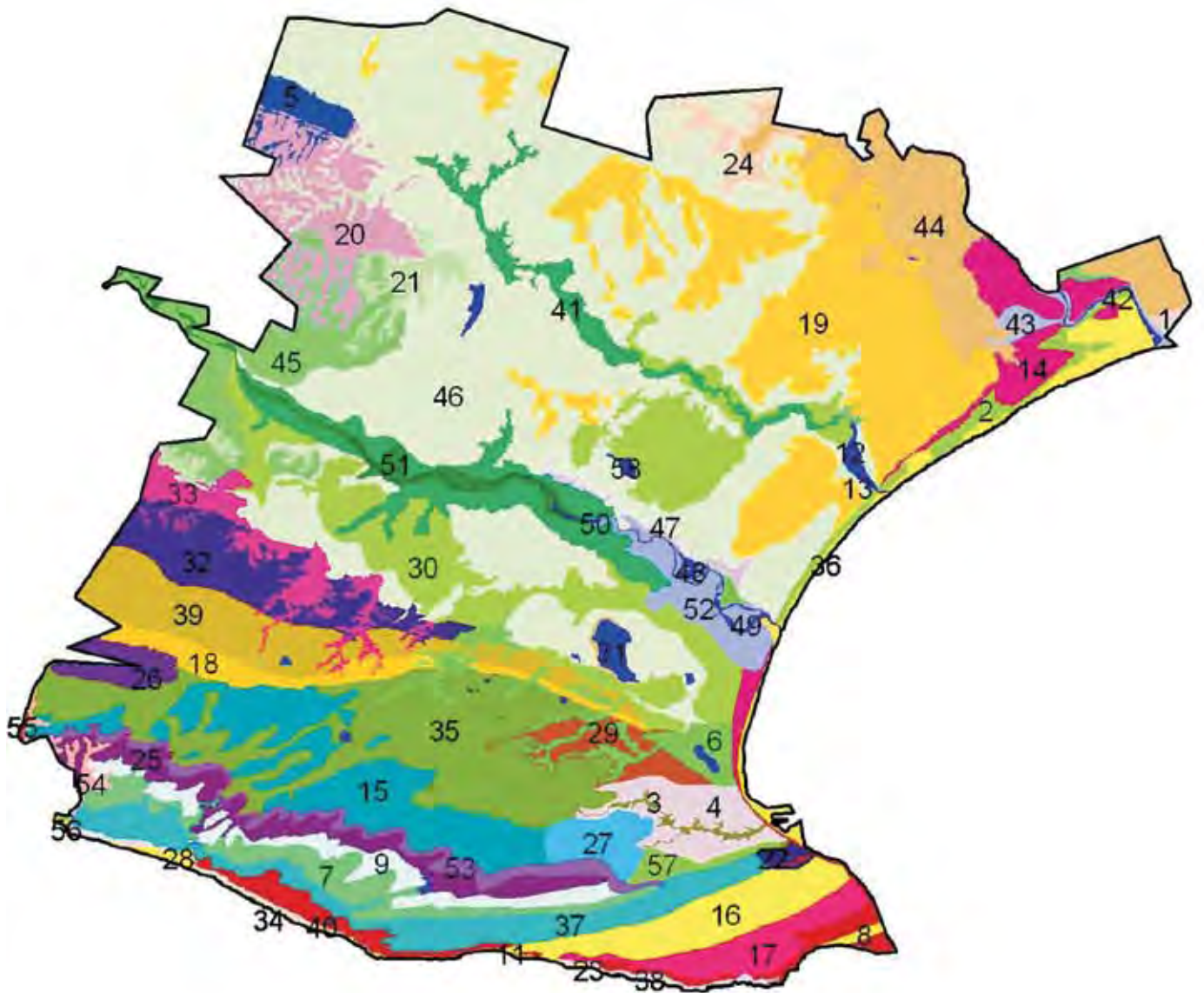
Compared to Cape Town, where over 70% of lowland habitats have already been transformed, Nelson Mandela Bay is still relatively undeveloped, with only 30% having been transformed by cultivation or urbanisation. In a proactive effort to ensure that future land use planning and decision-making serves the needs of both citizens and biodiversity, local government and civil society have seized the opportunity to plan an open space system for the Metro.

#### More sites needed!

The NM MOSS Project showed that the existing system of conservation areas in Nelson Mandela Bay is not sufficient to attain the conservation targets set. Nineteen of the region's 58 vegetation types



## NM Moss Vegetation Types



- |                                     |                                     |   |
|-------------------------------------|-------------------------------------|---|
| Albany Dune Thicket                 | Grass Ridge Bontveld                | Skurweberg Grassy Fynbos                    |
| Algoa Dune Thicket                  | Groendal Fynbos                     | St Francis Dune Fynbos Thicket Mosaic       |
| Baakens Forest Thicket              | Groendal Fynbos Thicket             | Sundays Doringveld Thicket                  |
| Baakens Grassy Fynbos               | Humewood Dune Fynbos                | Sundays River                               |
| Bavlaans Spekboom Thicket           | Intermediate Beach                  | Sundays River Floodplain                    |
| Bethelsdorp Mesic Succulent Thicket | Koedoeskloof Karroid Thicket        | Sundays Spekboom Thicket                    |
| Bushy Park Indian Ocean Forest      | Kragga Kamma Indian Ocean Forest    | Sundays Thicket                             |
| Cape Recife Bypass Dunefield        | Lady Slipper Mountain Fynbos        | Sundays Valley Thicket                      |
| Chelsea Forest Thicket Mosaic       | Lorraine Transitional Grassy Fynbos | Swartkops Escarpment Valley Thicket         |
| Coastal                             | Maitlands Dunefield                 | Swartkops Estuarine Floodplain              |
| Coastal Hummock Dunes               | Malabar Grassy Fynbos               | Swartkops Estuary                           |
| Coega Estuary                       | Motherwell Karroid Thicket          | Swartkops River                             |
| Coega Estuary Floodplain            | Pan                                 | Swartkops River Floodplain                  |
| Colchester Strandveld               | Rocklands Renoster Bontveld         | Swartkops Salt Marsh                        |
| Colleen Glen Grassy Fynbos          | Rocklands Valley Thicket            | Thornhill Forest and Thornveld              |
| Driftsands Bypass Dunefield         | Rocky Beach                         | Van Stadens Afromontane Indian Ocean Forest |
| Driftsands Dune fynbos              | Rowallan Park Grassy fynbos         | Van Stadens Forest Thicket                  |
| Goudini Grassy Fynbos               | Sandy Beach                         | Van Stadens River                           |
|                                     | Sardinia Bay Forest Thicket         | Walmer Grassy Fynbos                        |
|                                     | Schoenmakerskop Rocky Shelf Fynbos  | Wetland                                     |

This colourful patchwork of 58 different vegetation types reflects the astounding ecological diversity within the Nelson Mandela Metro. The NM MOSS Project aims to inform both forward planning initiatives (e.g. the SDF) and development planning in the Municipality and thereby safeguard this diversity.

## A proactive conservation plan

### Conservation targets

*The NM MOSS Project sets targets for the conservation of vegetation types, species of special concern and ecological processes.*

*The Nelson Mandela Metropolitan Open Space System (NM MOSS) Project is a partnership between Nelson Mandela Bay, the Wildlife and Environment Society of Southern Africa's Biodiversity Conservation Unit (WESSA-BCU), the Terrestrial Ecology Research Unit (TERU) at the Nelson Mandela Metropolitan University, the TMF and the Mazda Wildlife Fund. The partnership developed a framework for an open space plan for the Metro through a process of rigorous ecological research coupled with a programme of public participation. Scientists used Geographic Information System (GIS) techniques to create fine-scale maps showing the distribution of natural vegetation communities, as well as ecological processes, and endemic and threatened species. They assessed the conservation status of this biodiversity, and investigated options for conserving biodiversity pattern and process. Citizens informed the design of the future open space system and suggested how it could contribute to social and economic development.*

*In a city with as rich a biodiversity heritage as Nelson Mandela Bay, it is not enough simply to set aside a certain percentage of the total area of the city for conservation. An effective conservation plan must take account of the different ecological communities and processes and ensure that each of these has a good chance of survival. Special attention needs to be paid to vegetation types that are under the greatest pressure.*

*After assessing the current status of biodiversity, the NM MOSS Project set conservation targets for the different elements making up the overall biodiversity picture in the Metro. The project also identified priorities for expanding the conservation network. See opposite.*

*It is not just the diversity of ecosystems that makes conservation planning in Nelson Mandela Bay extremely challenging. The Eastern Cape faces huge socio-economic problems, with high levels of urban and rural poverty, a critical shortage of jobs and housing, and capacity constraints in government departments. In such a context, making biodiversity planning a priority may seem an impossible dream. However, an understanding of the fundamental importance of biodiversity to the sustainability and quality of human life in the Metro makes this investment in planning justifiable in socio-economic as well as ecological terms.*

## Implementing NM MOSS

*Current projects include:*

- *rezoning priority conservation land owned by the municipality to public open space.*
- *developing private land owner conservation initiatives.*
- *a community conservation project in the Van der Kemp's Kloof / Parsonsvelei area.*

*Realising the vision of "... a representative proportion of all biodiversity in Nelson Mandela Bay [being] effectively conserved, in a manner that is embraced by local communities, endorsed by government and recognised internationally" will require ongoing advocacy, capacity building, and monitoring and evaluation. The partnerships established during the planning phase must be strengthened and expanded. Urban planners, developers and decision-makers must be convinced of the need for biodiversity conservation in the Metro, and able to use the planning framework and decision-support tools that have been developed. Perhaps most importantly, the public must be enabled to appreciate the benefits of the plan, because ultimately the success of NM MOSS depends on the will of the people of Nelson Mandela Bay.*



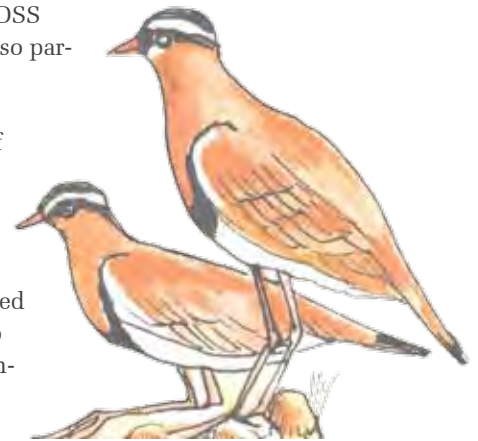
are not represented at all in protected areas and only five are adequately conserved according to the conservation targets.

The project used the conservation targets to draw up a plan for a representative protected areas system for the Metro. In addition to retaining all provincial and local nature reserves and natural heritage sites, the plan recommends adding all sites with critically endangered habitats to form the core conservation areas in a metropolitan reserve network.

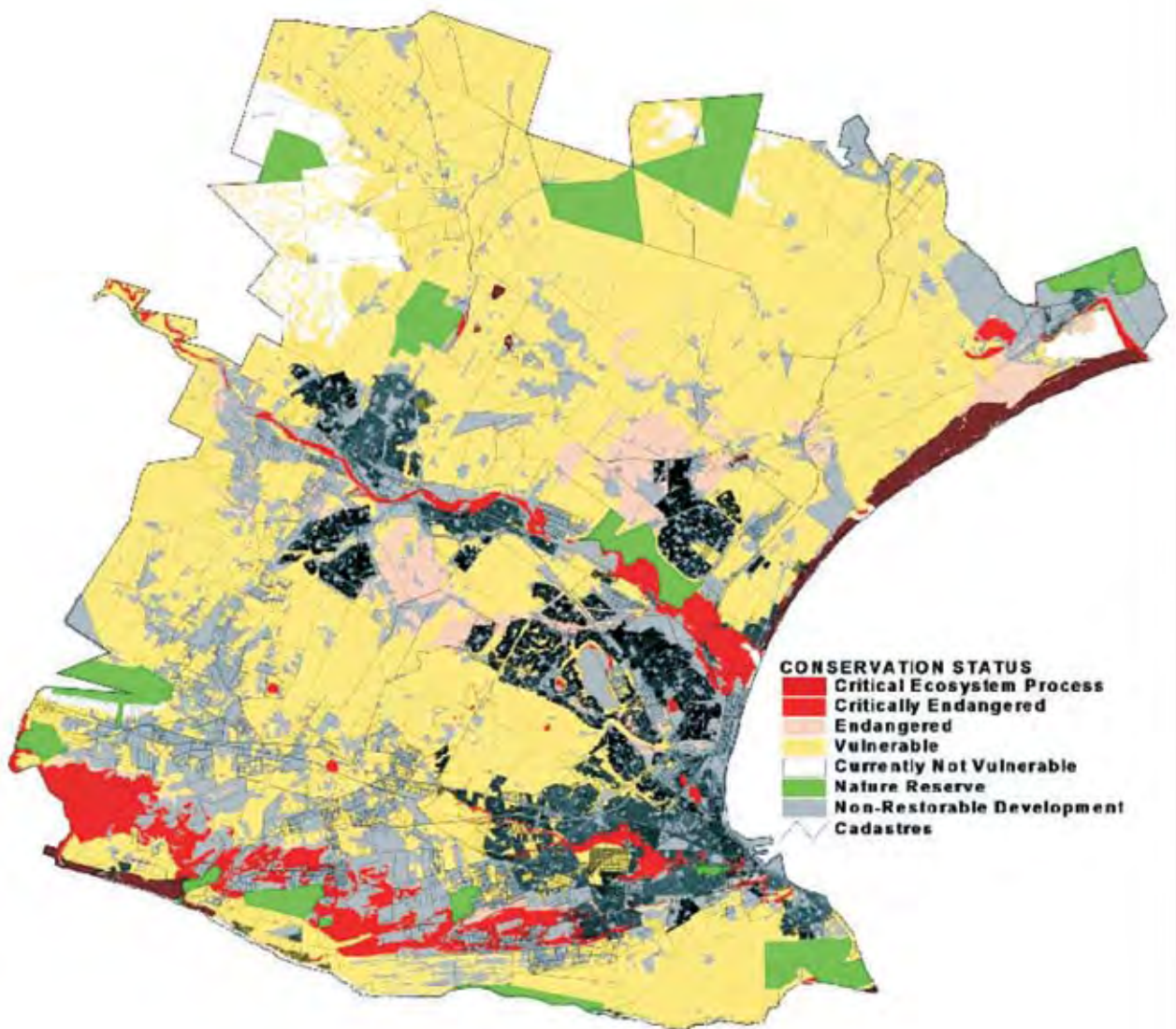
It also recommends that, where possible, sites classified as endangered or vulnerable should either be included in the

reserve network or managed as biodiversity corridors linking the reserve network. With nearly 63% of land in the Metro being privately owned, the NM MOSS will only succeed if landowners also participate in the programme.

Already a significant proportion of the conservation estate is made up of private nature reserves and conservancies; the challenge will be to guarantee the long-term security of these protected areas, and to develop incentives to encourage more landowners to conserve biodiversity on their properties.



## NM Moss Vegetation Types



The NM MOSS Project has developed maps that show the distribution of biodiversity features, their conservation status, areas where urban open space zoning is recommended, and existing and planned development areas.

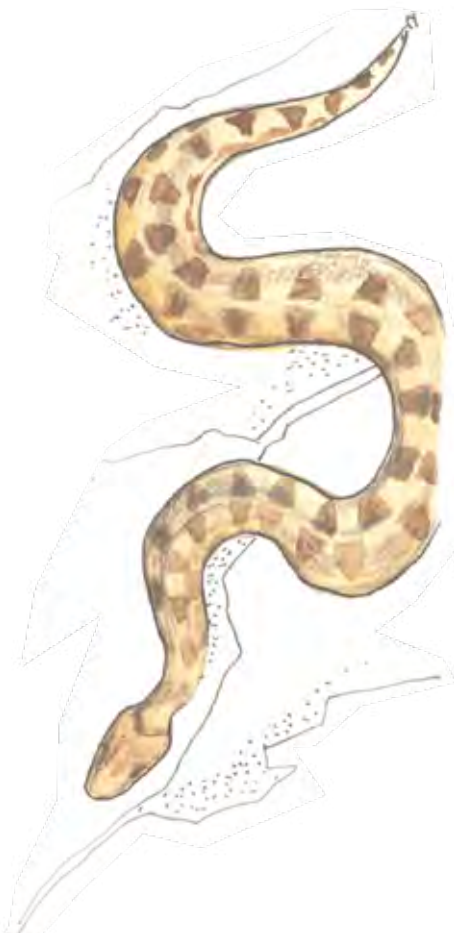




**W**arrick Stewart together with Brian Reeves established the WESSA Biodiversity Conservation Unit in the Eastern Cape. Following an initial approach of determining conservation priorities at fine-scale in Nelson Mandela Bay, Warrick provided leadership for the implementation of some important projects including capacity-building for local municipalities and conservation stewardship support in critical habitat corridors.

## What have we learned?

- *Developing a metropolitan open space system (MOSS) plan requires effective partnerships between government and civil society.*
- *The agency that will implement the MOSS plan must be involved in developing the plan.*
- *A stable institutional environment greatly enhances long-term planning processes like MOSS planning.*
- *The public was generally not interested in the conservation assessment, but rather in the potential benefits and improved management of open space. To develop greater public support for biodiversity conservation in the Metro, conservation agencies need to work with and build on the existing interests and concerns of people.*
- *There is a general lack of biodiversity planning capacity in municipalities; the project team identified the need for training and mentorship in this field, and commissioned the development of learning support materials to address this need.*
- *Providing information about biodiversity and development in the form of fine-scale maps greatly facilitates land use planning and decision-making at municipal level.*
- *The land owner has the final say as to what takes place on his or her property. The success of NM MOSS and its associated conservation management plans relies on the co-operation of both public and private landholders.*
- *NM MOSS needs a system to keep track of developments to ensure that piecemeal losses of habitat do not eventually result in the Metro being unable to meet its conservation targets.*



## Implementation begins

A comprehensive, scientifically justifiable conservation plan is now available to guide development planning and decision-making in Nelson Mandela Bay; the challenge now is to implement this plan.

## Conservation challenges in an urban community

### Van der Kempkloof-Parsonsvlei: a conservation priority

Bethelsdorp, one of the oldest Congregational mission stations in South Africa, was established in the nineteenth century in the Van der Kempkloof-Parsonsvlei area. It falls within the Nelson Mandela Bay metropolitan area and was identified during the NM MOSS Project as one of 12 priority conservation sites in the Metro. The vegetation of the area is diverse, including both fynbos and subtropical thicket, and at least six Red Data plant and animal species are found. Local people are well aware of the value of the vegetation, as they have used it for centuries for a host of purposes, from grazing and thatching, to food and medicine. However, more pressing issues prevent them from conserving these important natural assets in their environment.

As the Metro grows, the natural vegetation has been coming under increasing pressure from expanding informal settlements, increased grazing, poor waste management, frequent fires and off-road vehicles. Land degradation has undermined the community's traditional livelihoods and also threatens potential biodiversity-based opportunities that could be developed in the area, such as nature-based tourism.

THE WESSA-BCU (Eastern Cape Region) undertook a year-long consultative process in the greater Van der Kempkloof-Parsonsvlei area and developed an ecological management plan for the area. They consulted existing institutions and projects to find out about the area and the aspirations of the local community. An ecological management plan was developed, which included the proposed proclamation of a municipal nature reserve, a private conservation land owner initiative, and associated recreational, educational and economic development projects. For a number of reasons, the plan has not been implemented fully yet; however, many consultants working in these areas are finding the plan a useful guiding document.

### Theory—practice gaps

The lack of project implementation in the Bethelsdorp area illustrates an important lesson in putting conservation plans into practice. Fine-scale conservation planning is a highly rational scientific process. It charts the distribution of vegetation types, sets conservation targets, and decides on priorities for intervention. While the planning process may be technologically challenging, it is, relatively speaking, the easy part. Implementing these plans can be a highly complex and in some contexts even a problematic social process.

Developing and implementing a conservation management plan for a “target area” is not simply an extension of a rational conservation planning process. People living in the target area may have completely different aspirations for their environment, for example preferring the prospects of urbanisation to vague notions of biodiversity-based business, of which they may have no experience. People are also understandably suspicious of outsiders who arrive wanting to make plans for their communities, especially when the process appears to be taking place rapidly.

These issues are compounded by the complexity of communities. Using the term “the community” can conjure up a picture of a group of similar people with comparable aspirations whose interests are championed by representatives who strive to fulfil the needs of the whole group. It would be hard to find such a community anywhere in the world, and soap operas and newspapers alike remind us that social groups are generally characterised not by neat structures but by messy politics.

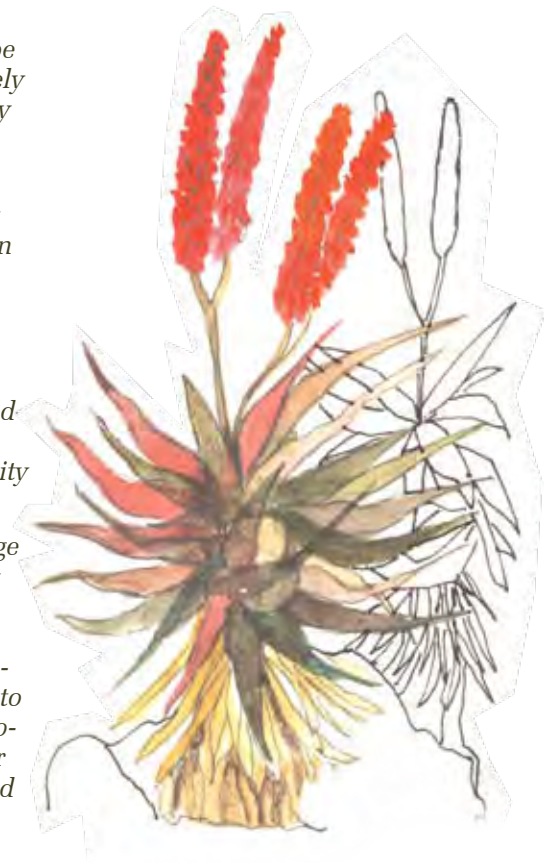
So, when the project manager working in the Van der Kempskloof-Parsonsvlei area speaks of a “gap between theory and practice”, he is describing the realities of trying to overlay a neat GIS planning layer on the complexity of a real-life community of people. If the plan is to become reality, the process will require a considerable investment of time, resources and capacity building. Sustainable implementation will rely on local people, conservationists, social scientists, development workers in NGOs and CBOs, and municipal officials who are committed to the process in the long term.



### What have we learned?

- *While developing conservation plans is a relatively neat, rational scientific process, implementing these plans is a messy social process that requires wisdom, skill and lots of time.*
- *Unless communities and landholders have proof that conserving biodiversity will be profitable, they will be unlikely to give up the livelihoods they are familiar with and know they can rely on.*
- *People are reluctant to adopt plans that they feel have been made for them, especially when these plans come from an outside agency.*
- *Conservation planners have very little experience of including communal land such as Church property in biodiversity networks in South Africa.*
- *Municipalities are facing huge socio-economic development challenges, and at the same time many lack the capacity to deliver basic services. Conservation agencies will need to continue playing a role in biodiversity planning that under different circumstances would be the responsibility of local government.*

The WESSA-BCU (Eastern Cape Region) undertook a year-long consultative process in the greater Van der Kempskloof-Parsonsvlei area and developed an ecological management plan for the area.





## A well-documented process

*It takes extensive research to plan an ecologically, economically and socially sustainable biodiversity corridor. Some of the documents produced during the Cederberg planning phase included:*

- **Pre-feasibility Study:** *Economic potential & impacts of a mega-reserve*
- **Biodiversity Profile:** *Natural and cultural heritage, its value, current conservation status & research needs*
- **Socio-political Profile:** *Community consultation & review of government policies*
- **Spatial Plans & Priority Areas:** *A suitable planning domain boundary; analysis of all relevant spatial data available for the area.*
- **Strategic Management & Business Plan:** *Drafted by the steering committee*
- **Tourism Development Plan:** *Consolidated biodiversity-based tourism plan & list of role-players in the GCBC*



For Wupperthal resident Moshall Mouton, one of the most significant things that came out of this project was a realisation that the initiative was “not merely a planning exercise, but rather an integral part of helping the community to develop its ecotourism business plan”. In other words, stakeholders didn’t have to wait until the overall strategic planning phase was completed before they experienced tangible benefits.

C.A.P.E. Programme has committed \$1.1 million to support a variety of implementation projects in the biodiversity corridor.

### Crossing the boundaries

The GCBC covers a staggering 1.8 million ha in both the Northern and Western Cape Provinces and includes both state and privately owned land. It stretches from the Nieuwoudtville plateau in the north to the Groot Winterhoek Wilderness Area in the south, and from the Sandveld of the West Coast to the Tankwa National Park in the east, and incorporates the Cederberg Wilderness Area. It spans an ecological gradient from moist mountain fynbos to semi-desert and represents two globally significant biodiversity hotspots: the CFR and the Succulent Karoo.

CapeNature does not intend consolidating this biodiversity corridor by acquiring or directly managing extensive new landholdings. Instead, the conservation agency is trying to implement a stewardship approach. Jaco Venter, project co-ordinator for the initiative, describes this approach as recognising and working with the “lived in, worked in” nature of an extended landscape.

### New name—new identity

What’s in a name? Quite a lot, actually. Names are loaded with meaning, and the legacy they reflect may not always be a positive one. During the early stages of the public participation process when community groups, landowners and

## 2.5 The Greater Cederberg Biodiversity Corridor

### (i) Conservation Corridors

One of the recommendations of the C.A.P.E strategy was the establishment of mega-reserves or conservation corridors that are large enough to sustain biodiversity patterns and processes in the CFR, even in the face of global climate change. Due to the extent of land transformation in the region, there are limited opportunities to create these corridors; possible sites identified included the Cederberg, Baviaanskloof and Gouritz areas. With the support of the Critical Ecosystem Partnership Fund (CEPF), Cape-Nature investigated the establishment of mega-reserves in the Cederberg and Gouritz regions, undertaking extensive stakeholder participation and planning processes.

In June 2004, CapeNature launched the Greater Cederberg Biodiversity Corridor (GCBC), marking the culmination of a ground-breaking planning process. The planning phase generated a number of comprehensive specialist reports, as well as strategic management and business plans for the GCBC. Encouraged by the success of the planning phase, the

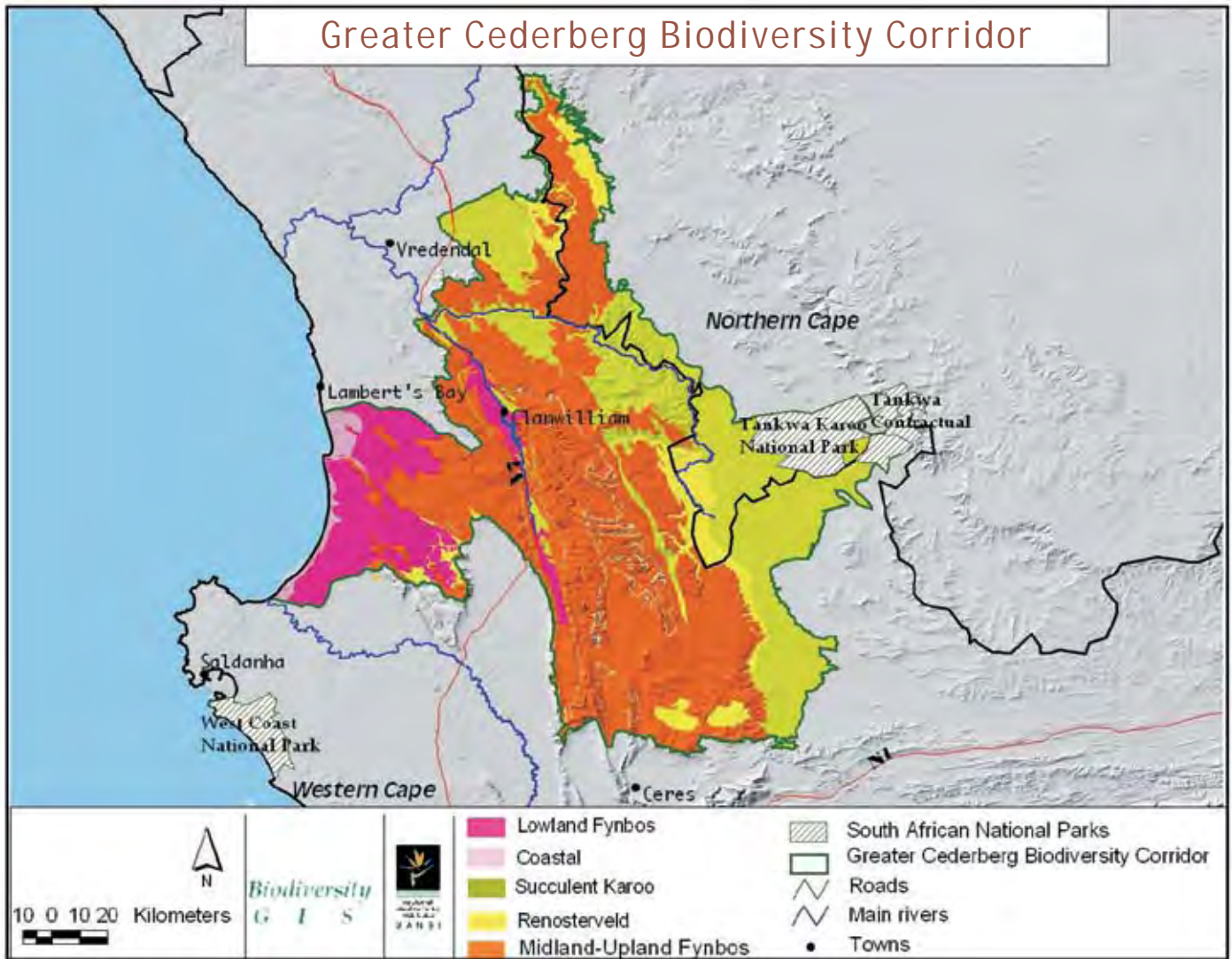


Rock Art in the Greater Cederberg Biodiversity corridor.



Despite having to travel great distances, over 100 people participated in consultative workshops to plan the GCBC strategy.





government departments were first introduced to the idea of a Cederberg mega-reserve, it became clear that the term “reserve” had negative connotations for many people. It reminded them of earlier processes of nature reserve establishment and raised fears that CapeNature might want to buy or expropriate their land, put a fence around it and deny them access to traditional livelihoods. A task team was given the challenge to come up with a more appropriate name and settled on the Greater Cederberg Biodiversity Corridor. The name is significant, not only because it more accurately reflects the nature of the area, but also because the name was given by the people of the region.

**Planning together for action**

The planning phase of the GCBC initiative was a positive process that was characterised by partnerships and the close alignment of planning and implementation. A steering committee was established, made up of important role-players

from the region who actively championed the process. Various action groups gave practical support to the steering committee.

People travelled long distances to attend meetings and workshops, but they were happy to do so because these were productive events that promoted implementation. For instance, stakeholders who participated in the Action Planning Workshop were able to contribute to the development of a draft strategy that guided the planning phase. In turn, the strategy development process provided a context for stakeholders to develop their own business plans for biodiversity-friendly enterprises. Experienced project staff members were on hand to provide support, with the result that the planning phase generated both an overall strategy for the GCBC and more specific business and action plans. This co-operative approach resulted in good working relationships between stakeholders.

The Greater Cederberg Biodiversity Corridor crosses provincial boundaries, spans ecological gradients and represents two biodiversity hotspots.





*Jaco Venter has brought his experience as a project manager to bear on the Greater Cederberg Biodiversity Corridor. Working closely with Jaco Rheeders, CapeNature's Business Unit Manager for the Cederberg, he has developed good relationships with stakeholders from all walks of life, facilitating progress with the project. He is seen here with Steve Gildenhuys who is working on the Kogelberg project.*

## What have we learned?

- *Always plan for implementation. If a plan does not lead to an Action Plan with commitments for implementation, then the plan is of no use and it will probably just waste valuable resources.*
- *Promote implementation, even during the planning phase. Try not to put projects on hold until the planning phase is completed; help people to develop strategic direction, business plans, management plans and capacity to implement these plans using available staff and resources.*
- *Aligning planning with implementation encouraged stakeholder buy-in and raised awareness of the corridor process.*



### Chipping away at the Sandveld

Stretching from the West Coast across the coastal plain to the Olifants River mountains in the east, the western section of the Greater Cederberg Biodiversity Corridor is known as the Sandveld. The process of mapping the biodiversity corridor drew attention to the rapid loss of natural habitats in this region. In stark contrast to the well-conserved mountainous parts of the corridor, in the Sandveld only the wetlands of Elandsbaai and Rocherpan are formally protected; most habitats are now classified as vulnerable, endangered or critically endangered.

### Improved Communication and implementation

The GCBC initiative has improved communication and strengthened co-operation between natural resource management agencies in the region; for example, in working with local landowners, the Department of Agriculture and CapeNature have integrated two complementary projects: Area-wide Planning (AWP) and Stewardship (Chapter 5.2 (i)). Through the AWP process, the Department of

Agriculture is probing the conservation willingness of landowners and encouraging them to enter into Stewardship agreements with CapeNature in order to conserve natural corridors in the landscape.

The AWP process involves drawing up a database and detailed maps of current and future land uses on farms. This area-wide inventory enables the Department to co-ordinate agricultural land use planning to ensure sustainability in the long term. The database includes a "conservation willingness" score, which is based on questions answered by the land owner. This helps the GCBC Management Team to decide which landowners to approach first to discuss Stewardship arrangements. Thanks to good co-operation between the Management Unit and landowners, conservation planning has been progressing rapidly in the GCBC. Already, plans are underway to establish contract conservation areas that will provide a corridor for leopard movement between two mountain ranges.

In the Sandveld, AWP gives landowners an opportunity to inform the departments represented on the Sandveld Task Team of any issues and project proposals they consider to be important in the area. These recommendations are presented to the relevant departments at quarterly Sandveld Task Team meetings.

### Good stewards of the Corridor

The GCBC Management Unit is helping Sandveld landowners to identify and implement sustainable land management options. The Unit is working closely with DEA&DP to provide advice on sustainable land use and to streamline the development application process. The Unit is also helping landowners to set up a Water Association in order to start addressing the urgent issue of water conservation in the Sandveld. Progress has been made with best practice guidelines for biodiversity management by the rooibos tea industry. One of the key objectives of the GCBC Management Unit is to adapt these guidelines for the potato industry.

The GCBC Management Unit is also actively bringing the plight of the Sandveld to the attention of a wide range of people. In addition to generating considerable media coverage, members have given presentations at farmers' association and women's group meetings, as well as at the Annual General Meeting of



## State of emergency!

Nine of the 12 vegetation types in the Sandveld are threatened by habitat loss—mostly due to potato farming.

*Historically this arid lowland area was mainly used for grazing cattle. When it was discovered that the soils were suitable for potato farming, vast tracts of virgin veld were ploughed up and centre-pivot irrigation installed. The economic imperative was strong: a farmer can earn about R1.2 million per year from a 20 ha potato circle, compared with only R110 000 per year from about 2 000 ha of grazing land. It's therefore no surprise that about 975 ha of natural habitat is being transformed every year, or about 2.7 ha per day! Compared to other parts of the province, this area has been experiencing the greatest pressure from agricultural development: departmental records show that 80% of all virgin land cleared for agriculture in the province between 1989 and 2004 was along the West Coast.*



*Potato circles are having a devastating impact on biodiversity, but this isn't the only problem. Groundwater levels are dropping fast, threatening all livelihoods in the region—including potato farming. The level of Verlorenvlei, a wetland of international importance, is also falling, making us question just how well protected our so-called protected areas really are. Climate change predictions suggest strongly that the western parts of South Africa will become progressively drier. If Sandveld farmers want to stay in business, they will need to start looking for sustainable alternatives to intensive potato farming.*



Like a giant cookie-cutter, the irrigation circles have removed all natural vegetation.

*To address these issues of unsustainable farming, destruction of natural vegetation and falling groundwater levels, a Sandveld Task Team was formed, comprising representatives of CapeNature, DEA&DP, DoA, DWAF and municipalities. The Task Team has been meeting with landowners and communities throughout the Sandveld to investigate local needs and seek more sustainable alternatives. People have discovered that they have much in common and are working together to share examples of good practice and decide on regional priorities.*

## Northern Cederberg Donkey Trails

*In the northern Cederberg, an exciting community tourism opportunity has been launched that will introduce you to traditional Cederberg hospitality and transport, while you marvel at the magnificence of the Wilderness Area. Drive or get a lift to the top of Pakhuis Pass, where you will be met by Abraham Ockhuis, resident of Heuningvlei, who will give you a lift in a traditional donkey cart along the jeep track that winds its way down the northern flank of the Cederberg to the village. There you can stay the night in a guest house, enjoying traditional food and swapping stories under the stars. Spend a day or two hiking and enjoying Heuningvlei hospitality, and then return to the Pass by donkey cart. Soon you may be able to continue your ride down the valley, as plans are under way to extend the donkey cart trail to Wupperthal, the Moravian mission town famous for its veldskoek factory. This innovative tourism venture is an opportunity for the villages of the northern Cederberg to benefit directly from a growing interest in the natural beauty and cultural history of the place that has been their home for centuries.*

*To book a Cederberg Donkey Trail, please contact the Porterville office of CapeNature, the booking agent for the Heuningvlei community, on (022) 9312900 / cederberg@cnc.org.za.*



Donkey cart trails are an exciting tourism innovation in the Cederberg.

Potato SA. They have even taken provincial government ministers and representatives of Conservation International and the GEF on flights over the area to see the impact of the potato circles and experience first hand just how little natural Sandveld vegetation survives.

From the start, the GCBC initiative has encouraged a partnership approach to biodiversity conservation that involves landowners, local communities, municipalities, non-governmental organisations and government conservation agencies. The broad conservation strategy for the biodiversity corridor must go hand in hand with plans to promote social and economic development through wise use of the region's natural and cultural resources. As the implementation phase unfolds, partners are working together to develop models of best environmental management practice, particularly in areas of high conservation priority like the Sandveld.

### (ii) The Cederberg Rare Project

The cedar is an icon for another innovative project—the Cederberg Wilderness Awareness Campaign, co-ordinated by Kobie Hanekom of CapeNature. Kobie is the local representative of Rare, an international NGO that develops conservation education programmes in biodiversity hotspots around the world.

An important aspect of the Rare strategy is the assessment of their awareness campaigns. According to the pre- and post-intervention questionnaires Kobie distributed, the community is far more aware of the value of biodiversity than they were before the campaign. And has all this awareness-raising actually made a difference to the Clanwilliam cedar and the broader Cederberg environment? Working in partnership with other conservation initiatives, Rare has broadened participation and strengthened efforts to bring the cedar back to the Cederberg.

## What have we learned?

- *When building awareness about environmental issues, don't underestimate the influence children can have on their families.*



- *In order to establish the effectiveness of an awareness-raising project, it is essential to put a monitoring and evaluation programme in place from the beginning.*
- *Before developing an awareness programme, consult a wide range of local stakeholders to ensure that you understand the issue and the local context.*
- *Conservation information doesn't have to be presented in a serious way: fun activities and materials are effective means of introducing environmental topics.*
- *The media is a vital partner in spreading the conservation message.*
- *Sound partnerships enhance the effectiveness and reach of conservation education projects.*

## The Rare Programme [www.rareconservation.org](http://www.rareconservation.org)

*Based at the University of Kent in England, the Rare Programme is supported by Conservation*



*International (CI) and the Critical Ecosystem Partnership Fund (CEPF). Rare identifies biodiversity hotspots needing conservation education programmes and offers scholarships to build the capacity of project co-ordinators. Successful applicants from all over the world attend a 10-week training course in Kent. Their contracts last for 30 months, during which the co-ordinators implement biodiversity awareness programmes guided by a comprehensive manual. Return visits to Kent give participants opportunities to share and reflect on their programmes and to learn from the experiences of others. Rare's conservation education approach is based on turning a charismatic flagship species into a symbol of local pride, and using this as a focus for developing understanding of the value of biodiversity and the need to conserve it.*

## PROFILE

### Kobie Hanekom

Kobie, a qualified teacher, had just started working for CapeNature as a field ranger when the opportunity came up to apply for Rare scholarship. "I joined CapeNature in April; by June I was on my way to England. It was an incredible experience going abroad, making friends with colleagues from China, Indonesia, the Philippines and Sierra Leone and learning so many things," he recalls.

When he returned, Kobie started working with schools and community groups, raising awareness of the biodiversity of the Cederberg and threats facing the wilderness area. It has been a busy couple of years, with talks at farm open days and community forums, a regular slot on Radio Namaqualand, and distribution of posters, fact sheets and bumper stickers. Kobie also developed a user-friendly booklet on environmental legislation and ran a training programme for the police service, which was very well received.



If working with adults is the serious side of Kobie's job, visiting the 11 schools around the Cederberg Wilderness Area is the fun part. Their cedar tree mascot and puppet show introduce children to the uniqueness of their environment and build a sense of pride in their heritage. Teaching a captivated audience of Grade Ones The Cederberg Song, Kobie is in his element. "These children aren't just the future," he declares. "When they go home to their families this afternoon, they will tell them what they learned at school today. I believe that children are 'message multipliers' who can help to spread awareness of biodiversity in their communities today." As Kobie waves goodbye to another delighted class, he leaves them with their "A to Z" colouring-in books to remind them of what they have learned about the Cederberg: A is for Astronomy; B is for Buchu; C is for the Clanwilliam cedar ...

## Sharing learning

*Within the broader C.A.P.E. network, there are growing opportunities for people from the different regions to share ideas. Recently stakeholders involved in the Baviaanskloof Mega-Reserve invited representatives from the Greater Cederberg Biodiversity Corridor to share ideas about setting up cedar nurseries to help with the conservation of the endemic Willowmore cedar, *Widdringtonia schwarzii*.*



World renowned: The IUCN recognises the Clanwilliam cedar as one of 43 conifers in the world requiring special conservation attention. The tree has been protected in South Africa for more than 100 years.



*Civil society stakeholders govern the Greater Cederberg Corridor Initiative under the guidance of Fanie Bekker, Chairman of the Steering Committee and Acting Chief Executive Officer of CapeNature. Fanie is the recipient of a C.A.P.E. Gold Conservation Award for his extensive contributions to the conservation of the Cape Floristic Region over the past two decades.*

### (iii) A Cederberg icon

Isn't it ironic that the very tree that gave its name to the magnificent Cederberg mountains is today so rare that it has been listed as a Red Data species? The population of endemic Clanwilliam cedar trees (*Widdringtonia cedarbergensis*), which as recently as the early nineteenth century grew in stands that stretched for many kilometres, is now limited to isolated gnarled survivors standing defiantly amongst rocky outcrops at high altitudes. People have put pressure on the Clanwilliam cedar since the earliest times. Fires set by the San and Khoi to flush out game and to stimulate new growth for grazing destroyed saplings and giants alike. But it was the hunger of the European settlers for its strong and fragrant wood—for floors, ceilings, furniture and miles upon miles of telephone poles—that sealed its fate. Today frequent devastating veld fires leave this species with a slim chance of survival.

In 1987, CapeNature conservation officer S V van der Merwe established a nursery in an attempt to bring the cedar back to the Cederberg. Thousands of saplings were planted out each year. After 1995 considerable help came from volunteers involved in the Botanical Society's Cederberg Conservation Group, who assisted with plantings. When the nursery closed in 2000 due to budgetary constraints, the Botanical Society,



*Penny Mustart, co-ordinator of the Botanical Society's current initiatives in the Cederberg, sees the cedar as an icon for conservation efforts in the Cederberg. "Our focus on the cedar is not just about conserving the species," she says. "The cedar is a charismatic tree. People hear about its plight and want to do something to help. So the cedar has been used as a focus in broader environmental education and community development programmes."*

with funding from Fauna and Flora International (FFI), established a new nursery at Matjiesrivier on the eastern side of the Cederberg Wilderness Area. Committed members of the Cederberg Conservancy assist CapeNature in managing the nursery.

Bushmans Kloof Wilderness Reserve and Retreat, an exclusive guest lodge in the northern Cederberg, also recognises the iconic nature of the cedar. They have established a satellite nursery and host an annual Cedar Tree Weekend in May, when guests join people from the community to plant out cedar saplings in a woodlot at Heuningvlei village and in the surrounding mountains.

Additional cedar nurseries are planned for the Clanwilliam area to provide training and employment opportunities, as well as a chance for local communities to help to conserve the cedar.

## What have we learned?

- *Focusing on a particular species as an icon can be a vital tool for stimulating a wider interest in biodiversity conservation.*
- *The involvement of diverse partners (institutions, NGOs, landowners, local communities and business) provides a solid base for long-term project sustainability.*



## 2.6 The Baviaanskloof Mega-Reserve

### (i) An Eastern Cape treasure

In the Eastern Cape, a flagship mega-reserve is in the making. With its core in Port Elizabeth's vital water catchment area of the Baviaanskloof and Kouga mountain ranges, much of the area has been conserved since the 1920s, when the Baviaanskloof Forest Reserve was declared and managed as a mountain catchment area. In 1987 the forestry land was given nature reserve status and today the Baviaanskloof Nature Reserve plus six smaller nature reserves make up the protected core of the mega-reserve. Now, one of C.A.P.E.'s most progressive conservation partnerships has been forged under the leadership of the Eastern Cape Parks Board and the Wilderness Foundation. The Baviaanskloof is remarkable in terms of the diversity of its natural ecosystems. In 2004 this richness was acknowledged internationally when the Baviaanskloof was listed as one of eight areas making up the new CFR World Heritage Site. Seven of South Africa's eight major natural regions or biomes are represented here, and you will find plants and animals typical of fynbos, forest, grassland, succulent karoo, Nama-Karoo, subtropical thicket and savanna. Two of these biomes—the fynbos and succulent karoo—are globally recognised “biodiversity hotspots”. Being declared a “hotspot” is a dubious honour, however; it means that your region is home to a spectacular variety of unique

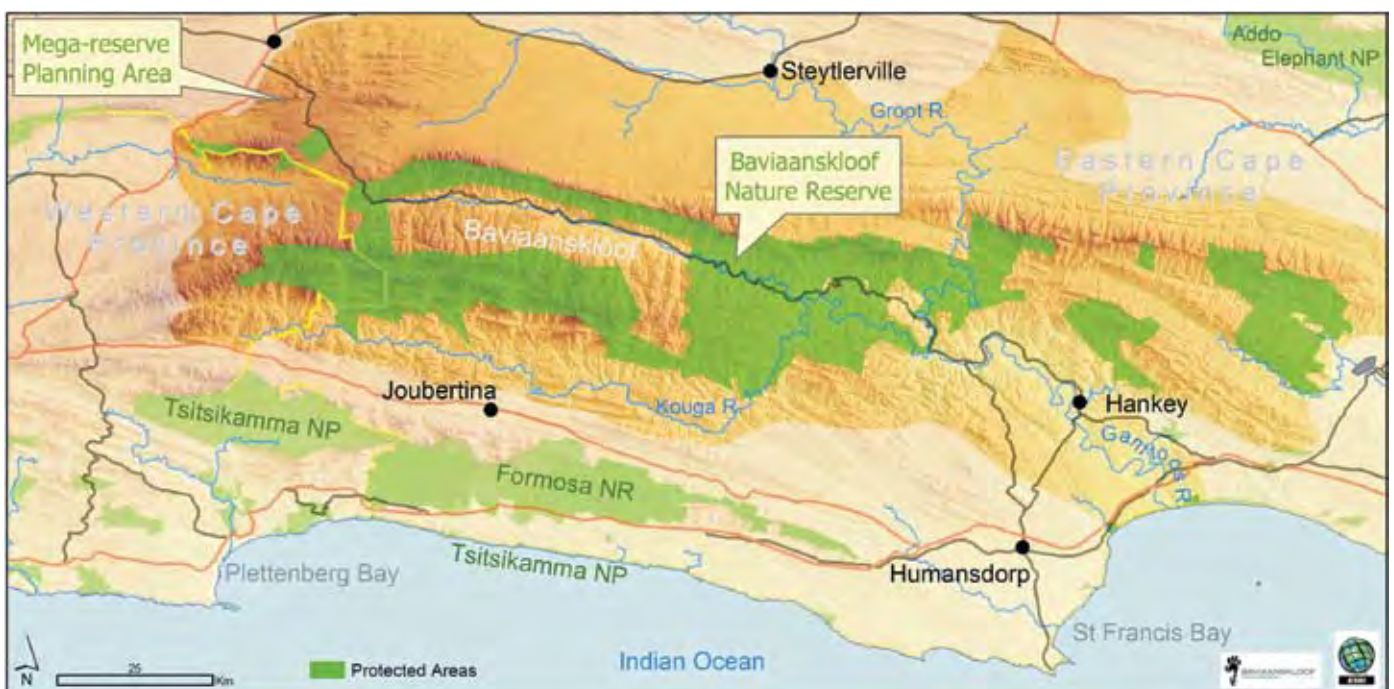
### Hotspot statistics

*A remarkable number of plants and animals call the Baviaanskloof home—but many of these are threatened with extinction:*

- *About 1 200 different types of plants have been recorded in the Baviaanskloof Nature Reserve (BNR).*
- *Scientists estimate that about 2 500 species grow in the whole mega-reserve area; this is about 10% of all the plants in South Africa.*
- *More than 50 species of plants in the BNR are threatened with extinction.*
- *20 species are endemic to the Baviaanskloof—in other words, you won't find them growing naturally anywhere else on earth.*
- *Other than the leopard, all the large carnivores that once lived in this area are locally extinct.*
- *The Baviaanskloof is recognised as a Globally Important Bird Area; more than a third of all South African bird species are found there.*
- *24 of the 57 reptile species, and eight of the 17 amphibians found in the BNR are endemic to South Africa.*

plants and animals, but also that much of this diversity is under threat. In the Baviaanskloof mega-reserve planning region, the most threatened habitats are lowland areas along rivers, which have been extensively farmed for generations.

The core of the Baviaanskloof planning region comprises seven nature reserves (the Baviaanskloof Reserve Cluster). The Kouga, Baviaans and Groot Rivers join to form the Gamtoos River, which provides a linkage to the sea.





Baviaanskloof Fynbos.



Euphorbia dominated Gamtoos thicket.



Farm workers.



Rock art.



### Keeping people on the land in living landscapes

A considerable amount of ecological, social and economic research has been conducted in the Baviaanskloof region to determine how best to conserve the diverse ecosystems and natural processes within the mega-reserve area. Ecosystem programmes like C.A.P.E., the Subtropical Thicket Ecosystem Programme (STEP) and the Succulent Karoo Ecosystem Programme (SKEP) agree that the most sustainable way forward for this unique area is to “keep people on the land in living landscapes”.

Many people in the Baviaanskloof live in poverty so it was essential that the mega-reserve should bring economic opportunities to the region. An extensive two-year stakeholder process funded by the CEPP generated a vision and five-year management plan for the Baviaanskloof Mega-Reserve (BMR), which were launched in September 2004. Major project partners are the Eastern Cape Parks Board and the Wilderness Foundation. This initiative has helped to spread the news about the rich natural and cultural heritage of this region, and to stimulate a demand for tourist facilities and services in the area. The initiative has attracted considerable funding for new developments in this part of the Eastern Cape, with international donors, local funders and government investing generously in ecological restoration, infrastructure development,



*At the C.A.P.E. Partners' Conference in June 2004, Albert Mfenyana, Chief Director of the Eastern Cape Department of Economic Affairs, Environment and Tourism (DEAET), reflected on how being a C.A.P.E. partner had strengthened conservation efforts in the Baviaanskloof. (Albert was recognised for his contribution to the C.A.P.E. Programme by the award of a C.A.P.E. Gold Conservation Award in 2006):*

- C.A.P.E. combines biodiversity issues with social upliftment and community involvement;
- integrates the activities of various implementation agencies;
- enables co-ordinated management of fynbos;
- provides access to funding;
- has elevated the status of the Baviaanskloof.

job creation and capacity building. Ecotourism is starting to complement agriculture, conservation and catchment management as an income generator in the area.

### Take time to lay a firm foundation

South Africa is a wonderfully innovative society, and visitors to this country often refer to our “can-do” attitude. Mega-reserves or biodiversity corridors are an example of innovative thinking in biodiversity conservation. The vision is inspiring but, because it is a new idea, we have no long-term case studies from which to learn. The people involved in creating these corridors have to be willing to “make the path by walking it”.

Two years were set aside to consult stakeholders and develop a vision and management plan for the BMR, but this proved to be insufficient. Setting up meetings across the region took much longer than expected because of the remoteness of the area. Much of the Baviaanskloof is a





*The Baviaanskloof Mega-Reserve is based on a systematic conservation plan developed by Andrew Skowno, pictured here with Aziz Bonzaner (right) and Slaheddine Ben-Halima of the World Bank.*

wilderness area, known for its excruciatingly bad roads. Communities are small and isolated, and the diversity of social groups is as rich as the biodiversity for which this area is famous, so a variety of communication forums were required. A complicated land claim involving one of the farms in the kloof has also required considerable time to resolve.

Furthermore, the BMR planning process has been taking place at a time of broader institutional change in the province. The Eastern Cape Parks Board, which is the public entity responsible for managing the core protected areas of the mega-reserve, was only established in 2004 through the amalgamation of the Protected Areas Section of the Eastern Cape Department of Economic Affairs, Environment and Tourism, and the Eastern Cape Tourism Board. The organisation therefore needs time to develop institutional structures and capacity, as well as co-operative governance systems and agreements with the various role-players involved in the mega-reserve.

Donor-funded projects are governed by goals and time frames; however, authentic public participation is neither a



predictable nor efficient process. It was therefore necessary to apply for a project extension to complete the stakeholder consultations. The funders wisely granted this, realising that the future of the mega-reserve depended on a firm foundation of understanding, trust and good communication being laid in the preparatory phase.

## Opportunities to communicate

*Communication approaches have varied depending on the stakeholder groups:*

- *A popular publication on the Baviaanskloof (Boshoff, Kerley & Cowling 2000) helped to promote and garner support for this project. An updated version was published in 2005.*
- *The Baviaanskloof Steering Committee oversees the project management unit. It meets once a quarter and enables a range of stakeholders (government, academia, NGOs, civil society, organised agriculture, C.A.P.E., etc) to report on and guide developments in the BMR.*
- *Specialist working groups are formed on an ad hoc basis to address matters as they arise. Getting these groups to function effectively can be very time consuming, however.*
- *Community groups in the Baviaanskloof initially requested mass meetings with the PMU representative to ensure that everybody had direct access to information about the BMR. But large meetings have their limitations and communities are starting to develop representative community structures that will allow for smaller meetings with PMU staff.*
- *A skilled land negotiator, Colyn Scheltema, born and bred in the area, was appointed to introduce landowners to the concept of the BMR; most communication takes place in one-to-one meetings, but also at agricultural co-operative meetings and by means of a newsletter.*



Colyn Scheltema.



*Matthew Norval and community stakeholders discuss issues of common concern in the Western Baviaanskloof.*

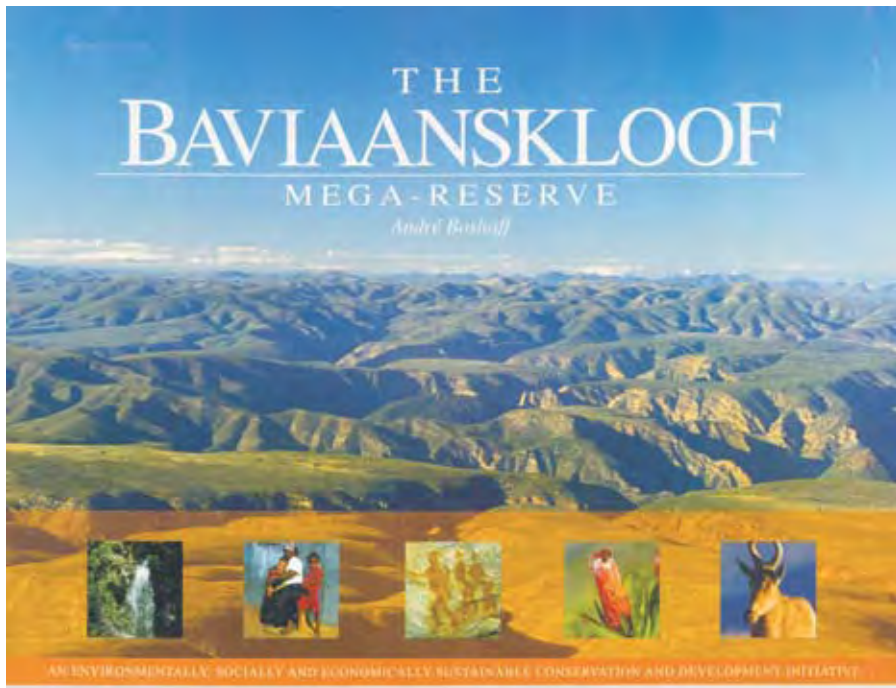
PROFILE

### Matthew Norval

#### Communication is the key

Members of the BMR Project Management Unit (PMU) led by Matthew Norval agree that the most significant lesson learned during the BMR planning process has been the importance of good communication. Different approaches have been appropriate in different contexts (see box), but all groups have contributed constructive input into development of the mega-reserve vision and management plan.





*Oupa Chauke is an intern working with the Baviaanskloof team on poverty relief programmes.*

a rare plant grows. A commercial farmer might decide to join a local conservancy or, when the Parks Board creates the necessary contractual frameworks, contract a portion of his farm into the reserve and re-stock it with game.

The vision of “keeping people on the land in living landscapes” is a challenging concept to both the conservationists who manage the nature reserves and people who live and work in the BMR. The core conservation areas will drive ecotourism in the BMR, so to attract visitors the PMU is developing and upgrading infrastructure in the reserves. The people of the kloof are already benefiting from job opportunities created by these developments and are also starting to develop their own tourism-related ventures. The communication structures mentioned above will enable people to share their experiences and inspire others to find ways in which they too can care for and benefit from the rich natural and cultural diversity of the Baviaanskloof.



*The Government's Expanded Public Works Programme is designed not only to provide poverty relief measures, but to break the cycle of poverty through the development of skills and programmes that build communities and have positive impacts on the environment.*

**Making the mega-reserve work**

As in the other biodiversity corridor areas, it has taken landowners time to accept that the Eastern Cape Parks Board does not intend to evict them from their properties in order to forcibly incorporate land into a protected area. Strengthening biodiversity conservation in the Baviaanskloof requires both direct conservation actions and the provision of secondary services to support ecotourism. Participation in the mega-reserve can therefore take many forms: a community member could benefit from having her guest room listed on an accommodation website; a gardening group might develop a farm stall to sell organic produce to visiting tourists; or a small stock farmer could agree not to graze his goats on land where

**PROFILE**

**Eleanor MacGregor**

Eleanor MacGregor has used her skill to develop a very positive relationship with community stakeholders in the Baviaanskloof.

In the Baviaanskloof, “communicating conservation” has taken on a new meaning. Traditional one-way communication of conservation messages to communities has been transformed into a conversation with all stakeholders. A number of PMU staff members are newcomers to the Baviaanskloof who recognise that they need to learn from local people whose families have lived in the area for generations. They have been listening to the needs and concerns of local communities and exploring together how biodiversity conservation in the Baviaanskloof can contribute to a better quality of life for all who live there. The Baviaanskloof Steering Committee is helping to ensure that long-term problems, like the poor state of roads, are addressed by the relevant authorities. Poverty relief and lottery funding for alien eradication, thicket rehabilitation and construction projects is helping to address unemployment, and has already generated about 90 temporary jobs for Baviaanskloof residents.







*The Eastern Cape presents an interesting challenge as the new Eastern Cape Parks Board grapples with its new mandates including the Baviaanskloof Mega-Reserve. They are supported in this role by Skyma Mancotywa of the national Department of Environmental Affairs and Tourism and by Monde Maqula of the Eastern Cape Department of Economic Affairs, Environment and Tourism.*

## (ii) A community vision for the western Baviaanskloof

The vision for the Baviaanskloof Mega-Reserve is much bigger than conserving the existing core of protected natural areas; it envisages a place where people can live and work on the land in ways that safeguard biodiversity, respect local cultures and ensure sustainable livelihoods. The people who live in the western Baviaanskloof have been involved in discussions to clarify a vision and practical action plan for their area.

The vision that is emerging is “to create a home in which all its people can live and work in safety and dignity, that has opportunities for all, including the women and youth, and in which the diversity of our people, our cultures and our environment is respected, celebrated and protected.” “It’s a very beautiful place! Many people value the area and we are proud of it; we want to stay and conserve it.”

The people of the western Baviaanskloof feel that it is time to get away from the idea that the only way to conserve an area is to move people off the land; they see people, the natural environment and the economy as interdependent and believe that the kloof can provide work and social development opportunities. They acknowledge that they need to do careful research to find the most sustainable ways to use the natural resources of the kloof, but believe that agriculture, tourism, ecological management and restoration, and improved community services hold the key to a more sustainable future. It’s early days and the action plan is a living document that will evolve, but we



hope that one day our children will be able to say: “The plan our parents started has been good for us!”

## (iii) A sustainable future for the Baviaans Conservancy

How feasible is the idea of developing a biodiversity-based economy within biodiversity corridors and mega-reserves? A group of landowners in the northern part of the Baviaanskloof Mega-Reserve decided to find out. During 2005, members of the Baviaans Conservancy appointed expert consultants in the fields of ecology, economics, tourism and game farming to carry out feasibility studies to enable them to make informed decisions about converting their land from agriculture to more biodiversity-friendly activities like game management and ecotourism. Project manager Karen Kirkman reports that research results have been very interesting but not necessarily what they had hoped. “Initially we planned to convert the conservancy into a game reserve and stock it with the Big Five. However, both the tourism and financial analyses indicate that this will just not be feasible. It will require a huge investment to convert entirely from small-stock farming to game farming and ecotourism, and these are both new and risky

For the people of the western Baviaanskloof, the dream of a sustainable future is simply to have a place where they can be with their families and have work.

## Lessons learned

*Three major principles or dreams*

- *In future there are people living and working here;*
- *The kloof must provide opportunities for everyone, not just those who have capital or land*
- *The plan must acknowledge the biodiversity and cultural heritage of the kloof, and find ways to use this for future generations.*

## The Baviaans Conservancy

*Established in 1997, the conservancy is located in the foothills of the Baviaanskloof Mountains, 20 km from Steytlerville. It involves 17 landowners and covers 53 000 ha on 23 farms.*



Established in 1997, the conservancy is located in the foothills of the Baviaanskloof mountains, 20 km from Steytlerville. It involves 17 landowners and covers 53 000 ha on 23 farms.



Members of the Baviaans Conservancy commissioned a feasibility study to investigate the game farming and ecotourism potential of the area.



Community members performed a traditional dance to celebrate the launch of the Baviaans Tourism Route at the community-owned farm Sewefontein.

businesses for people whose families have been small-stock farmers for generations. Our conservancy is off the beaten track, 160 km from Port Elizabeth and 40 km along a gravel road in the Steytlerville area. The Eastern Cape already has numerous well-established protected natural areas like the Addo National Park and Shamwari Game Reserve, which are accessible from major roads. With competition like this, why would tourists visit us?" she asks.

It is clear that a radical change from agriculture to ecotourism is unrealistic. But the study has provided the members of the Baviaans Conservancy with a variety of other scenarios to explore. Agriculture may need to remain the mainstay of the local economy for many years, but landowners can now start developing additional income-generating opportunities like farm-stays, nature-based tourism, hiking and hunting. Rather than trying to replace agriculture with biodiversity-based activities, the challenge seems to be to find ways to integrate these two land use types.



## What have we learned?

- *Changing from agriculture to more biodiversity-friendly land uses is not a simple matter. In the Baviaans Conservancy, numerous factors make radical changes financially unviable and therefore unsustainable.*
- *Farmers are highly unlikely to give up farming in favour of a livelihood with which they are unfamiliar (e.g. ecotourism), especially if the risks are high and the returns are unpredictable. It is more realistic to slowly and incrementally diversify one's business.*
- *Conservationists need to provide farmers with more specific information on how they can help to conserve biodiversity pattern and process on their land. This will enable farmers to integrate biodiversity conservation with their farming activities.*
- *More research is needed into sustainable farming methods that are appropriate to specific areas.*
- *State incentives for land use change will have to be well defined, concrete and long-term in order to influence landowners.*



#### (iv) Pride of Groendal

Based on their well established Pride of Table Mountain project in Cape Town, the Wilderness Foundation has developed the Pride of Groendal youth leadership development project in the eastern part of the Baviaanskloof Mega Reserve. The project operates in the Groendal Wilderness Area, which is ideally situated close to the towns of Uitenhage and Despatch and the city of Port Elizabeth within the Nelson Mandela Metro.

The Pride of Groendal project provides opportunities for youths over the age of 14 years to develop their leadership potential by training as field guides. To date four young people have become confident trail leaders, and another four are now involved in the training programme. The youth leaders have taken more than 300 young people on guided trails, exposing them to the natural splendour of the Groendal Wilderness Area. Through this programme, the Wilderness Foundation hopes to give thousands of youths from disadvantaged urban areas the opportunity to experience, enjoy and develop respect for their natural heritage.

For most, this trail is their first Wilderness experience. The sights, sounds and smells of the bush have a profound impact on the youth, and most can't wait to return. As new trail leaders are trained, more and more young people will be able to share in the Groendal experience.

Zamuxolo Tanda of Lwandlekazi Senior Secondary School says "This was my first time in a Wilderness Area and I learned lots of things about plants and animals and how nature is important to us. I would love to come back here."

## 2.7 The Gouritz Initiative

### (i) The Gouritz Initiative

#### Making a plan for the Gouritz

The C.A.P.E strategy proposed that three conservation corridors should be created to sustain biodiversity processes in the CFR, namely the Baviaanskloof, Cederberg and Gouritz corridors. Phase One of the Gouritz Initiative (GI) got under way in May 2003 with the aim of developing a management plan to conserve and restore the biodiversity and water resources of the Gouritz conservation corridor.

### Bioregional benefits

*The GI has benefited greatly from work done in the region on the SKEP. This programme has been able to draw on both the knowledge and networks developed through SKEP.*



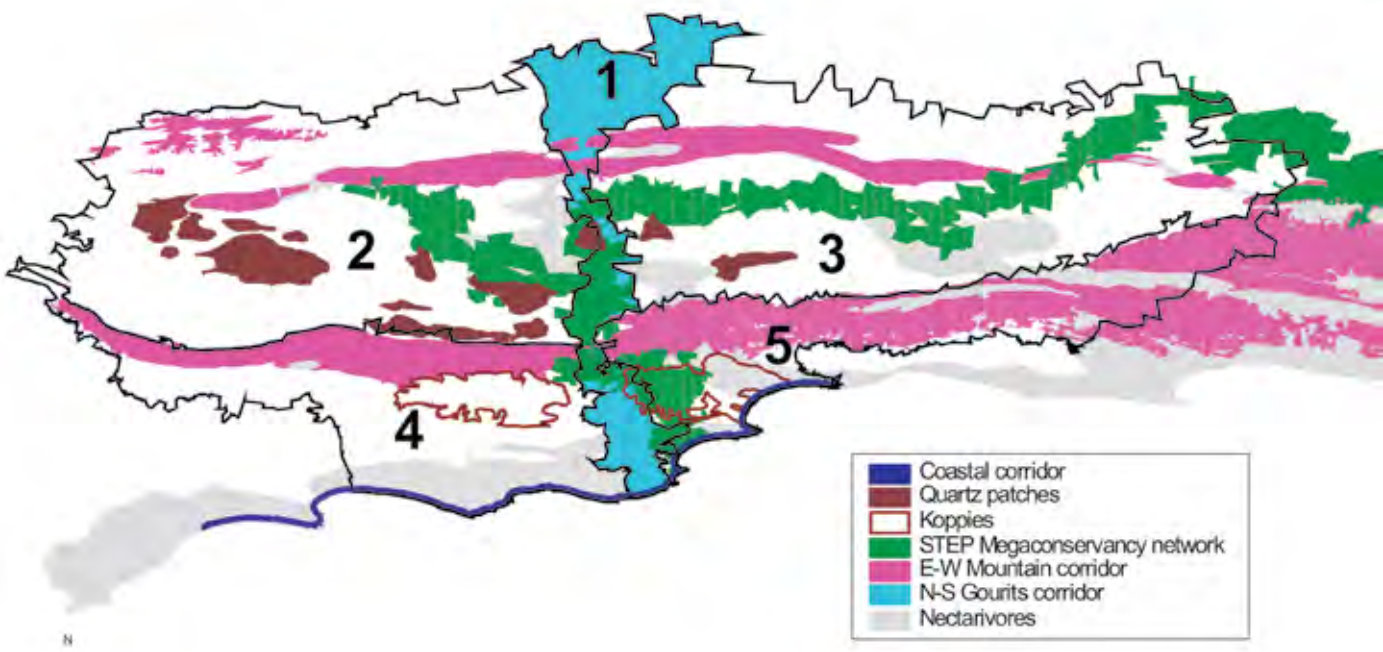
It was important to the project team to plan in a manner that would build support among its major stakeholders, from government departments and conservation agencies to landowners and local communities. During the two-year planning process, biodiversity research was conducted simultaneously with extensive consultations with a wide range of stakeholders. The decision to consult stakeholders like the Department of Agriculture and private landowners before deciding on the boundaries of the planning domain contributed to greater openness and trust. It also enabled the GI project team to plan more realistically; for example, conservationists could suggest other productive uses of marginal agricultural land, while avoiding including highly productive land in plans for conservation areas. The outcome was a management plan that is supported by a wide range of stakeholders in the Gouritz region.

#### A multitude of habitats

Researchers have identified 64 distinct habitats within the Gouritz region. Although only about 12% of the planning domain has been transformed and nearly 26% of the area enjoys some level of protection, nearly half the habitat types are endemic to the planning domain. This means that it is entirely up to the people of the Gouritz region to safeguard these unique communities of plants and animals that occur nowhere else on earth. Already habitat transformation caused by agriculture, coastal development and alien plant invasions has destroyed more than half the original extent of three of these endemic habitats. The Gouritz Initiative is determined to halt any further loss of these threatened vegetation types.



The Gouritz region is home to three biodiversity hotspots, namely the Fynbos, Succulent Karoo and Thicket Biomes. The area has therefore been in the spotlight of three bioregional programmes, C.A.P.E., SKEP and STEP.



The Gouritz Initiative planning domain includes a wide range of habitat types, from succulent karoo and mountain fynbos to quartz patches and river catchments. To facilitate management planning, the region is divided into five management sectors.

**From river corridor to planning domain**

The initial vision for the GI was to establish a conservation corridor along the Gouritz River, stretching from the inland mountains (Anysberg-Swartberg and Gamkaberg-Rooiberg) via the coastal mountains (Langeberg-Outeniqua Mountains) to the sea. This corridor would allow for the movement and dispersal of animals and plants and would conserve natural habitats across a range of altitudinal gradients, which is believed to be

necessary to buffer the effects of climate change.

As the specialists met to consider the immediate and long-term needs of a number of key plant and animal species, the extent of the Gouritz corridor continued to expand. The idea of a corridor following the Gouritz River system worked for some species, like thicket vegetation, aquatic animals and a number of carnivores, but it was actually the mountain ranges that proved to be more important



corridors for fynbos plants and some bird species. Conserving mountain corridors would also contribute to effective fire management and allow movement of species in response to possible changes in rainfall seasonality from west to east.

In addition to these fairly continuous river and mountain corridors, research in the Gouritz region identified special habitats like quartz patches and koppies that have large numbers of unique species, but which occur as “stepping stones” rather than as corridors in the landscape. Eventually, instead of a simple corridor, the GI developed a management plan for a planning domain that was so extensive that it was necessary to divide it into five sectors to allow for effective planning and management.

#### Inform, inspire, involve

One of the strengths of the GI has been its enthusiasm to inform and involve others. The implementation team knows that they cannot possibly achieve the goals of the GI alone. The project will be a success if the people who live, work and play in the region understand how special the environment is and know what they can do to care for it.

To help inform and involve the public, the GI has produced booklets, pamphlets and a website in the two main languages of the region. Sometimes scientists find it difficult to translate their knowledge into a form that the public can appreciate; but this has definitely not been a problem in the GI. Publications have been written in everyday language and an up-beat style, making information accessible, interesting and inspiring.

By participating in agricultural and municipal forums, developing educational programmes for learners and teachers, and spending time in one-to-one visits with farmers and municipal officials, GI partners are making information available, sowing the seeds of ideas, inspiring enthusiasm and involving people in living more sustainably in the Gouritz region.

#### Start small—and build

The implementation phase of the GI has only just begun. CEPF funding has been secured and a four-person team appointed to co-ordinate the programme over a period of 30 months. The projects to be tackled during the implementation phase aim to improve linkages between existing conservation areas, to develop a sustainable land use ethic among the people

## Water, biodiversity and people

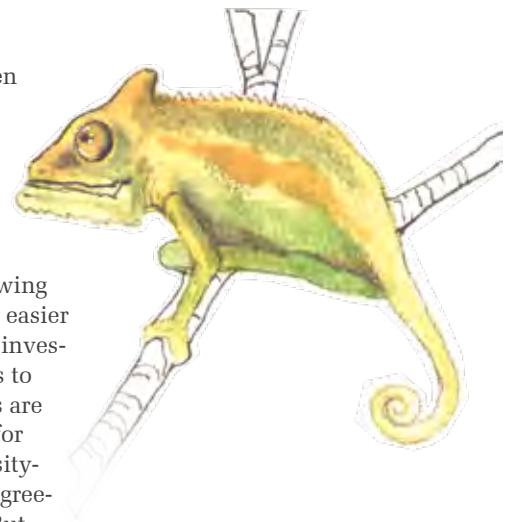
*A very important goal of the GI is to conserve the water resources of the Gouritz River for the benefit of both people and biodiversity. The Gouritz River and its tributaries flow through arid parts of the Great and Little Karoo before crossing the rapidly developing coastal plain between Albertinia and Mossel Bay. A survey has shown that the catchment cannot sustain even current levels of water use. More and more people are moving into the region and putting pressure on local resources; it is therefore essential to learn to manage the water resources of the Gouritz more effectively.*

*There is a considerable amount of groundwater abstraction in the catchment, with boreholes tapping water as deep as 2–3 km below the surface. In the Kammanassie Mountains, for example, water abstraction has caused perennial streams to dry up; this has caused the death of endemic Cape mountain zebras, which cannot survive more than 2 km from a supply of fresh water. Farmers have also suffered, with many going bankrupt as their weirs no longer supply enough water to allow them to irrigate.*

*There are risks associated with relying on groundwater: the deeper the reserves, the more mineralised the water, making it expensive to clean. It is not possible to measure how much groundwater is available and once it has been extracted, aquifers can take a very long time to recharge. This makes it difficult to predict how much water will be available for growing developments. For all these reasons, it is essential to protect water catchments and to reduce the abstraction of deep groundwater.*

of the region, and to restore severely transformed habitats that are critically important to biodiversity. They also aim to contribute positively to the economy of the Gouritz region.

A suite of “starter projects” has been selected from the GI management plan. The team believes in starting small and having something practical to show for their plans before expanding, so in most cases they will work with partners on pilot projects. As they start showing results, the team believes it will be easier to attract the interest of funders or investors, which will enable the projects to expand. Where private landowners are concerned, it may take some time for farmers to start exploring biodiversity-friendly options like stewardship agreements and tourism development. But the GI team is confident that once a few champions have shown the way, others will follow and these projects will snowball.





**M**andy Lombard



**J**an and Anne Lise Vlok have worked tirelessly in the Gouritz area to understand both the underlying biodiversity and ecosystem processes and the factors that will influence its future. Jan worked with Mandy Lombard to develop a fine-scale plan for the area, and has since then co-ordinated the initial implementation programme to establish an effective Gouritz Initiative. Jan Vlok was recognised by the C.A.P.E. programme with a Gold Conservation Award in 2006 for his exceptional contributions to research and conservation in the Cape Floristic Region.



**A** former school-teacher, Susan Botha became involved in the Succulent Karoo Ecosystem Programme in its planning phase and so was a natural choice as a team member when the spatial priorities of C.A.P.E. and SKEP were integrated in the Gouritz Initiative. Charged with project development, Susan is helping to lay a foundation for effective conservation action in this important corridor initiative in support of the C.A.P.E. and SKEP strategies.

### Incompatible legislation

One of the challenges that the GI team has had to face since the implementation phase began is the realisation that much existing legislation is incompatible with the notion of conservation corridors. In recent years, bioregional programmes have brought about unprecedented levels of co-operation between government departments, parastatals and other agencies involved in land use planning and conservation. However, much existing legislation was promulgated before these approaches became commonplace; many laws and regulations therefore support narrow sectoral interests rather than integrated thinking and planning. So, while the establishment of conservation corridors requires the removal of fences to allow for the unfettered migration of animals, it is illegal in terms of agricultural regulations to take down jackal-proof fencing. And whereas it would seem logical that a farmer should build cabins for tourists on old agricultural lands that have very limited biodiversity value, agricultural regulations stipulate that agricultural land should be retained and new developments should take place on undeveloped land! In order to enable the creation of conservation corridors, government departments will need to undertake a review of legislation and regulations. Bioregional programmes like GI can serve as catalysts to get people from different departments talking to one another to address these problems holistically.

### What have we learned?

- *The more you invest in the planning phase, the easier it will be to start implementing the project.*
- *A team effort between the various role players like CapeNature, the Department of Agriculture, the Department of Environmental Affairs and Development Planning and local authorities is helping the GI to achieve its objectives.*
- *To ensure that the goals of regional biodiversity initiatives are reached, these goals should inform the activities of partner organisations; for example, CapeNature has aligned all its activities to the GI objectives.*
- *You must consult landowners during the planning phase and not just present them with the plan of the corridor; this will undermine their trust and support.*
- *Where possible, project staff should be appointed from the area; local knowledge is valuable and if people already know and respect the staff member, it makes it easier to establish working relationships.*
- *While farmers' co-operatives and municipal meetings are good places to make initial contacts with landowners and municipal officials, nothing beats one-to-one contact. You must take the initiative to follow up.*
- *It is very difficult to get projects off the ground in politically divided communities.*
- *Although the Gouritz area is often referred to as a 'marginal farming area', agriculture provides the main income in the region and many farmers are sceptical of alternatives.*
- *Although game ranching is already popular with some farmers in the region, this is not as simple a solution as it seems; some farmers want to introduce game that is not locally indigenous (e.g. giraffe, impala, buffalo) in order to promote tourism, and advice relating to game management (e.g. carrying capacity) is not readily available.*
- *Establishing ecotourism ventures may require considerable investment and it can therefore take a number of years before these initiatives become profitable; for instance, developments are subject to environmental impact assessments (EIAs), which can be costly and time consuming. Ecotourism will have to co-exist with traditional farming practices, at least until the former proves to be financially viable. Many farmers find it difficult to accept that conservation-relat-*



*ed tourism will generate as much income as their current farming activities.*

- *Although formal contracts and biodiversity agreements are far more secure in terms of conservation than conservancies, landowners may be more prepared to start by becoming part of a conservancy and working toward a more binding agreement. Reasons include scepticism of entering into contracts with a conservation agency, and the costs and time required to confirm farm boundaries and source title deeds.*
- *Champions are essential: the best way to get a land owner to consider a new idea is to refer him to another land owner who is already sold on the idea. This, however, is a long-term process.*

## 2.8 The Garden Route Initiative

### (i) Garden Route Initiative

#### The urbanisation challenge

The newest of the C.A.P.E. biodiversity conservation landscape projects, the Garden Route Initiative (GRI) faces a unique challenge. Unlike most other landscape initiatives where conservation managers work mainly with farmers and rural communities to investigate biodiversity conservation opportunities, the planning domain of the Garden Route Initiative includes areas experiencing extremely rapid urbanisation.

Over the past few years, there has been growing resistance from environmental and social lobby groups to a number of “up-market” developments, which some feel are threatening to turn the Garden Route into the Golf Course Route. Many local residents who were once denied access to property by apartheid laws now find themselves marginalised by soaring property prices. As coastal holiday resorts morph into suburbs by the sea, people looking for “unspoilt” holiday destinations are turning their attention elsewhere. Within this rapidly changing, emotionally charged and often polarised

environment, the GRI is looking for more sustainable ways forward.

#### Co-ordinated conservation action

The Garden Route has no shortage of committed environmentalists, and numerous organisations and projects are currently addressing many of the environmental and social challenges facing the region. With the support of the GEF through the World Bank, the GRI was established in July 2004 to improve co-ordination of biodiversity conservation actions in the region. Its mission statement declares that the GRI is “a partnership programme that seeks to co-ordinate the conservation and restoration of the unique biodiversity and sense of place of the Garden Route while supporting the sustainable development of the area and the delivery of benefits to local communities.” As the major government conservation agency in the Garden Route, SANParks houses the GRI project management unit, which acts as the secretariat for the partnership and takes responsibility for planning, initiating and implementing projects.

#### Laying the foundation

GRI co-ordinator Andrew Brown sees one of his priorities during this first phase of programme development as setting up structures and systems that will enhance communication, co-operation and co-ordination of conservation efforts. This is no simple matter, as the GRI planning domain incorporates six local municipalities and two district municipalities in two provinces. But Andrew hopes that improved communication between national, provincial and local government departments, as well as the NGO community, will result in more proactive planning and better co-ordination of conservation actions in the region.

#### Fine-scale planning

In order for development planning to become more sustainable, provincial and municipal planners need information on regional biodiversity priorities. The GRI is therefore ensuring that fine-scale biodiversity planning takes place. Fine-scale biodiversity information is the foundation for developing planning frameworks and guidelines that will help planners to identify which areas should be protected (either in formal conservation areas or by other means) and where development can take place without compromising the biodiversity and natural capital of the

Before your very eyes ...

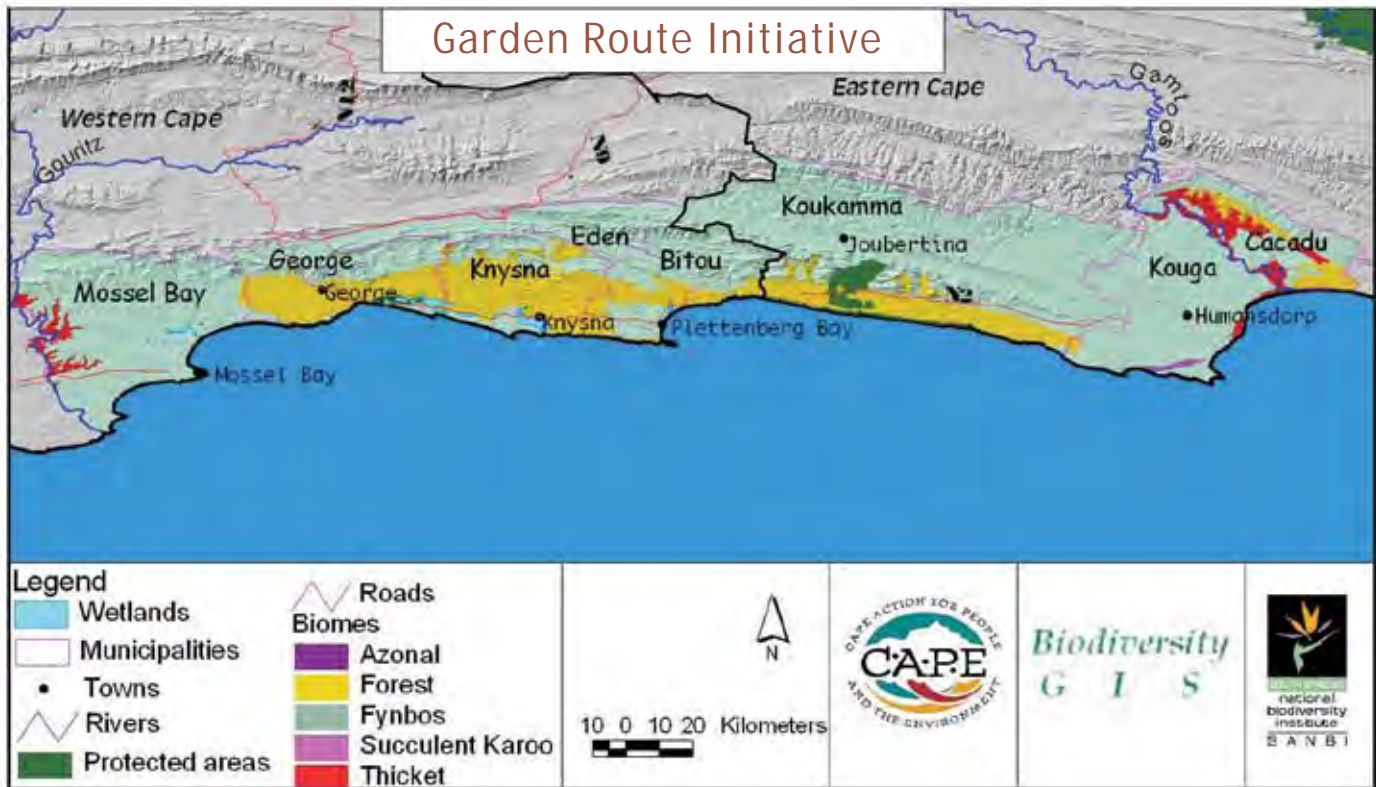
*The Garden Route is currently experiencing the second highest rate of urban development in the CFR. Only the City of Cape Town is growing faster.*



Andrew Brown was selected as Co-ordinator of the Garden Route Initiative following his extensive experience in project management at the Table Mountain National Park. He is charged with the responsibility of getting to grips with the conservation priorities on the Garden Route and mobilising an effective programme to ensure that the mosaic of protected areas and intervening lands are conserved.



Colleen Simons received the C.A.P.E. Gold Conservation Award on behalf of the Guardians of the Garden Route, who have mobilised civil society participation in opposing ill-considered commercial developments in pristine environments in the area.



Stretching from the Gouritz River in the west to the edge of the Nelson Mandela Metro in the east, the Garden Route Initiative straddles two district municipalities and six local municipalities in two provinces.

region. Fine-scale planning information and products will be used by the project management unit and GRI partners to advise the authorities on which areas are suitable for development and which areas should be conserved. Putting planning frameworks in place should reduce the number of inappropriate development applications and the conflict that inevitably ensues. It should also streamline the development approval process.

**Consolidating protected areas**

The Garden Route is well known for its rich diversity of natural habitats, from mountain fynbos and afro-montane forest, to freshwater lakes, estuaries and diverse marine and coastal environments. The region is fairly well-endowed with protected areas, especially along the coast: SANParks currently manages the Tsitsikamma, Knysna Lakes and Wilderness National Parks, while CapeNature is responsible for the Robberg and Goukamma Nature Reserves. A long-term goal of the GRI is the development of a 140 000 ha Garden Route National Park, which will incorporate a number of existing nature reserves as well as privately owned conservation areas, enabling more effective integrated natural resource management.

This dream was given a boost in April 2005 when the Department of Water Affairs and Forestry (DWAFF) handed

over management responsibility for a total of 97 000 ha of indigenous forest, mountain fynbos and pine plantation (to be felled and rehabilitated), mainly in upland areas, to SANParks. DWAFF also transferred about 130 experienced staff members plus operational budget to enable SANParks to manage this area, which includes the largest contiguous indigenous forests in the country.

Upgrading existing tourism infrastructure and developing new facilities in these conservation areas will provide much needed poverty relief work for many of the unemployed people living in the area. Already R27 million has been allocated for infrastructure development over the next three years.

In addition to consolidating protected areas on land, the GRI is also reviewing the effectiveness of existing Marine Protected Areas along the coast and drawing up new management plans and enforcement procedures. New staff members are being employed and trained, equipment purchased and facilities upgraded to ensure effective management of the region's marine environment.

**Biodiversity benefits**

If wisely managed and protected, the natural environment and biodiversity of the Garden Route will continue to provide many benefits and services to







GRI estuary.



Urbanization.



Golf course.

the people of the region, like clean water from mountain catchment areas, productive soils, healthy lakes and estuaries and scenic landscapes. The natural beauty and biodiversity of the area also make the Garden Route one of South Africa's top tourist destinations. The GRI aims to promote responsible tourism, which will create further employment and training opportunities for local people.

Managing the region's biodiversity also provides employment opportunities, such as invasive plant control, fire management, habitat rehabilitation, plant propagation and law enforcement. The GRI is also investigating opportunities for sustainable harvesting in natural areas, including medicinal plants, ferns for the floristry market, and wood for furniture and carvings. As protected areas are expanded and consolidated, the number of biodiversity-related jobs is expected to increase.

### Planning for implementation

There has been growing reaction to the issue of large-scale speculative property development on the Garden Route. Concerns have been expressed that some developments are having negative environmental impacts, and that the natural assets of the area are becoming both physically and economically inaccessible to many local people. The GRI believes that a socially just, economically fair and ecologically sustainable future is possible if development planning is informed by a deeper understanding of the region's biodiversity, and steps are taken to safeguard the natural assets of the Garden Route.

The first year of the GRI has been dedicated to laying a firm foundation of consultation, information gathering and planning. From 2006, the GRI will start implementing plans in earnest, consolidating and restoring protected areas, inviting

conservation-minded landowners to participate in stewardship programmes, and ensuring that all the people of the region have access to the benefits of biodiversity.

### (ii) Eden to Addo Corridor Initiative

The role of private landowners in conserving biodiversity is referred to numerous times in this publication. The Eden to Addo Corridor Initiative represents one of the boldest and most visionary private initiatives in the region. First mooted in 2003 by Joan Berning of the Indalo Conservancy outside Plettenberg Bay, Eden to Addo envisages a green corridor stretching from the Eden District Municipality, through the southern and Eastern Cape, to the Greater Addo National Park. Eden to Addo aims to help small groups of landowners who are caring for their land to link together to form green corridors that have far greater reach and impact than any of the individual properties. Private landowners could actually help to link the four major conservation nodes in the region, namely the Garden Route Initiative, Gouritz Initiative, Baviaanskloof Mega-Reserve and Greater Addo National Park, into a continuous corridor.

The Eden to Addo Initiative is encouraging landowners to participate in CapeNature's Stewardship Programme (Chapter 4.1) by establishing conservancies or, where critical ecosystems occur on their land, entering into more binding stewardship arrangements. In addition to this, the Initiative is drafting a Memorandum of Understanding to be signed by members of the corridor, which will encourage land management practices that enhance the ecological functioning of the corridor as a whole.

The Initiative aims to help landowners to comply with environmental legisla-



Canopy tours bring you nature with an adrenalin rush.



*Pam Booth, Eden to Addo project manager, explains that the initiative is striving to "establish a culture of private sector conservation" that "provides an alternative to the largely speculative and profit-driven brand of development that is responsible for the destruction of our landscape." She cautions that it is not enough to expect the authorities to take full responsibility for conservation; private landowners also need to start conserving their natural heritage in their own back yards.*



The Eden to Addo Corridor Initiative aims to link protected natural areas between the Eden District Municipality and the Greater Addo National Park via private landholdings.

tion and to manage their land sustainably. Once funding is secured, an Eden to Addo project management unit will be set up to give landowners the necessary support. The unit will include an experienced environmental lawyer who will be able to advise landowners on issues relating to environmental legislation.



Pam Booth, who previously worked for the Working for Water programme, will be able to help landowners draw up alien vegetation clearing plans and advise on appropriate clearing methods and herbicides. She will also act as a broker to facilitate the appointment of Working for Water contractors who can undertake alien clearing on private land. Once the Bitou Municipality finalises its property rates rebate policy, landowners involved in the Eden to Addo Initiative will qualify for a rates rebate if they have a conservation management plan in place and are actively implementing it.

## Big Walk!

*A very exciting fundraising and awareness-raising project is planned for the latter half of 2006: a sponsored walk from Eden (Wilderness area) to Addo via the Baviaanskloof. This 450 km hike promises to be an awesome experience.*

Even without major funding, landowners have started working collectively rather than as isolated individuals. The initiative has also provided a platform for improved communication and co-operation between private landowners and the conservation agencies that are spearheading the Garden Route Initiative (GRI). This can only bode well for making the vision of C.A.P.E. a reality in the Garden Route. Once funding becomes available, the implementation of this inspiring vision can start to be implemented in earnest.

The Eden to Addo vision has a very good chance of being realised thanks to the involvement of committed environmentalists and well-established environmental networks in the southern Cape, notably the Plettenberg Bay Community Environment Forum. Many residents are concerned about insensitive residential and resort development in the area and the Eden to Addo Initiative has provided them with a practical way of getting involved in counteracting this trend.

### (iii) Guardians of the Garden Route

The very rapid and often insensitive developments taking place on the Garden Route have dismayed many people. In an effort to mobilise a co-ordinated response to issues of inappropriate development, a number of organisations and individuals have formed a loose affiliation, the Guardians of the Garden Route (GOG). GOG represents a broad environmental movement; its members champion a spectrum of causes promoting social justice and ecological sustainability.

GOG demonstrates the unifying potential of a common concern. Garden Route residents who in the past had never shared a platform have come together to fight unsustainable and inequitable develop-



ments that are threatening the region. For some, the key issue is that political change in South Africa has made no difference to the economic status of the masses: as development transforms the Garden Route into South Africa's new Riviera, the problem of landlessness amongst local people increases. Others regret the loss of the rural and sylvan character of the Garden Route, and are concerned about the growing pressure on the water resources and biodiversity of the region. But whether rich or poor, land owner or tenant, as the Guardians talk and learn together, they find increasingly that they share common ground.

In November 2004, GOG co-ordinated simultaneous peaceful protest marches in several towns along the Garden Route to draw attention to its concerns. The marches attracted a huge amount of media attention, which in turn generated public debate around sustainable development issues. The marches also demonstrated to property speculators who try to play the "greens" off against the "poor" that these groups are now united against the common enemy of greed.

While the diverse membership of GOG may initially have gathered to fight inappropriate development, their struggle has evolved into a quest to clarify the norms and values that unite them. In addition to knowing what it is they are "against", GOG is clear about the society and environment they are working to achieve.

## A vision for a just and sustainable environment

- *Protect vulnerable ecological and social settings, agricultural land and natural resources;*
- *Respect cultural heritage and promote social cohesion;*
- *Provide affordable and accessible land and access to natural resources for livelihoods;*
- *Develop in ways that bring communities together;*
- *Provide meaningful opportunities, empowerment and employment, particularly for marginalised people.*



GOG co-ordinated peaceful demonstrations against unsustainable development on the Garden Route.

inequitable and

## What have we learned?

- *There is a growing awareness that social and environmental activists share a common vision; as these two groupings stand together critical mass grows.*



### (iv) The Garden Route Botanical Garden—serving community and environment

Until 2002 the Southern Cape Herbarium operated out of a "cupboard under the stairs" at the George Museum. In that year, a dream vigorously championed by the herbarium staff and volunteers became a reality: the herbarium moved to new premises adjacent to the Garden Route Botanical Garden in George, creating a centre that has become a vital botanical and environmental hub in the southern Cape. The flourishing of the centre and its numerous associated projects has much to do with the thousands of hours contributed each year by more than 30 volunteers. Chief amongst these is the energetic and visionary Yvette van Wijk. Yvette has a passion for plants



## Special collections

*The Southern Cape Herbarium houses collections focusing on indigenous healing plants and plants found at San rock art sites.*



*Yvette van Wijk is a conservation institution in her own right. With seemingly boundless energy, she has co-ordinated a group of extraordinary volunteers and has developed the Garden Route Botanical Garden "from scratch".*

and the diversity of projects based at the Garden reflects the many facets of this fascination.

### Celebrating local plant diversity

The Garden Route Botanical Garden is not just an indigenous South African garden; it specialises in locally indigenous southern Cape plants. Even in the section that displays the cultivated hybrids that are commonly grown in people's gardens, at least one of the parent plants comes from the southern Cape. The recently developed "medicinal mound" is garden-based evidence of IMITHI Amayeza, a long-term project to share and build on indigenous knowledge of healing plants with traditional healers, local clinics and HIV/Aids groups. More than 60 different types of medicinal plants from the area are grown on the mound, and these are harvested and distributed to people who need them. The mound attracts many groups who want to learn about these plants and their cultural uses.

The Southern Cape Herbarium, located midway between Cape Town and Port Elizabeth is the only public herbarium for 450 km. It provides an invaluable service to the community: in addition to housing more than 10 000 pressed and named plant specimens from the region, the simpler "quick guide" of about 2 000 specimens helps students, scholars and the general public with identifications and research. Focusing on plants from the area, the herbarium is well situated to support research and planning initiatives linked to both C.A.P.E. and SKEP.

The herbarium is far more than a library of pressed plants; it also houses a botanical and environmental reference library, and is striving to make its information resources available via the internet by digitising its databases, checklists and collections and developing an on-line image library. The Southern Cape Herbarium is becoming a critical information hub for environmental research and conservation action in the southern Cape.

### Strengthening community conservation efforts

In the face of rapid residential and resort development along the Garden Route, the Botanical Garden and Herbarium are making important contributions to sustainable development. The Herbarium

collections are vital to enable consultants carrying out EIAs to identify plant specimens collected on potential development sites. If developments get the go-ahead, the Garden undertakes "search and rescue" missions to collect threatened plants, which are then grown in the Garden in the hope that they may be used in future re-vegetation projects.

The Garden Route Botanical Garden and its partner projects are strongly community-focused. Networking and education feature high on the Garden's list of priorities, making it an influential environmental centre in the region. Staff and volunteers network locally, regionally and internationally and the Garden plays host to GREEN, the Garden Route Environmental Education Network (Chapter 6.3 v).

Educational programmes range from the "Fabulous Fynbos" Wildflower Show held each October in George, to the annual Environmental School Expo that reaches more than 2 000 learners from local schools. The Garden also produces educational booklets, information sheets and displays to support environmental learning and action. It runs courses and provides information for teachers, local government, conservation agencies and the tourism industry, as well as for its staff and volunteers. For the last seven years, the Garden and Herbarium have been running weekend courses for the paying public. These popular events have strengthened public knowledge and awareness of the environment and environmental issues, and raised much-needed funds.

In 2003, the Garden started providing formal horticultural and landscaping training for its staff. Once qualified, the gardeners will in turn provide training for unemployed prospective gardeners, as well as for grounds staff employed by large golf and housing estates in the southern Cape. In this way the Garden hopes to encourage developers to plant locally indigenous rather than alien plants, and to contribute to the sustainable management of large landholdings in the region.

### Striving for financial sustainability

The biggest challenge facing the Garden and Herbarium is becoming financially sustainable. Fundraising strategies include events like the annual flower show, sales of books and plants, partner-





ships with environmental organisations and donor funding for special projects. Without the many hours invested by volunteers, however, a number of its initiatives and services would not be possible. Most members of the Friends of the Garden and Herbarium Association are talented and experienced professionals who have retired to the Garden Route, and who now invest their time and energy in serving their adopted community and environment. The Garden Route Botanical Garden, with the Southern Cape Herbarium, has become a vital environmental focal point in the region; a strategy must be found to sustain the programme and its services.

## What have we learned?

- *It is possible to achieve a great deal without core institutional funding while working at a project level; however, this becomes increasingly difficult to sustain as projects evolve into complex programmes with property and staff positions to maintain.*
- *Networking is an essential first step in becoming known within the local environmental community; however, networking does not automatically lead to effective partnerships.*
- *To avoid seeing competition for funding as a threat, it is important to be clear on what your organisation can offer and how you can work in productive partnerships with others towards a common goal.*



## 2.9 The Agulhas Biodiversity Initiative

### (i) A focus on the Agulhas Plain

Diverse attractions

### “Cape Agulhas!”

Another busload of tourists disgorges at the candy-striped lighthouse, jostling to have their photographs taken at the southern tip of the continent of Africa. In recent years, the list of reasons why people choose to visit the Agulhas Plain has been growing steadily: whale watching, shark cage diving, the fynbos, local history, culture and crafts. Both directly and indirectly, biodiversity is proving vital to the local economy. Ecotourism is growing rapidly and the harvesting of fynbos wildflowers is currently one of the largest industries on the Agulhas Plain. In this predominantly rural area with up to 50% unemployment, the Agulhas Biodiversity Initiative (ABI) is investigating how to use the region's biodiversity in a sustainable manner so that it can benefit local communities in the long term.

The Agulhas Plain stretches from the Klein River in the west to the Breede River in the east, covering 270 000 ha of coastal lowlands and hills that stretch northwards towards the mountains (see map). The diversity of indigenous fynbos and Renosterveld plants is enormous: of the 2 500 species that occur here, 100 are endemic to the Agulhas Plain and about 112 are found on the Red Data list. Originally, the Agulhas Plain supported large herds of game, and 72 of the 81 species of terrestrial mammals that occurred in the CFR were found here. Some species like blue buck, quagga and Cape lion are now extinct and today many species are found only in protected areas like De Hoop Nature Reserve and Agulhas National Park.

### Conservation by default ... or by design?

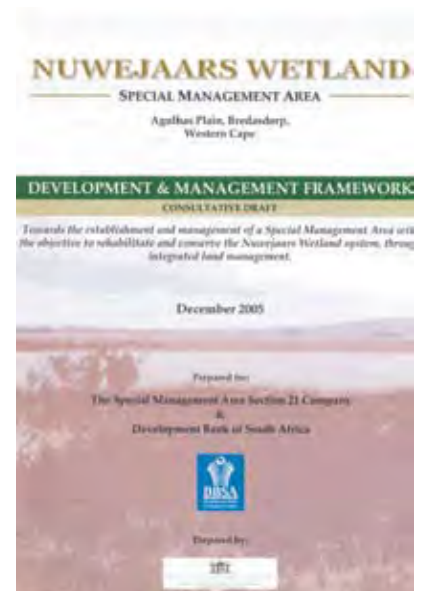
Despite the value of biodiversity on the Agulhas Plain, by 1990 only 4% of the area was formally conserved; most of the protected areas were small and isolated and together they conserved only three of the 35 vegetation types in the region. This reflected a lack of systematic conservation planning in the past. In fact, the proclamation of some protected areas had



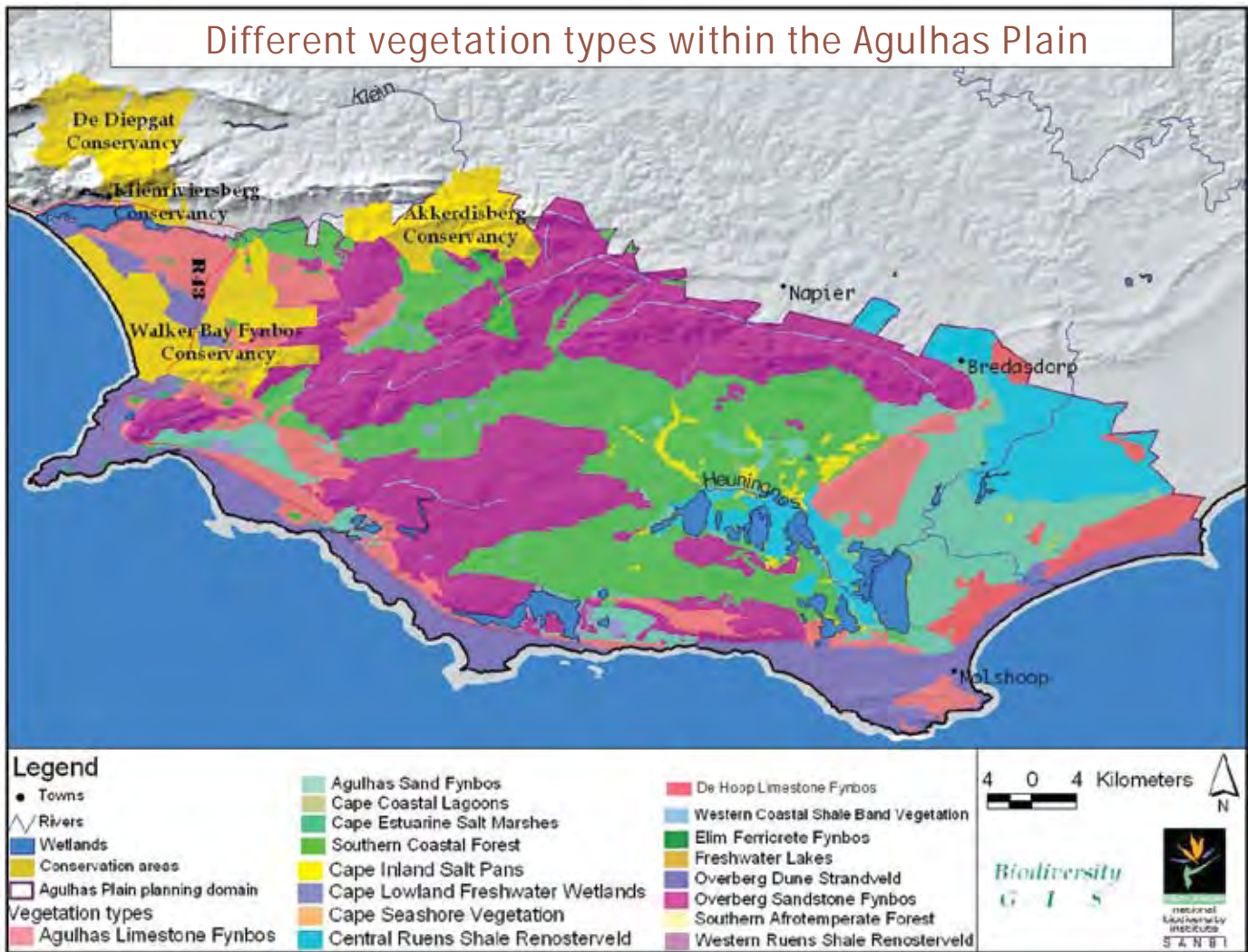
Flower Valley is a key demonstration of the viability of a farming enterprise based on sustainable harvesting on the Agulhas Plain.



The Agulhas Biodiversity Initiative is governed by an oversight committee that meets regularly.



The Nuwejaars Wetland is the subject of a Special Management Area involving all stakeholders.



The planning domain of the Agulhas Biodiversity Initiative incorporates a number of priority habitats, from lowland fynbos and coastal renosterveld to wetlands of international importance.

had little to do with conservation priorities. Issues like state security during the Second World War and the stabilisation of sand dunes to protect local agriculture were the reasons for the creation of the De Mond and Walker Bay State Forests in 1941 and 1960 respectively. It is one of the great ironies of the history of conservation in South Africa that the very trees planted by the state to stabilise the dunes, are today costing the government millions of rand a year to eradicate.

Another conservation irony is that we sometimes have to come close to losing a valuable area before the necessary action is taken to conserve it. In 1994, plans to build a nuclear power station on one of the most important biodiversity hotspots on the Agulhas Plain resulted in the drafting of the first strategic and systematic biodiversity conservation plan for the area. The Institute for Plant Conservation (IPC) at the University of Cape Town

and the Botanical Society of South Africa supported SANParks to work with local people to identify how best to implement this conservation management plan. With most of the biodiversity of the Agulhas Plain occurring on privately owned land, it was clear that conservation efforts would be fruitless without the co-operation of local landowners.

### Establishing the Agulhas National Park

Also in the early 1990s, SANParks started investigating the establishment of a National Park on the Agulhas Plain. In 1996, the SANParks Board approved the declaration of the Agulhas National Park (ANP), which incorporated conservation priority areas that had been identified in the IPC study. SANParks planned to purchase 26 000 ha of land outright and to enter into contractual arrangements with landowners to incorporate a further 44 000 ha. The consolidation of the Agulhas National Park is proceeding as planned.

### Spot on!

On the 5 km<sup>2</sup> site where *ESKOM* planned to construct a nuclear power station 45 plant species endemic to the Agulhas Plain were found, including four site endemics!







Land uses on the Agulhas Plain	
40%	livestock
10%	mixed farming
28%	fynbos
22%	conservation

**ABI: a ecosystem approach**

When plans to establish the Agulhas National Park were first discussed, it became clear that many local landowners did not want to sell their land to SAN-Parks; they wanted to retain title to their land and continue farming. Most farmers accepted that they had a responsibility to conserve the natural environment, but they believed farming and conservation activities could take place side by side on the same property. This led to the need for a new approach to conservation on the Agulhas Plain.

The conventional institutional approach to conservation, in which state agencies establish and manage formal protected areas, developed into an ecosystem approach in which a range of stakeholders are involved in conserving biodiversity within “living landscapes”. The Agulhas Biodiversity Initiative (ABI) was developed as a key C.A.P.E. project to investigate the implementation of both institutional and ecosystem approaches to biodiversity conservation on the Agulhas Plain.

There have been dramatic changes in both attitudes and approaches to conservation and sustainable natural resource management on the Agulhas Plain since 1990. Systematic conservation and land use planning, the establishment of new state and private protected natural areas, and the involvement of officials and landowners in a variety of conservation initiatives across the landscape, are all evidence of this transformation.

The Agulhas Lighthouse symbolises the iconic destination that is the southern tip of Africa, where three oceans meet (Indian, Southern and Atlantic) and where conservation, agriculture and local municipalities are combining forces to develop an innovative model of landscape-scale conservation that extends beyond the boundaries of protected areas.



## What is Area-wide Planning?

*LandCare is a programme of the Department of Agriculture that aims to maintain and restore healthy, productive agricultural land through integrated natural resource management, capacity building and partnerships. Through a process known as Area-wide Planning (AWP), the department works with groups of farmers to develop sustainable land management plans at a subregional level. These plans take into account the issues, needs and opportunities identified by the group and are linked to municipal Integrated Development Plans (IDPs). Through the AWP process, groups of farmers can identify projects and seek funding from LandCare and the local municipality.*



### Biodiversity across the landscape

In contrast to the figure of 4% of the Agulhas Plain that was formally conserved in 1990, today 22% of the Agulhas Plain is classified as conservation land. And looking at the other land use figures for the area, it is clear that land that is formally conserved represents only a small proportion of the remaining natural landscape. In fact, if grazing veld and fynbos on private properties are included, as much as 75% of the Agulhas Plain is estimated to be natural vegetation. In some areas veld management is limited and 15% of the Plain is densely invaded by alien plants, so challenges do exist. But the ecosystem approach introduced by ABI offers landowners and land managers in the private and public sectors the opportunity to work together to conserve biodiversity and manage land sustainably across the whole of the Agulhas Plain.

### Private sector conservation initiatives

Private landowners have taken a great deal of initiative to conserve the biodiversity of the Agulhas Plain. As early as 1969, the Albertyn family established the first private nature reserve in the area.

Feedback from the biological surveys undertaken during the 1990s reaffirmed what many farmers in the area already knew: the Agulhas Plain was a biodiversity treasure. Rather than seeing this as a threat to their farming operations, some landowners recognised that conservation offered them opportunities to diversify and improve their incomes. Once they knew which terrestrial and wetland habitats should be conserved, they could set these aside and continue farming on the less critical sections of their properties. The conservation areas then became an ecotourism draw-card.

In one case, a group of twelve landowners decided to form a Section 21 Company to strengthen conservation efforts on their properties. The Nuwejaars Special Management Area now comprises a combined area of 44 000 ha, of which 20 000 ha (60–70% of which is wetland) has been designated conservation land. With funding from the Development Bank of South Africa, the partners have been developing business plans to promote sustainable agriculture, ecotourism and socio-economic development in the area.

Other groups of conservation-conscious landowners have established conservancies, which together conserve 14 000 ha of land on the Agulhas Plain. A conservancy is a voluntary association of landowners with a joint conservation management plan for their combined properties. Members of conservancies benefit from co-operating with their neighbours. For instance, members of the Walker Bay Fynbos Conservancy in Hermanus share responsibility for maintaining fire belts and strategic boundaries, share the services of a part-time manager employed by Grootbos, and have established a hiking trail that traverses their properties. At Salmonsdam, members of the Akkedis Conservancy share the costs of clearing invasive alien plants from their properties.

These are only a few of a number of private sector conservation and socio-economic development initiatives on the Agulhas Plain. You can read about other private sector initiatives like Flower Valley, Grootbos and Sandberg elsewhere in this publication.

### The Department of Agriculture—a key partner

Trust is at the heart of all successful negotiations, especially when they involve

## PROFILE

### Tertius Carinus

Tertius Carinus is the Co-ordinator of the Agulhas Biodiversity Initiative. With a background in protected area management, Tertius arrived on the Agulhas Plain to take up one of SANParks' major challenges: integrating national parks into landscape level management. Ever ready to consult and learn, Tertius quickly grasped the need to build alliances among the various agencies who have roles to play in natural resource management, land use planning and tourism in the area. The main value of his work over the past few years has been to build a solid partnership between SANParks, CapeNature, the Department of Agriculture and the municipal and tourism structures to ensure co-operation.





landowners and government. On the Agulhas Plain, attempts to get farmers to sell their land to SANParks resulted in some landowners feeling uneasy about the intentions of state conservation agencies. In an area where most of the land is zoned agricultural, the Department of Agriculture has become a significant role-player in biodiversity conservation efforts, in particular through its LandCare: Area-wide Land Planning (AWP) programme.

One of the functions of AWP is fine-scale farm planning. The Department of Agriculture works with landowners to identify zones on their properties that are suitable for different land uses. In rural areas, the distinction is made between priority agricultural land and priority conservation land. Through the C.A.P.E. Programme fine-scale (1:10 000) biodiversity maps have been prepared for the Agulhas Plain indicating the vegetation types and areas that are most critically in need of conservation. The Department of Agriculture uses these maps during AWP and farm planning exercises, and can therefore recommend not only which parts of the farm are most suitable for grazing, crops and infrastructure, but also which areas should be managed for biodiversity. Should farmers show an interest in conserving threatened habitats on their land, the Department of Agriculture will then recommend that they contact conservation agencies to ask for help with biodiversity management and to investigate conservation options. By integrating agricultural and conservation planning in this way, the Department of Agriculture

is helping to implement the ecosystem approach to biodiversity conservation in a practical way on the Agulhas Plain.

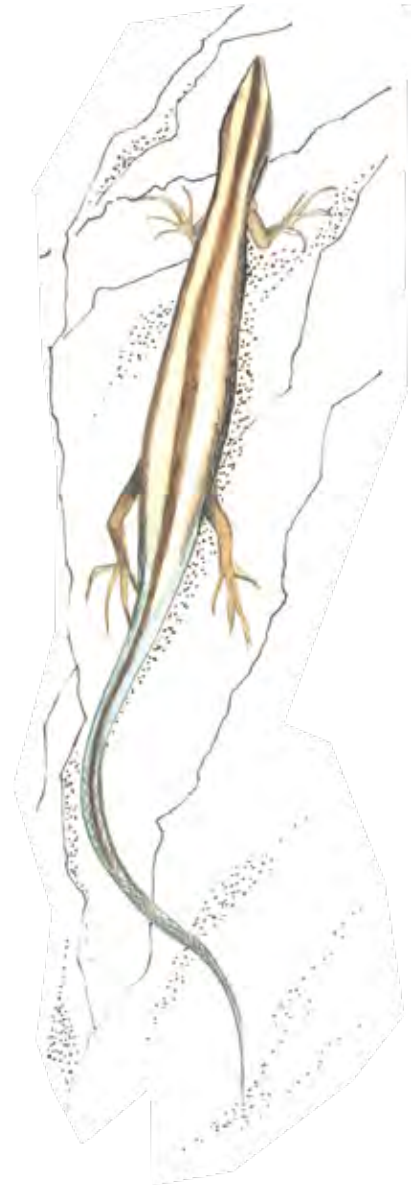
### Mapping conservation priorities

ABI has set conservation targets, which include biodiversity hotspots, irreplaceable habitats, priority wetlands and areas sustaining ecological processes. Conservation managers use fine-scale (1:10 000) biodiversity maps to help them identify these priority conservation areas on the Agulhas Plain.

These fine-scale maps put research information into the hands of conservation and resource use managers in a form that facilitates management planning. They also help landowners to appreciate the conservation value of their properties and how they can help to conserve biodiversity on the Agulhas Plain. It becomes easier to understand why it is important to conserve a particular habitat fragment on your property when you can see on the map that it is the last refuge on earth for a particular plant or animal.

In addition to conserving sites of biodiversity importance on their properties, landowners can also help to create linkages in the landscape by managing their land as part of a biodiversity corridor. ABI has used fine-scale maps to identify possible corridors: some follow the course of rivers or link protected areas along the coast, while others stretch from the mountains to the sea via protected areas and conservancies.

Access to spatial biodiversity information has helped landowners and resource



## Hennis Germishuys and Francis Steyn



Recent winners of C.A.P.E. Silver Awards, Hennis Germishuys (left) and Francis Steyn (right) have made tremendous strides towards the integration of agricultural, municipal and conservation planning on the Agulhas Plain. A basic principle of their approach has been to make contact with the landowners and communities themselves, applying the well-tested approaches of Agriculture's LandCare programmes. More

than that, they have provided a bridge not only with communities, but among the various responsible agencies, finding common ground among the conservation, agriculture and development priorities generated in the preparation of municipal integrated development plans. A recent brainwave that already has practical expression is to develop an integrated "service centre" where representatives of the main decision-agencies already base themselves. They now offer a single point for the public and authorities alike to discuss issues of common concern. This is a model for the Agulhas Biodiversity Initiative that bears replication in every other region of the Cape.





## What is Bioregional Planning?

*Bioregional planning has been defined as “an organised process that enables people to work together, think carefully about potential problems of their region, set goals and objectives, define activities, implement projects, take actions agreed upon by the communities, evaluate progress and refine their approach”. World Resources Institute, 1999.*

*Bioregional planning takes place within an area known as a bioregion. In simple terms a bioregion is an area that represents both an ecological system and a home for residents and people dependent on the area’s resources. These two criteria determine the scale of a bioregion.*

managers alike to visualise how they can contribute to the conservation of biodiversity and natural resources on the Agulhas Plain. The growing number of conservancies, private nature reserves, special management areas and stewardship agreements in the area suggests that sustaining biodiversity across a productive Agulhas Plain is a dream that may well come true.

### A one-stop shop

Programmes like ABI rely on the co-operation and effective participation of a number of stakeholders. Similarly, provincial and local authority initiatives require integrated planning across a number of sectors. In the Overberg, role players have come up with a strategy to help them operate in a more integrated and efficient way.

The Department of Agriculture and SANParks have entered into a Memorandum of Co-operation, which is currently being expanded to include CapeNature. One of the outcomes of this agreement is the establishment of the Bredasdorp Multi-purpose Centre, a “one-stop shop” that can potentially house stakeholders from a number of government departments, including the Department of Agriculture, SANParks, CapeNature, DEA&DP, DWAF, Department of Land Affairs, local authorities and social welfare organisations. The centre is strategically located in Bredasdorp where the offices of the District Municipality are situated. By physically working together, the partners believe that they can more effectively achieve their vision and plans for a sustainable future on the Agulhas Plain.

## What have we learned?

- *Most land owners are unwilling to sell their land to conservation authorities, but generally prefer to retain title and take responsibility for conserving biodiversity on their properties.*
- *In farming areas, the Department of Agriculture must play an important role in encouraging biodiversity conservation through LandCare: Area-wide Planning.*
- *Different departments (e.g. Department of Agriculture, SANParks, CapeNature) are*

*increasingly willing to work together to ensure effective biodiversity conservation.*

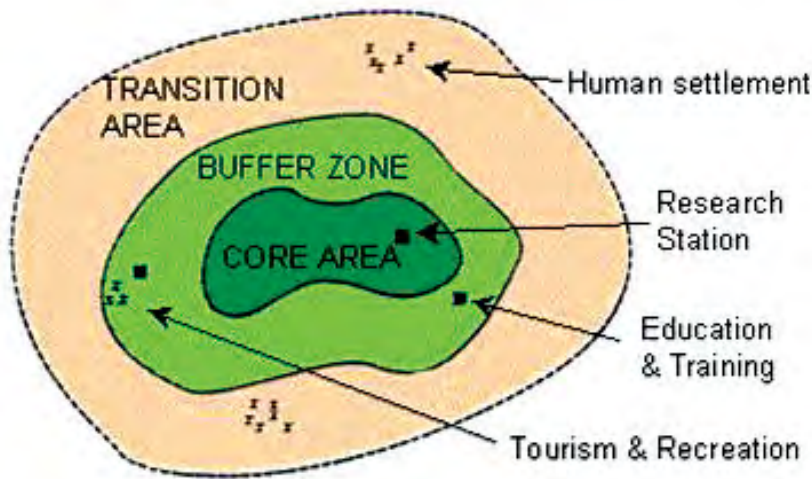
- *To date, most C.A.P.E.-related research has focused on biodiversity and there are therefore many biological arguments for biodiversity conservation. Land owners also need convincing economic arguments as to why they should conserve significant portions of their land.*
- *It is unhelpful to treat agriculture and conservation as incompatible land use types, or to assume that farmers will stop their agricultural activities in order to pursue biodiversity-friendly alternatives. Most farmers are willing to diversify but farming will remain their core business.*
- *Conservationists must listen to landowners and land managers, develop trust and work towards a common goal. Threatening land owners (e.g. with legal obligations) is not helpful; rather help people to do what is required of them.*
- *In general, landowners are willing to conserve biodiversity, but they need information. Extension officers must work with willing land owners and provide them with the necessary guidelines, maps and plans.*
- *People whose livelihoods depend on a particular resource are passionate about that resource!*

## 2.10 A tale of two biosphere reserves

### (i) Bioregional planning and biosphere reserves

The Department of Environmental Affairs and Development Planning (DEA&DP) of the Western Cape Province has adopted a planning and development approach known as bioregional planning, which seeks to ensure that the province develops in a sustainable manner. Bioregional planning is an integrated approach to the planning and management of land resources that takes





Biosphere reserves use a system of land use zones to achieve their goals of biodiversity conservation and sustainable socio-economic development.

into account environmental, social and economic factors. It aims to ensure that all land is allocated and used in ways that provide sustainable benefits.

The Western Cape intends implementing bioregional planning using two main strategies, namely municipal development planning and the creation of biosphere reserves. To date, two biosphere reserves have been established in the CFR: the Kogelberg Biosphere Reserve (est. 1998) and Cape West Coast Biosphere Reserve (est. 2000).

**What is a biosphere reserve?**

The concept of a biosphere reserve was developed by the Man and the Biosphere (MAB) Programme of the United Nations Environmental, Scientific and Cultural Organisation (UNESCO).

Biosphere reserves are managed to fulfil three distinct functions:

- **Conservation:** contribute to the conservation of landscapes, ecosystems, species and genetic variation;
- **Development:** foster economic and human development which is socio-culturally and ecologically sustainable;

**Support from NEPAD**

*African environment ministers have called on NEPAD to use biosphere reserves as “laboratories for sustainable development”. In January 2004, they stated their commitment to “promoting the use of biosphere reserves as operational sites for sustainable development in the fight against poverty”.*

- **Logistic:** provide support for research, monitoring, education and information exchange related to local, national and global issues of conservation and development.

Biosphere reserves can thus be described as “living laboratories” for investigating integrated approaches to sustainable development. The World Network of Biosphere Reserves comprises more than 450 biosphere reserves in over 90 countries around the world, providing fertile opportunities for the sharing of information and experience.

**International research into Western Cape Biosphere Reserves**

*Barbara Thierfelder, a German PhD student, visited the Western Cape recently to investigate management and governance systems of Biosphere Reserves and biodiversity corridors. She focused in particular on the Cape West Coast Biosphere Reserve, the Kogelberg Biosphere Reserve and the Greater Cederberg Biodiversity Corridor, and conducted interviews and surveys throughout the region. Her research is part of a multi-disciplinary study of biosphere reserves that involves five PhD students from the Humboldt University of Berlin in Germany. For more information on Barbara’s findings, go to [www.biodiversitygovernance.de](http://www.biodiversitygovernance.de)*



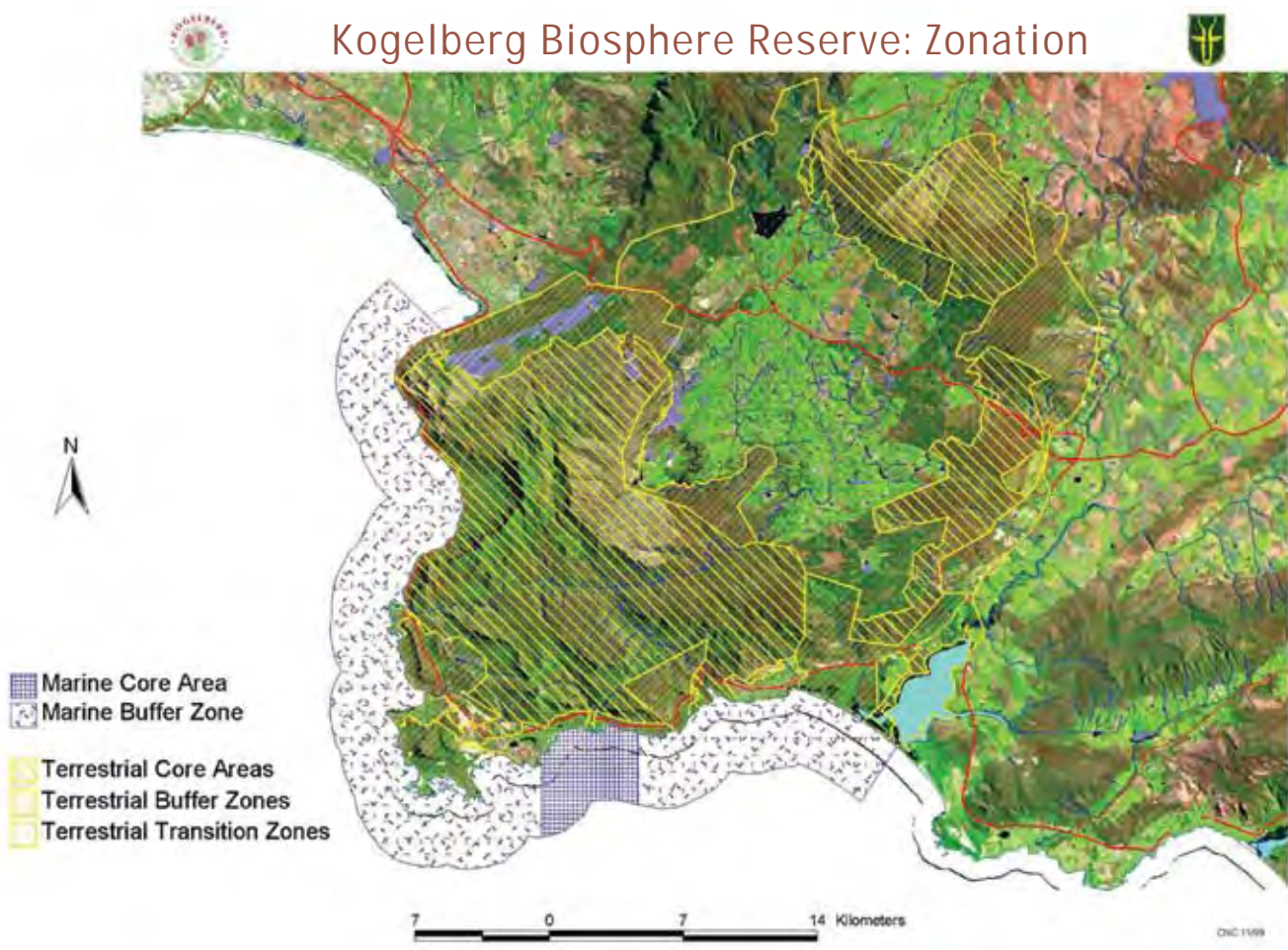
PROFILE

**Gonald Present**

Gonald Present is CapeNature’s Business Unit Manager for the Kogelberg. He is using his talents as a people-person to draw together the many interests of the diverse stakeholders in the area.



## Kogelberg Biosphere Reserve: Zonation



A key issue when planning for the Kogelberg Biosphere Reserve was to ensure the identification of the appropriate planning zones.



The Kogelberg Biosphere Reserve includes one of the most species-rich landscapes in the CFR and includes mountain, coastal and marine environments.

### Land-use zones

Typically, biosphere reserves comprise three interrelated zones, the core area, buffer zone and transition area, with different types of activities being permitted in the different zones. In the Western Cape, DEA&DP has expanded this classification system to six zones, which include all possible land uses:

- **Category A - Core area:** conservation areas; no development allowed; non-consumptive use only. Ideally, core areas should be linked to one another by natural corridors like river systems or coastlines.
- **Category B - Buffer area:** conservation-worthy areas without statutory protection, including ecological corridors (e.g. rivers, coastlines) and areas that could be rehabilitated; act as a buffer between core and other areas; sustainable and non-consumptive land uses are allowed under certain conditions.
- **Category C - Agricultural area:** rural areas; extensive and intensive agriculture and forestry.



- **Category D - Urban-related area:** settlements, services and infrastructure.
- **Category E - Industrial area:** intense human activity and consumptive land use.
- **Category F - Surface infrastructure:** roads, railway lines, power lines, communication installations, etc.

#### Local support for biosphere reserves

Biosphere reserves are internationally designated and recognised but rely on the initiative of the local community and the commitment of national, provincial and local government departments for their establishment and ongoing management. In the Western Cape, biosphere reserves are specified as an important component of bioregional planning. If the management plans of biosphere reserves are aligned with the development plans of provincial and local spheres of government, biosphere reserves will help government to achieve their goals and objectives. In turn, biosphere reserves will be able to look forward to greater recognition and support from government.

The following section describes some of the achievements and lessons learned in the two biosphere reserves in the Western Cape.

#### (ii) The Kogelberg Biosphere Reserve

Less than an hour's drive from the centre of Cape Town you will find South Africa's first biosphere reserve. Designated by UNESCO in 1998, the Kogelberg Biosphere Reserve (KBR) can be described as the heart of the CFR. This area of over 103 000 ha is a biodiversity heaven, boasting about 1 600 different types of plants, of which around 150 occur nowhere else on earth. The marine life along the spectacular coastline, where warm temperate south coast waters interface with cold upwellings, is also magically diverse and productive. Beyond the biodiversity, the KBR is scenically one of the most magnificent parts of South Africa. The coastal road from Gordon's Bay to Rooi Els traverses steep fynbos-clad slopes with towering cliffs above and below, providing panoramic views of False Bay, complete with whales from late winter to early summer. More than 80% of the biosphere reserve is mountainous, with the rest of the area comprising sea, coastal plains, rocky shores, sandy beaches and estuaries.

Deciduous fruit farming and commercial forestry are important local industries and there is also a considerable amount of wild flower harvesting, both from orchards and from the veld. The beauty and bounty of the nature area attract large numbers of visitors, with populations of some towns increasing almost three-fold during peak holiday seasons.

#### Lessons in management

Both biosphere reserves in the CFR are managed by Section 21 companies. However, the way in which the Kogelberg Biosphere Reserve Company was set up limited the effectiveness of the biosphere reserve. The company is currently being revitalised but valuable lessons can be learned from this experience, which can inform the planning of other biosphere reserves and corridor initiatives.

One of the factors limiting the success of the KBR Company was that it was run entirely on a voluntary basis. There was no paid executive director, operations manager or secretariat to carry out the extremely demanding role of managing the company, liaising with the numerous stakeholders, raising funds and promoting the biosphere reserve. Furthermore, there was no local authority representation on the board of directors, so it was difficult to liaise with and garner support from the four municipalities that fall within the biosphere reserve. A lack of effective fundraising resulted in very few projects being initiated and relatively little publicity being generated for the biosphere reserve.

#### Reviving the Biosphere Reserve Company

During 2004, after a short period of dormancy, the major roleplayers, including municipalities and community organisations, took the initiative to start reviving the KBR Company. The Company now has the full support of the four local authorities and is supported by a technical committee, established under the Articles of Association of the Section 21 Company. A more regular schedule of meetings has been planned and funding through the Development Bank of South Africa (DBSA) and the Provincial Government will enable the development of a strategic management framework for the KBR. This framework will determine the vision for the company, draw up a management plan guiding actions on the

## KOBIO

*The Mission of KOBIO is to help conserve this magnificent centre of endemism and biodiversity, and the land and seascapes which contain it, through championing uplifting, sustainable living in harmony with nature. KOBIO is playing a crucially important role in mobilizing civil society action to secure the Kogelberg.*





The Kogelberg Biosphere Reserve is contributing to effective land use planning that integrates the environmental, social and economic needs of the area.

ground, and include a corporate plan outlining the functions of the Board and its functionaries. A consultant has been appointed to develop the strategic management framework, which is expected early in 2006.

Funding raised through C.A.P.E. will be used to appoint a full-time KBR co-ordinator for an initial contract period of four years. This will address one of the key management problems experienced in the past. Initially, projects will focus on strengthening marine conservation in the area, as well as the development of a tourism strategy for the biosphere reserve.

Support for the KBR is coming not a moment too soon: coastal development is proceeding apace and poaching is threatening to destroy local populations of perlemoen and crayfish. The people of the Kogelberg must work together to identify how the area's greatest assets—its natural beauty and biodiversity—can be conserved so that they can continue to provide opportunities for ecologically and socially sustainable development.



### (iii) The Cape West Coast Biosphere Reserve

The population of the City of Cape Town is projected to double between 2002 and 2012. The West Coast is experiencing growing pressure from urban expansion and coastal development, which are impacting on its unique character. Conscious of the need to plan development carefully, representatives of civil society on the West Coast lobbied for the proclamation of a biosphere reserve. The process of preparing the formal application to UNESCO brought together municipalities, provincial government and civil society on the West Coast, and set the scene for ongoing co-operation. National government also gave their support, with the then Minister of Environmental Affairs and Tourism, Mr Mohammed Valli Moosa, endorsing the application.

In November 2000, the UNESCO MAB programme designated 378 000 ha of coastal lowlands and inland agricultural areas as the Cape West Coast Biosphere Reserve (CWCBR). The Biosphere Reserve stretches from the Diep River in Milner-ton, Cape Town, to the Berg River and



## An insecure future

*Saldanha Limestone Dune Thicket and Hopefield Sand Fynbos occur entirely within the CWCBR—yet less than 0.5% of dune thicket and less than 3% of sand fynbos vegetation is adequately protected!*

### How is land used in the CWCBR?

Analysis of satellite imagery indicates the following major land use types in the CWCBR:

47%	Agriculture
25%	Natural vegetation
16%	Alien vegetation
8%	Urban development

incorporates one of the fastest growing areas of the City. UNESCO recognises development pressure on the West Coast as a significant challenge to the Biosphere reserve.

The CWCBR includes a wide range of habitats, from marine, beach and dune environments to pans, wetlands, coastal plains and rocky outcrops. The Langebaan Lagoon, one of the core conservation areas, is also designated as a Ramsar wetland of international importance. New core areas have been added since the biosphere reserve was designated, namely Dassen and Vondeling Islands and their surrounding marine areas.

The natural assets of the West Coast make it a popular tourist destination, particularly during spring when the Strandveld is in bloom. The region also supports a diverse range of industries including agriculture and fisheries, mining, manufacturing and services. However, these economic opportunities are not equitably distributed, and many communities live in poverty, experiencing low levels of employment, skills shortages, overcrowded living conditions, and health problems like tuberculosis.

**CAPE WEST COAST BIOSPHERE RESERVE**

- To conserve, maintain and rehabilitate biodiversity in the Biosphere Reserve.*
- To conserve non-renewable resources.*
- To maintain the palaeontological, historical and cultural heritage of the Biosphere Reserve.*
- To contribute to coherent planning at all levels to provide models of land management.*
- To contribute to enhancing the sustainable economic wellbeing of communities.*

Photographic Contributors:  
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Design: Nautique Marketing Communications



Consult the website at [www.capebiosphere.co.za](http://www.capebiosphere.co.za)

### Integrating conservation and development planning

In the face of pressing socio-economic challenges, the CWCBR Company takes pride in the fact that they have always promoted the “M” in UNESCO’s Man and the Biosphere Programme (MAB). A lengthy process of consultation with numerous stakeholders resulted in the preparation of strategic and business plans for the CWCBR, which are in line with Province’s bioregional planning framework. These are people-centred plans that acknowledge the fundamental importance of biodiversity conservation for sustainable development on the West Coast. They enable all role players in the area to work towards common goals and objectives, and ensure that the Biosphere Reserve fulfils its three core functions.

The strategic plan sets out a 20-year vision for the Bio CWCBR sphere, with a series of action plans providing the detail. By taking an integrated approach to conservation and development, the CWCBR aims to ensure that the people of the West Coast will

### The Vision of the CWCBR

*We see the Cape West Coast Biosphere Reserve as the best international example of integrating rapid growth and change with biodiversity conservation, sustainable living and heritage preservation.*

both benefit from and safeguard the area’s distinctive natural diversity and cultural character.

In order to inform the development of its own strategic and management plans, the CWCBR commissioned a thorough review of a wide range of environmental, social and economic policy and planning documents. These included a number of biodiversity surveys highlighting conservation priorities and development opportunities in the region. This research drew attention to the socio-economic benefits of conservation and confirmed that the region has enormous potential for eco-tourism, especially in the core areas.

However, the study also warned that there has been substantial loss and fragmentation of natural areas in the CWCBR. In eight of the region’s 12 vegetation types, so much natural vegetation has already been lost that it will not be possible to meet a minimum conservation target of 25% of the original area. In order to meet even a 10% conservation target, it will be necessary to conserve more than 5 500 hectares of additional land. Of particular concern is that five of the vegetation types occur entirely within the CWCBR; if the biosphere reserve cannot guarantee their survival, nobody else will.

Most of the land in the CWCBR is privately owned, so biodiversity conservation in the region relies on the support and co-operation of a large number of stakeholders. Fortunately, as the creation of the biosphere reserve indicates, there is a great deal of support for sustainable development from civil society in the region.

The Biosphere Reserve Company is encouraging a balanced approach to land use and development planning in the CWCBR. Spatial biodiversity information can help to identify those habitats that need special protection, while also indicating less critical biodiversity areas where urban and agricultural development can proceed without threatening the region’s unique biodiversity. This information can also help the authorities identify priority areas where invasive alien vegetation must be removed.

### Effective biosphere management

The CWCBR Company provides services to its members and stakeholders by co-



ordinating projects and programmes that integrate rapid growth and change with biodiversity conservation, sustainable living and heritage preservation. Since the Biosphere Reserve was designated in 2000, the Biosphere Reserve Company has achieved a great deal. The following approaches have contributed to effective management of the CWCBR:

- In the past, municipalities advised the CWCBR Board on technical matters only; a few years ago, representatives of the Saldanha Bay, Berg River and Swartland Municipalities, the West Coast District Municipality and City of Cape Town were nominated as Directors. This formal partnership has improved co-operation between the CWCBR and local government.
- Although Board members serve in a voluntary capacity, the Biosphere Company set up a full-time office with an administrator to enable the CWCBR to operate effectively.
- The Biosphere Reserve Company raised funds from the Western Cape Province, West Coast District Municipality, City of Cape Town and DBSA, which enabled it to develop and start implementing a strategic management framework.
- The management framework has been a major success. The strategic plan provides a long-term vision, which guides a shorter-term business plan and detailed action plans that are enabling the CWCBR to achieve its goals.
- A communication strategy was drafted to ensure that the CWCBR is promoted effectively. This resulted in the development of publications and a website.

### Taking up the challenge

The CWCBR Company faces ongoing challenges, which include the need to appoint a professional programme coordinator, to raise funding and involve partner organisations in rolling out flagship projects, and to strengthen partnerships, co-operation and communication among role players in the region. A committed Board, a clear strategy and the support of stakeholders in the region will ensure that the CWCBR meets its primary objectives of reducing the rate of loss of biodiversity, reducing consumption of natural resources and stimulating economic development in this unique region.

## What have we learned?

*The experiences of the Kogelberg and Cape West Coast Biosphere Reserves have been very different. A comparison of the relative effectiveness of the two approaches suggests that:*

- *The management of biosphere reserves requires an integrated approach involving both government and civil society partners. Biosphere reserves cannot be run by a Section 21 company operating in isolation to achieve its own agenda.*
- *Biosphere reserves are established to fulfil conservation, development and logistic functions; they cannot focus on the conservation of biodiversity only but must also promote sustainable development projects and demonstrate tangible socio-economic benefits.*
- *The management framework of a biosphere reserve must include both strategic plans to guide overall management and operational plans to guide the day-to-day running of the company.*
- *The biosphere reserve concept is understood differently by different people; this leads to anomalies in the execution of plans and perceptions of stakeholders, including funders.*
- *Biosphere companies need secure funding, a full-time administrator and dedicated office space to operate effectively.*
- *Biosphere reserves should interact at all management levels with other role players in the area, to ensure that strategic goals and objectives are attained. Management structures should be set up to actively involve key role players (e.g. local government).*
- *Although donor funding may be required to catalyse specific projects, biosphere reserves must investigate opportunities to generate their own revenue and become more economically sustainable. The level of funding required will relate to how the biodiversity reserve company views its primary role (e.g. implementing agent, facilitator, pressure group, etc).*



Biodiversity on the West Coast is under pressure from agriculture, invasive alien plants and urban expansion.









managing watersheds

wisely



*Watersheds or catchment areas provide land use planners and decision-makers with a very useful ecological unit within which to manage land and water use, fire, invasive alien species, pollution and estuary function in an integrated manner. The C.A.P.E. Programme identified watershed management as a key component of the Strategy and supports efforts to integrate the diverse aspects of catchment management. For instance, C.A.P.E. Partners are actively involved in the establishment of Catchment Management Agencies, which are due to start taking over responsibility for the management of the five major catchment areas in the Cape Floristic Region.*

*With the recognition that large stands of woody alien plants significantly reduce the amount of water reaching streams, increase the severity of veld fires and pose a threat to biodiversity, the government stepped in and created poverty relief programmes such as Working for Water and Working on Fire. These programmes provide tens of thousands of unemployed people across the region with temporary employment and skills development opportunities. Volunteer groups have also made a significant contribution to the eradication of invasive alien plants on both private and public land. This chapter acknowledges the huge contribution the “fynmense” of the Cape have made in addressing this huge and multi-faceted threat.*

## CHAPTER 3 Managing watersheds wisely

### 3.1 Caring for rivers and wetlands

#### (i) Working for Wetlands



One of the strengths of the Working for Wetlands programme in the Cape Floristic Region (CFR) is its focus on trying to restore some of the natural functioning of river and wetland ecosystems, even within highly transformed urban environments. Whether projects have been initiated to address

storm water management problems,

blooms of toxic blue-green

algae or general environmental degradation, the solution has been to

restore habitats

to a more natural state. Actual

rehabilitation has

included earthworks,

removal of invasive species

and reintroduction of locally indigenous plants. A variety of innovative

job creation opportunities have been

explored, from supplying a commercial

paper manufacturer with cut *Phragmites*

reeds, to the development of nurseries to

supply the plants needed for rehabilitation

projects.

#### Wildevölvlei—working for a healthy environment

One of the early Working for Wetlands projects was initiated in response to an outbreak of toxic blue-green algae in the Wildevölvlei Wetlands at Noordhoek. For some reason, the pond weed that normally grows in these wetlands died off and was no longer able to remove nutrients from the water. Toxic blue-green algae bloomed in response to the rise in nutrient levels, turning the wetland into a health hazard for people and animals.

Poverty relief funding from the Department of Environmental Affairs and Tourism enabled the City of Cape Town, SANParks, the Ukuvuka Campaign and WESSA Western Cape to undertake a massive project to clear invasive alien plants and make a start with the restoration of the wetlands. To address the blue-green algae problem, Working for Wetlands appointed teams to build “mesocosms”, floating corral-like structures in which they could start poisoning the algae and reintroducing indigenous pond weed. Workers also removed swathes of *Phragmites* reeds and planted a variety of indigenous wetland plants to try to re-establish a more diverse plant community.



*Working for Wetlands team members made a big impression at the C.A.P.E. Partners' Conference 2006.*



About 600 people from Masiphumelele township benefited from short-term employment and skills development opportunities. The Noordhoek Valley Training Centre, a campus of False Bay College, played a key role in supporting the skills development aspects of this project, from sewing skills needed to construct the mesocosms, to basket-making with the cut reeds. FebDev provided business skills development for emerging contractors. A number of these contractors have since started their own businesses and Working for Wetlands project manager Mandy Noffke continues to involve them where possible in a range of different jobs so that they can continue to learn different skills, from alien clearing and plant propagation to planting and maintenance of rehabilitation sites.

### Offering urban rivers a helping hand

The City of Cape Town manages most of the river and wetland sites where Working for Wetlands Peninsula Project is operating. With its strong commitment to integrated environmental management, the City's conservation officers are in the forefront of rehabilitation efforts, especially at wetland reserves like Rondevlei, Rietvlei and Zandvlei. By working closely with Working for Wetlands, the engineers are starting to view urban rivers as more than just canals for stormwater. They are helping to reshape river courses, excavate gently sloping river banks, and construct islands to create more diverse habitats. Working for Wetlands can then replant natural wetland vegetation, which helps to stabilise the banks and restore biodiversity. One of the ongoing challenges, however, is to ensure that City employees at all levels learn to manage these river and wetland corridors sustainably. The destruction of Red Data species by mowing teams, and damage to newly reshaped river banks by dredgers are unnecessary steps backward in an otherwise positive story of environmental improvement.

In the South Peninsula, Working for Wetlands has been assisting volunteer groups, a business partnership and nature conservation agencies with a number of restoration projects in the Sand River catchment. A vision is emerging of a "source to sea" rehabilitation and management programme incorporating existing initiatives in Tokai Forest and Die Oog (Chapter 2.3), the Keyser's River in Retreat, and Zandvlei. These projects have been improving not only the



Pristine river environments in the Cape Floristic Region are characterised by a lack of alien vegetation along their banks and an absence of invasive alien fish in their waters.

ecological functioning of these systems but also their aesthetic, recreational and educational value. Two full-time river wardens are now employed by businesses along the Keyser's River to improve and maintain this section of river. Access and safety have also been improved with the construction of pathways and lighting along a section of the Sand River.

### A network of nurseries

Working for Wetlands in Cape Town is helping to rehabilitate urban wetlands and rivers, some of which have been so severely degraded by urbanisation that they can no longer regenerate naturally. Teams reintroduce lost plant species, creating "islands of diversity" in the seas of kikuyu grass and *Phragmites* or *Typha* reeds that fringe these depleted systems.



Businesses along the Keyser's River have employed two full-time river wardens to maintain this section of river.

## A Story of New Beginnings

*For two years, Richard Erskine was a supervisor with the Working for Water team responsible for clearing invasive alien plants, building rubble and other rubbish from the newly established Edith Stephens Wetland Park in Lansdowne Road. The pay wasn't much but it was better than sitting at home in Manenberg where he had been since his previous employer had died, leaving him without his gardening job of 35 years.*

*When Working for Wetlands established a small nursery at Edith Stephens, Richard jumped at the opportunity to start growing plants again and became part of the nursery team. A horticulturist provided some training and supervision but it soon became clear that all three nurseries needed a manager. Recognising his skills and experience, Working for Wetlands offered Richard the contract in 2004; that was the start of Richard's business, "New Beginnings".*

*"I feel great because I've been part of this project from day one," says Richard. He is proud of the 20 certificates he was awarded during his time with Working for Water; among other things he is now a qualified health and safety officer, fire fighter, herbicide applicator and supervisor. This training, coupled with his gardening and supervisory experience, enables Richard to manage the nurseries confidently and to share his knowledge of propagation with the many people who now come to him for advice. And what of his hopes for the future? "We need to restore the whole of the Cape Peninsula to its former glory." Richard and his nursery teams are doing their best to make this dream a reality.*



Richard Erskine (right) previously supervised the Working for Water team that rehabilitated Edith Stephens Wetland Park. He now manages three Working for Wetlands nurseries in the City of Cape Town.

cannot guarantee the origin of the plants they sell; however a network of small nurseries dedicated to rehabilitation can specialise in propagating plants from locally sourced seeds and cuttings. Currently there are three Working for Wetlands nurseries situated at City of Cape Town nature reserves or depots, namely Rondevlei, Edith Stephens Wetland Park and Westlake. Key to their success is the fact that they are an integral part of the Working for Wetlands programme, which guarantees a market for the plants the nurseries produce.

### What have we learned?

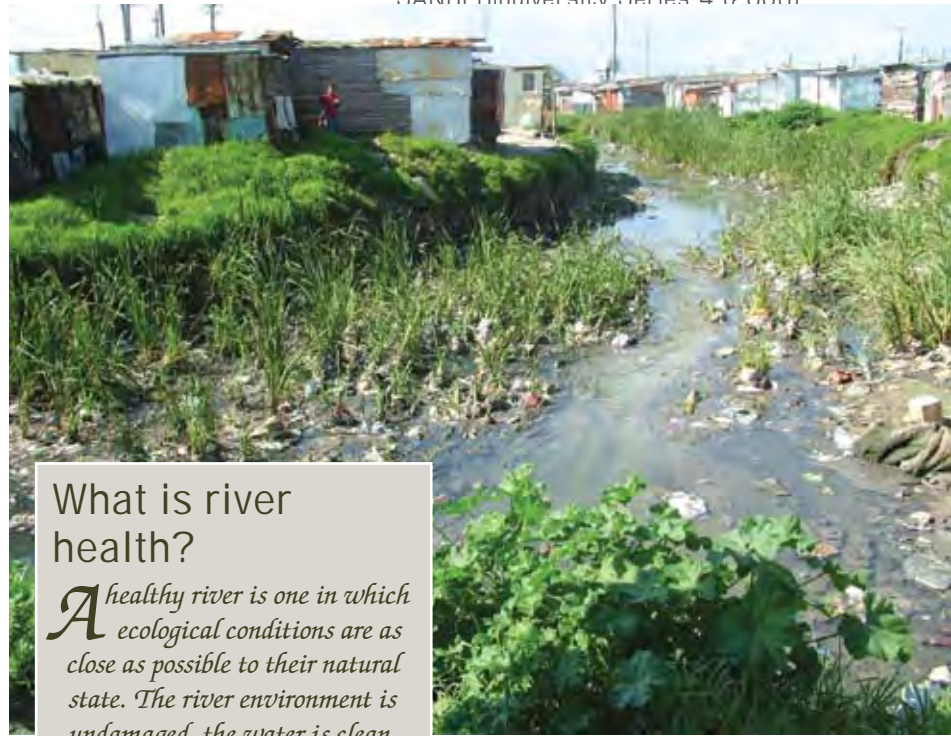
- *The technical aspects of poverty relief projects are relatively straightforward; it is the social aspects that are the most complex. Local politics can complicate the appointment of workers and extensive planning and adequate lead times are essential to avoid costly mistakes and delays.*
- *Levels of innovation and problem-solving among trainees are generally low; adequate on-site supervision is therefore essential.*
- *Poverty relief funding is just what it says—poverty relief; it is an attempt to provide temporary assistance and training opportunities for unemployed people who have few marketable skills and very poor prospects of employment. Because the daily wage is so low (approximately R40 per day), poverty relief projects suffer from a high turnover of workers. As soon as better opportunities turn up, people understandably move on.*



A lot of plant material is needed to supply these rehabilitation projects. Working for Wetlands decided to establish its own network of nurseries to produce these plants, rather than sourcing them from commercial nurseries, which don't specialise in wetland species and often lack sufficient stock. This generated a number of benefits: firstly, it created another opportunity for poverty relief jobs and training; secondly, nurseries could be situated close to rehabilitation sites, thereby reducing transport costs. Finally, Working for Wetlands is committed to rehabilitating sites with locally indigenous plants in order to maintain the genetic integrity of different plant populations. Most commercial nurseries



- When different organisations operating within the same geographical area offer differing rates of pay for poverty relief projects, this causes endless problems for managers and contributes to the closing down of some projects and competition between others. A standardised system would alleviate some of these social issues
- Working for Wetlands started off as a sister programme to Working for Water and was managed by DWAF, which focuses mainly on water conservation issues. The programme has since been taken over by SANBI, which has a biodiversity conservation mandate. This has served to strengthen the ecological restoration focus of Working for Wetlands.



### What is river health?

A healthy river is one in which ecological conditions are as close as possible to their natural state. The river environment is undamaged, the water is clean, and indigenous plant and animal populations are present.

Unless rivers and streams are well cared for, they become unhealthy and pose a health risk.

### (ii) The River Health Programme

“Water is Life!” We all know the slogan; but take a look at our streams and rivers and you have to ask why, in this water-scarce country, we seem intent on killing the very systems that are society’s life-line.

Cape Town’s polluted urban rivers feature periodically on prime-time TV news, with graphic pictures of festering canals, choked with rubbish, that are really no more than open sewers. Unaware that their health is at risk, children play in rivers where concentrations of faecal bacteria exceed international health and safety standards. Ironically, as we degrade river systems through over-abstraction of water, insensitive development, pollution and invasive alien plants and animals, these rivers become less and less able to satisfy our needs. They also become increasingly expensive to rehabilitate.

Looking after the quality and availability of South Africa’s fresh water resources is such a priority to government that in 1994, the year of the country’s first democratic elections, the River Health Programme (RHP) was established to monitor, assess and report on the health of rivers. The Department of Water Affairs and Forestry (DWAF) runs this national programme, in collaboration with the Department of Environmental Affairs and Tourism (DEAT) and the Water Research Commission (WRC).



Provincial champion Toni Belcher has managed the River Health Programme that has effectively mobilised a whole range of partner organisations for implementation.

### Ongoing river monitoring

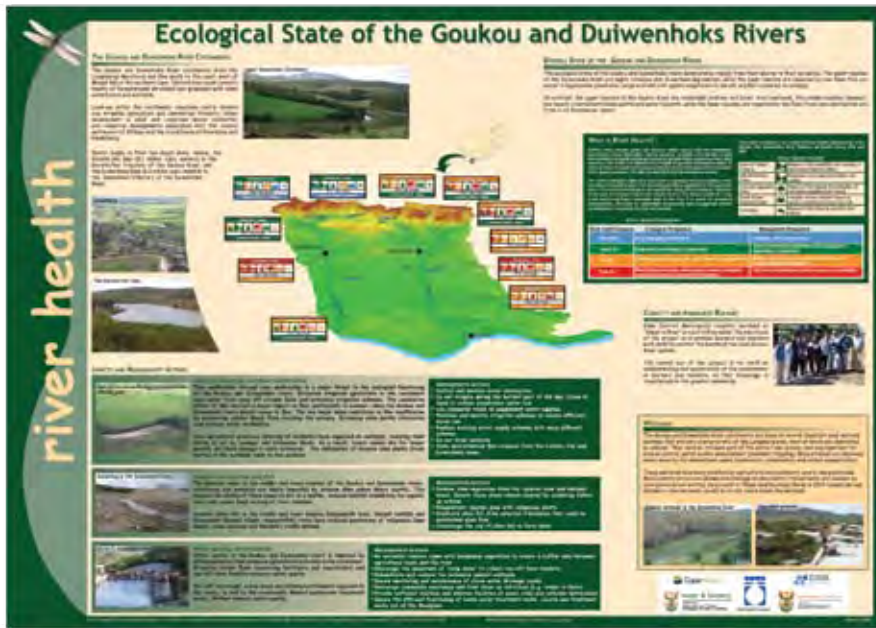
There is no shortage of *ad hoc* river monitoring projects in South Africa, but the RHP is significant because it provides a set of protocols and procedures that any organisation in the country can use. This enables diverse organisations to participate in an ongoing, systematic national monitoring programme and to contribute useful information to a growing database.

RHP researchers observe land uses in the catchment and assess the current ecological health of a site by surveying a range of indicators. They record their findings using a simple rating system (natural,



There is a dramatic difference between rivers that are infested with aliens and those where clearing has been effective.





The RHP team in George has spent many afternoons with keen teachers and learners from Thembaletu township, teaching them how to monitor river health. The schools have each adopted a section of their local river and will be carrying out regular assessments.

## A future for urban rivers?

*The RHP in the Western Cape has produced several SoR reports on rivers in the province. Most recently, an SoR report was commissioned for greater Cape Town because of concerns about the impact on rivers of rapid urbanisation and ageing infrastructure. The report identified some horror stories as well as some reasons for hope. Water quality in the Kuils River, for example, can only be described as disgusting: six sewage works discharge treated wastewater into this river and its entire catchment, from source to mouth, is urbanised. The Sand River system, on the other hand, has great potential; although water quality varies greatly along its length, it could be rehabilitated and managed as an urban greenbelt.*

The RHP uses simple graphics to report on its findings, making the information accessible to all.

good, fair, poor and unacceptable) and make a realistic judgement in terms of the state of river health that could be achieved through better management. This predictive element of the assessment serves as a vision to inspire sustainable development options in the catchment.

### Information enabling action

The RHP presents its findings in the form of attractive, user-friendly State of Rivers (SoR) reports and posters that focus on particular catchments or regions. Designed to inform politicians, managers and residents, these reports describe the current situation, identify factors impacting on the river, predict trends in the condition of the river, and suggest what can be done to manage the catchment better.

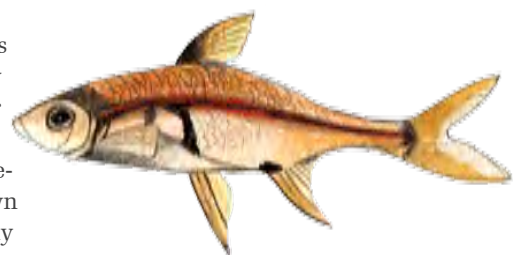
The information gathered by the RHP is widely used, notably by environmental planners and officials responsible for managing freshwater resources, and by C.A.P.E. partners involved in fine-scale conservation planning. However, Toni Belcher believes that this information also needs to inspire and enable citizen action at a local level.

We all live and work within catchments but, especially in urban areas, it is easy to forget that we are only a storm-water drain away from our local river. From the sweet wrapper dropped on the pavement to the can of used oil thrown down the drain, we impact on rivers every day

of our lives. Rather than expecting the authorities to address all the problems facing our rivers, the RHP team can provide water forums, friends groups and schools with information and support to inspire and enable them to care for the health of the region's river systems.

## What have we learned?

- *In the Western Cape the RHP team works well because it is adequately resourced and very well managed by DWAF and the provincial RHP champion.*
- *By providing a standard set of protocols and procedures, the RHP is able to involve a large number of organisations in a nation-wide monitoring project.*
- *Using photographs, simple graphics and a qualitative rating scale makes the RHP findings accessible to a wide range of users.*
- *Each and every one of us both impacts on and benefits from rivers, so it is everyone's responsibility to look after rivers. Information provided by the RHP helps us to do this monitoring project.*





### (iii) Western Cape Wetlands Forum

The Western Cape Wetlands Forum (WCWF) is a multi-stakeholder body that provides opportunities for the "... sharing of information and expertise regarding the protection, management and restoration of wetlands in the Western Cape Province". It was initiated by the Working for Wetlands Programme, which needed informed guidance in its poverty alleviation projects, and has since grown to include a range of agencies and interest groups. The Forum aligns itself fully with the mission and vision of C.A.P.E., and is committed to providing appropriate input to C.A.P.E.'s task teams that deal with wetland issues.



The Western Cape Wetlands Forum is committed to the protection, management and restoration of wetlands in the Western Cape.

The Forum is currently housed by SANBI's Urban Conservation Programme based at Kirstenbosch. Via its membership, it can provide information, advice and networking opportunities with regard to Western Cape wetlands. This service is of particular value to consultants involved in environmental impact assessments that involve wetlands. Anyone who shares a vision for the environmentally responsible management of wetlands, from individuals living near wetlands, to civil society organisations and government agencies, is welcome to join the Forum. An offshoot of this Forum has recently been established in the southern Cape.

### (iv) Catchment Management Agencies—a new model for water management

#### What are CMAs?

The Department of Water Affairs and Forestry is currently both manager and arbiter of South Africa's water resources. In an effort to separate these functions, the National Water Act (No. 36, 1998) provides for the establishment of Catchment Management Agencies (CMAs) that will take over responsibility for water resource management in South Africa, resulting in a leaner national department that will be responsible for policy development and oversight rather than implementation.

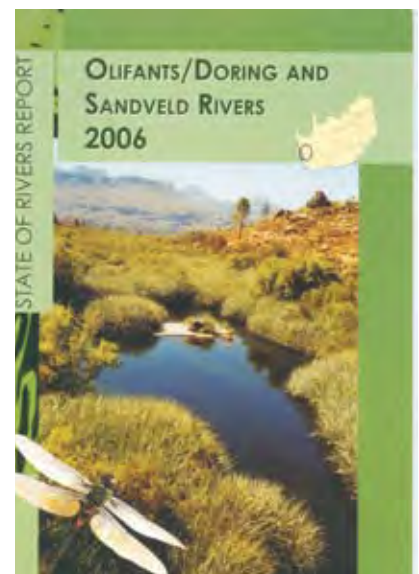
#### CMAs in the CFR

Five CMAs will be developed in the CFR:

- Breede River / Overberg
- Gouritz
- Olifants / Doring
- Berg (including Cape Town)
- Fish / Tsitsikamma

These CMAs should all have been established by 2009.

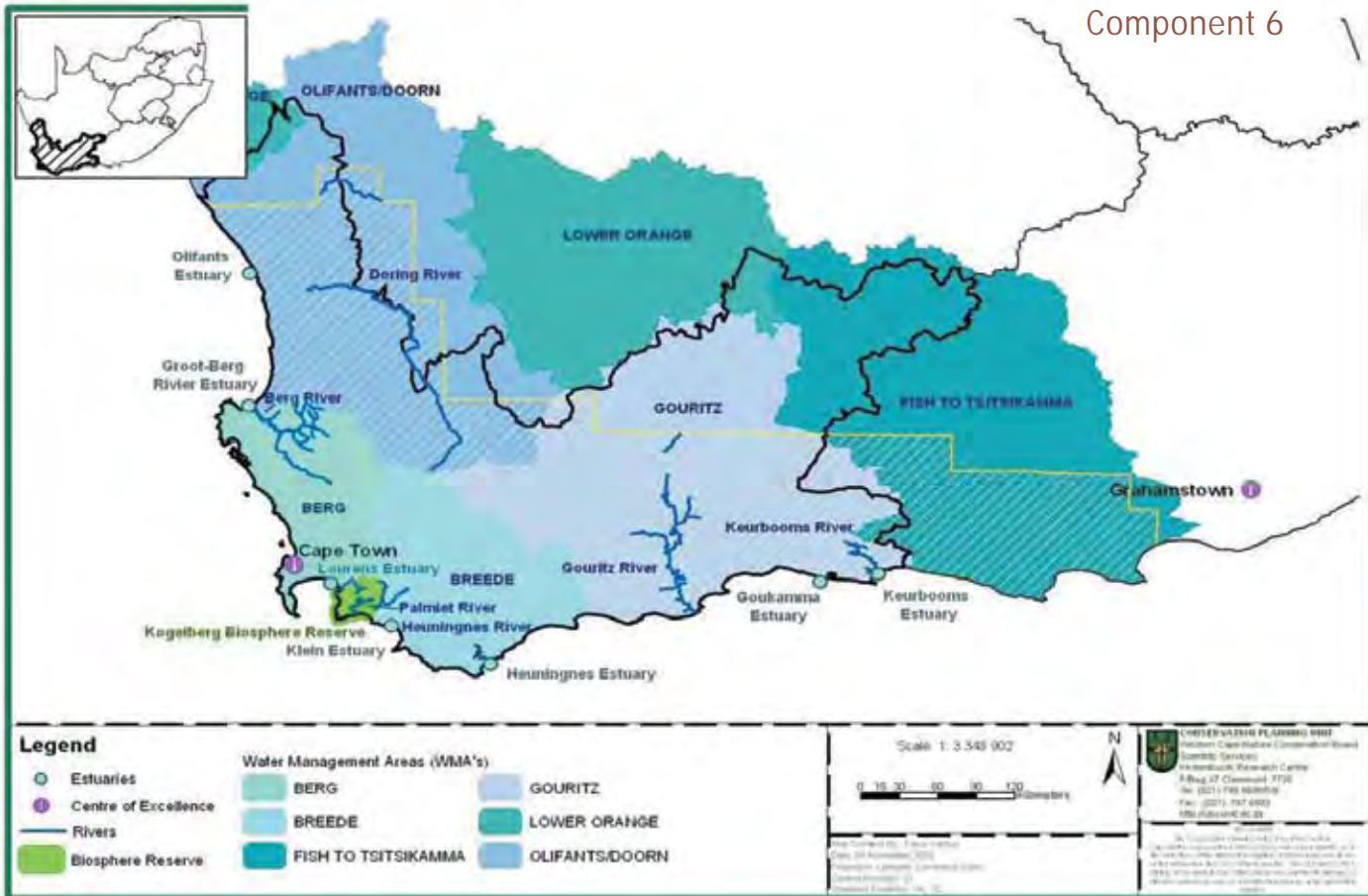
The 19 CMAs correspond to major catchment areas and their governing boards will comprise representatives of water user groups and interested parties in the catchment, including agriculture, industry, local government and environmental groups. Each CMA will develop a catchment management strategy and appoint staff to carry out its functions. Responsibilities will include water use control, licence allocations (e.g. afforestation, irrigation) and environmental management (e.g. aquatic requirements of water resources, pollution control, eradication of invasive alien organisms). Revenue to fund the CMAs will come from the water resource management charge that all water users currently pay to DWAF. Water users within a catchment will fund the functions of their CMA. Projects for the control of invasive alien plants (the Working for Water programme) will be co-funded by the CMA in addition to poverty relief funding from national government.



The River Health Programme has resulted in State-of-Rivers reports of all important catchment areas in the CFR.

## Integrating biodiversity concerns into Watershed Management—

### Component 6



Five Catchment Management Agencies will be established to manage water resources within the CFR. A close relationship between C.A.P.E. and these CMA's will strengthen biodiversity conservation in catchments.

The governing board of the first CMA is already appointed in the Inkomati water management area in Mpumalanga. The Breede-Overberg CMA in the Western Cape is already established and the governing board will be appointed in 2006. This is one of five CMA's in the CFR. Two of the others, the Gouritz CMA and the Olifants-Doring CMA, will be established by the latter half of 2006.

through C.A.P.E. will enable the CMA's to make more informed decisions about resource allocation and help them to plan proactively. For example, fine-scale biodiversity plans show where the threatened habitats are in a catchment; using these, the CMA can ensure that forestry and irrigation permits are not issued in areas where the biodiversity is under threat. Information on the water requirements of river ecosystems will enable CMA's to regulate the discharge of water from dams. Maps showing the distribution of invasive alien plants in the catchment and the critical biodiversity areas will enable Working for Water funding to be allocated more strategically.

#### CMA's and C.A.P.E.—partnerships for biodiversity

DWAF is an active C.A.P.E. partner. Through involvement in a number of C.A.P.E. task teams, the department has become increasingly conscious of the relationship between its mandate to manage South Africa's water resources, forests and plantations, and the need to conserve biodiversity. Due to the influence of C.A.P.E., biodiversity concerns will figure prominently in the strategies developed by CMA's in the CFR.

Being a partner in the broader C.A.P.E. programme has enabled DWAF to identify priority areas for conservation action in the region. As CMA's are established to manage South Africa's water resources, those in the CFR will be developing catchment management strategies with the assistance of C.A.P.E. that promote biodiversity conservation, setting a precedent that will inform CMA's elsewhere in the country.



*Willie Enright has contributed consistently to the development of the Watersheds component of the C.A.P.E. programme.*

Willie Enright, Deputy Regional Director at DWAF, notes that the wealth of fine-scale biodiversity information available



## (v) The Knysna Rastafarian Community Trail

“The river is life. But there is a problem—the river is polluted.” This is how residents of Rasta Square in Bongani Township in Knysna described the situation when they approached SANParks for advice on how to rehabilitate their local catchment. Fouled by seepage from pit latrines, choked by car wrecks and alien vegetation, the stream was by no means an asset to the community. The municipal cleansing department had lost interest in spending money on cleaning up the area, as the community had not supported previous attempts. Each time, within a few weeks, the valley looked like it had never been cleaned. But this time it was different; members of the community had taken the initiative and, what’s more, they weren’t asking for physical or material help, but only advice.

Inspired by the fact that they live in the heart of a National Park, this group of Rastafarians was convinced that they could develop sustainable livelihoods through rehabilitating their valley. Rather than launching into a once-off clean-up campaign, SANParks provided training in a variety of skills like path building and erosion control, and helped the group to develop their own business plan describing what they wanted to achieve. The plan unlocked funding and support from the municipality, which helped with the removal of the vehicle wrecks.

Having cleared the area of rubbish and alien plants, the task team decided to develop a footpath so that local residents and visitors could enjoy the area. They negotiated with municipal councillors, secured funding and invited people from the neighbourhood to apply for contracts. Managed by the task team, the people of the valley built their own trail, including an entrance, pine bridges and boardwalks. Elroy Block, one of the task team members, now takes tourists on guided trails, which provide insights into the Rastafarian way of life. The success of this phase of the project has attracted further funding: R500 000 has been provided to continue with rehabilitation of the area and to develop a multi-purpose community centre to serve as a meeting place, information centre and project hub.

The values and beliefs of the Rastafarian community have been the inspiration for

this project. The task team has been motivated by its desire to rehabilitate the natural environment and to restore the dignity of people. Through the project they have explored what the term “sustainability” means to their community in practical terms. They have found that sharing a vision for the project, taking initiative, remaining committed and building on their successes have enabled the project to take root and flourish. Instead of waiting for others to do things for them, the task team has restored their river valley and created job opportunities for their community. And this has resulted in the most important outcome of the project: instilling pride in the community.

## What have we learned?

- *If a group wants to get something done, the members must share a vision of their ultimate goal—and stick to that vision.*
- *People have different views and expectations, so it is important to look for common ground when working on community projects.*
- *Money can create problems—whether you have no money, some money or plenty of money! Start with a vision, develop your plan and use the money as you have planned.*
- *Co-ordinating a project is like driving a bus—to keep going in your chosen direction you need one bus driver. When things are going well, other people will want to take over the driving!*
- *Don’t waste opportunities or wait for conditions to improve before you act. Recognise that this is the time and work with what you have now.*
- *Planning and doing are two different things. People need appropriate capacity-building opportunities if projects are to become sustainable. This should include both practical skills (e.g. path building) and administrative skills (e.g. budgeting).*
- *Nobody can control the flow of time. To be sustainable, a project needs to develop at its own pace and in its own time.*



*Elroy Block, one of the speakers at the C.A.P.E. Partners’ Conference in 2005., says: “Money isn’t necessary to initiate projects. You need initiative to get projects off the ground. The worker becomes the father and the work his child”.*



## There are many impacts of alien invasive plants:

- *Alien plants usually grow more vigorously, reproduce more rapidly and have fewer natural enemies than indigenous plants. Dense groves of a single species of alien plants threaten biodiversity by crowding out more diverse communities of indigenous plants and animals, including rare and locally unique species.*
- *Ecosystem goods and services like edible and medicinal species, grazing, tourism opportunities and natural pollination services are all threatened by alien invasions.*
- *Alien plants threaten agriculture by invading potentially productive grazing land and areas where wild flowers are harvested.*
- *Experiments have shown that alien trees use more water than fynbos; this reduces moisture in the soil and runoff to rivers especially in mountainous areas and on river banks, affecting plants, animals and people.*
- *Dense stands of wood alien shrubs and trees are highly flammable and increase the intensity of veld fires, the cost of fire control and the risk of damage to human life and property. Destruction of the vegetation and changes to the soil structure increase the risk of soil erosion after fire.*

## Ouch!

*The cost of controlling invasive alien plants is estimated at R600 million per year for 20 years. If left unchecked, the extent of the problem will double within 15 years.*

## 3.2 Dealing with invasive alien plants

**I**nvasive alien plants pose one of the most serious threats to biodiversity in the CFR. Unchecked, alien plants spread rapidly and the greater the extent and severity of the infestation, the higher the cost of eradicating these plants. Government recognises the seriousness of the invasive alien plant problem and has put legislation, programmes and funding in place to facilitate alien clearing. A key approach has been to link alien clearing to poverty relief and skills development opportunities. In this section we reflect on the work of some of the key alien clearing initiatives in the region.

### (i) We're Working for Water

Addressing environmental degradation through poverty relief and social development projects is now a well-established model in South Africa. In 1995, however, when the Working for Water programme was launched, this was a novel idea inspired by the values of the new South Africa.

Through programmes like Working for Water, and more recently Working for Wetlands and Working on Fire, tens of thousands of people from the most economically depressed rural and urban areas have had the chance to earn a living and develop a range of skills through restoring local environments. Many have gone on to become independent contractors, managing their own teams and hir-

## Thirsty!

*Long-term studies at Jonkershoek in the Western Cape show that pine plantations in mountain catchment areas can reduce stream flow by 130–300 mm per year compared to areas with fynbos vegetation. Pine invasions have a similar impact.*



Working for Water has resulted not only in job opportunities, but also capacity-building and entrepreneurial development.

ing out their services to the public and private sectors.

The Working for Water programme has made a conscious effort to benefit the most marginalised communities, setting targets for the employment of women (60%), youth (20%) and people with disabilities (2%). A range of life skills development opportunities and social services have been provided through these programmes; for example, with the help of the Department of Social Development, Working for Water has facilitated child care for the children of workers involved in alien clearing projects.

The Department of Water Affairs and Forestry (DWAF) administers this flagship programme in partnership with the Department of Environmental Affairs and Tourism and the National Department of Agriculture.

### Are we making a difference?

Working for Water is currently involved in more than 300 alien clearing projects across South Africa, around 20% of these being in the CFR. Without this programme, it is estimated that plant invasions could have been up to 30% more extensive than they are today. But is there proof that removing invasive alien plants actually makes a difference to the amount of water reaching our rivers and dams? Indeed there is: the opposite table shows the average increase in stream flow measured after clearing of invasive alien plants from three sites in the Western Cape.

Conservative estimates suggest that the clearing of invasive alien plants by the Working for Water programme generates increased runoff of about 56 million m<sup>3</sup> every year; this equates to the full sup-



**Increase in stream flow immediately after clearing of invasive alien plants**

Catchment	Vegetation cleared	Short-term stream flow increase (cubic metre/hectare of aliens cleared/day)
Du Toitskloof	Wattle & Eucalyptus	9
Somerset West	Wattle & Eucalypts	12
Jonkershoek	Pine	31



Residues from clearing operations provide a source of raw materials for secondary industries.

**Water yield**

*This is the amount of water that can be collected and used in a catchment.*

ply capacity of the Wemmershoek Dam! Were it not for the Working for Water programme, the annual loss of water due to invasive alien plants could increase to as much as 127 million m<sup>3</sup> per year, or twice the full supply capacity of the Berg River Dam. The clearing of invasive alien plants from mountain catchment areas and along rivers is contributing significantly to water availability. This is particularly important in the dry west, where water restrictions are becoming a fact of life.

The diagram shows the impact that invasive alien plants are currently having on water yield in the mountain catchment areas and river systems of the Western Cape (orange bars). Clearing these alien plants from rivers and mountain catchment areas would release more than 80 million m<sup>3</sup> of water per year, or 4% of registered water use in the province. If alien plants were allowed to invade to their full extent, however, we would risk losing a further 334.5 million m<sup>3</sup> of water, which is equivalent to 16% of the registered water use in the Western Cape (blue bars).

In addition to increasing the supply of water, removing invasive alien plants results in huge benefits for biodiversity and creates employment opportunities for thousands of people. These are compel-

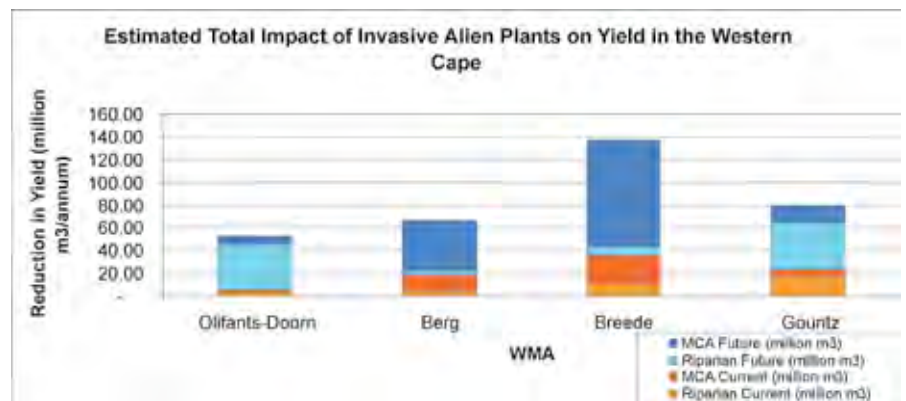
ling reasons why government should continue to support the Working for Water programme.

**Getting help from Working for Water**

Working for Water is a public sector programme funded almost entirely by government. It focuses on clearing invasive alien plants from areas identified as priorities in terms of water, biodiversity and the productive potential of untransformed agricultural land, such as land used for grazing and flower picking. Working for Water may partly fund alien



*Christo Marais has contributed to the economic valuation of the Working for Water programme, including the value to communities of skills development and entrepreneurial opportunities.*



The effects of clearing are dramatic, but fynbos vegetation recovers rapidly.





clearing on private or municipal land if this land is identified as a priority, but the land owner must agree to cover the costs of keeping the land clear of aliens after the initial clearing period. Private landowners who do not qualify for Working for Water assistance can obtain advice from the National Department of Agriculture or from their regional Working for Water office. They are able to draw from the growing pool of private alien clearing contractors, most of whom have been trained through involvement with Working for Water projects.

Founded on the principles of sustainable development, the Working for Water programme has successfully integrated environmental restoration, social development and poverty relief. Over the years, through turning this vision into reality, it has helped to transform not only the South African landscape, but also relationships between environmental agencies and local communities.

## What have we learned?

- *The Working for Water programme grew so fast that it became necessary to put in place norms and standards and assessment procedures in order to ensure effective project management across the board. The resulting Activity Sampling Programme has helped to improve productivity significantly in some areas.*
  - *An effective national alien eradication strategy requires a multi-pronged approach. Working for Water encourages workers who have completed their contracts to set themselves up as independent contractors with their own alien eradication teams. However, relatively few private landowners are complying with alien clearing regulations, thus reducing the amount of work available. Advocacy and incentives are needed to encourage landowners to clear their land, providing work for alien clearing teams.*
  - *Administrative systems and processes that suit the formal economy are not always appropriate when working with contractors*
- *from the informal sector. Rigid protocols reduce the responsiveness and effectiveness of some Working for Water projects. Delays in signing contracts or making funding available impact negatively on the appointment of workers and contractors and on the achievement of alien eradication targets.*
  - *Post-clearing rehabilitation is needed in some areas, in particular areas that have been densely invaded for long periods, such as some river courses and coastal plains.*
  - *An annual budget of R450 million may sound generous but it is not actually enough. Working for Water is not winning the war against invasive alien plants and needs to investigate additional sources of revenue, such as introducing levies for ecosystem services. In the CFR, for example, the current budget is R110 million per annum, whereas as much as R600 million may be needed.*
  - *Working for Water is currently investigating the establishment of Value Added Industries, like building materials (e.g. wood composites), biofuels like charcoal and, on a smaller scale, the manufacture of wooden crafts and furniture. Pilot projects suggest that income from these industries could offset the cost of clearing rooikrans, Port Jackson and black wattle by 14–20%.*
  - *Biological control is making a major contribution by dramatically slowing down the spread of the two most serious invasive alien species in the CFR: rooikrans and Port Jackson. This will significantly reduce the budget of R600 million required for both initial and follow-up clearing.*

### (ii) Addressing Invasive Alien Plants in the TMNP

In the early years of the Table Mountain National Park (TMNP), the clearing of invasive alien plants was funded by the Global Environmental Facility through the World Bank and was mainly outsourced to experienced contractors, in line with the donor's competitive procurement arrangements. Once this fund-



ing ran out, the Park started sourcing funds from Working for Water. This heralded the start of what has since become an important focus of the TMNP: creating training and employment opportunities in the Park for unemployed residents of neighbouring townships and informal settlements (Chapter 2.2).

The transition from GEF to Expanded Public Works Programme funding brought with it many changes. The TMNP held open meetings for its existing contractors to explain that, while wages would be significantly lower, the new system would provide work and training for the most disadvantaged members of the community. Poverty relief projects set out very strict contract conditions, which have enabled the Park to insist on high standards of occupational health and safety and fair labour practice from contractors. When the Park started recruiting new contractors, the response was enormous; eventually 60 contractors were appointed from over 400 applicants. Since the initial training period, contractors have been assigned to different sections of the Park and compete among themselves for contracts. This element of competition motivates teams to produce high quality work.

Herman Jungbauer who oversees alien clearing projects in the Park recognises the immense value of poverty relief programmes. As a self-confessed perfectionist, however, he is always looking for ways to improve the system. “We provide contractors with training in a host of areas, like occupational health and safety, first aid, business skills and personal finance,” he says “but even though we have an exit programme, I don’t think there is enough support for emergent contractors once they leave the poverty relief programmes.” Herman would like to see a contractors’ forum set up through which landowners could source newly established contractors.

For an organisation to sustain an effective alien clearing programme, it must invest in effective management capacity and have access to ongoing funding. In order to plan and manage a well-co-ordinated and integrated alien clearing strategy that involves different poverty relief programmes, the TMNP established an Invasive Species Control Unit. The unit draws up an Annual Plan of Operations (APO), which ensures a systematic approach to initial clearing plus adequate follow up. Working for Water provides funding in three-year cycles, which allows the



Park to plan ahead. Being a flagship programme of government, it is likely that this source of funding will be sustainable. Herman finds this model much more satisfactory than once-off donations that tend to encourage large-scale initial clearing without adequate long-term follow up.

Being funded by the Department of Water Affairs and Forestry, the Working for Water programme focuses primarily on clearing invasive alien plants from catchment areas in order to increase water runoff to streams and rivers. The restoration of biodiversity is an important spin-off of alien clearing, but generally Working for Water teams do not actively rehabilitate indigenous vegetation after aliens have been removed. Herman sees post-clearing ecological restoration as the next important challenge for the TMNP. A new project funded by the Department of Environmental Affairs and Tourism to remove invasive alien plants from Robben Island and to restore the natural vegetation will provide an opportunity to explore rehabilitation methods that can then be applied on the Peninsula. Restoration projects that complement alien clearing, like erosion control, the development of indigenous nurseries, and replanting disturbed areas, can create additional job opportunities to further benefit neighbouring communities.

The Table Mountain National Park is looking beyond alien clearing to the re-establishment of indigenous vegetation. Sometimes it’s an interesting operation!

### A major project

*Clearing invasive alien plants is a big budget project requiring significant co-ordination. During 2005, the TMNP planned to:*

- *Spend nearly R8.6 million on alien clearing.*
- *Clear over 16 000 ha.*
- *Provide nearly 60 000 person days worth of employment!*





*As Minister of Water Affairs and Forestry, Kader Asmal became a powerful champion of the Working for Water programme. Passionate about the need to conserve and provide water, alleviate poverty and empower people, he quickly seized on the opportunity that biodiversity restoration could play in achieving these goals simultaneously. Under his leadership, South Africa demonstrated to the world that sustainable development is possible when biodiversity considerations are mainstreamed into social and economic development.*



Effective implementation is founded upon good science, information and knowledge. A strength of the Working for Water programme has been the underlying understanding of how water supplies and biodiversity are affected by alien invasive species. This became the subject of a comprehensive scientific review in the South African Journal of Science.

## What have we learned?

- *Some contractors find it very difficult to manage contract funds, and spend money earmarked for business expenses on private purchases. To address this problem, all TMNP contractors must appoint a book-keeper and the Park regularly audits their books. If a contractor continues to mismanage funds, that person is no longer given contracts.*
- *Poverty relief programmes are supposed to benefit the most needy members of a community, but in some cases contractors appoint friends or family members who may not fulfil this criterion. The TMNP is trying to address this by asking community leaders to help identify contractors and workers. Stricter criteria are needed to ensure that funding benefits those for whom it is intended.*
- *Contractors sometimes find it difficult to maintain their teams, as some workers fall away and need to be replaced. Appointing untrained workers is a problem, and the Park is working with community leaders to try to address this problem.*
- *Although allocation of Working for Water funding has become much more efficient with the introduction of three-year funding cycles, project managers still experience problems of breaks in funding availability between cycles. A system of bridging finance needs to be investigated to protect the vulnerable communities who rely on poverty relief projects.*
- *Currently, the biggest invasive alien plant problem in the TMNP is caused by neighbours who continue to grow invasive species and who dump garden refuse in the Park. The TMNP needs to explore opportunities to encourage greater co-operation.*

## (iii) Santam Cape Argus Ukuvuka Campaign

The devastating fires on the Cape Peninsula in January 2000 were unprecedented, not only in terms of their extent and the damage they caused but also in relation to the response they elicited. Within just ten days of the fires, funding had been committed and a business plan drawn up enabling the establishment a short-term, issue-focused partnership known as the Santam Cape Argus Ukuvuka Campaign.



Over four years (2000–2004) the project staff worked with numerous partners in the City of Cape Town, initiating projects and facilitating processes aimed at reducing the risks of both bush fires and fires in informal settlements. The project received a total of R63.5 million, with most support coming from the City of Cape Town, Santam and, in the form of campaign advertising, the *Cape Argus* newspaper.

The campaign faced numerous challenges, not least the need to work with and through multiple stakeholders during a period of massive restructuring of many of the partner organisations. Despite this, the campaign enjoyed a high level of commitment from competent staff and committee members. Being a small organisation, it was able to operate with minimal bureaucracy and make funding available relatively efficiently. It also provided a forum for diverse organisations to work together to address issues of common concern.

The Ukuvuka Campaign spent about 50% of its budget on alien clearing, resulting in around 5 000 ha being cleared during the four-year project period. Most of this took place within the TMNP, greatly enhancing the ability of the Park to meet its alien clearing targets. Alien clearing is an ongoing process, however, and Ukuvuka made sure that government agencies like the Public Works Department and the South African National Defence Force, which also benefited from funding, committed themselves to ongoing alien clearing on their land.

Ukuvuka, with its partner the *Cape Argus*, conducted a very high-profile fire awareness campaign. A survey conducted





The Ukuvuka Campaign was established to reduce the risk of fire in both informal settlements and natural areas.

towards the end of the campaign period revealed a high level of awareness about the need to remove invasive alien plants, and the motivation to do so, especially among residents living along the edge of the TMNP.

Following the Working for Water model, the Ukuvuka Campaign contributed to poverty alleviation and social development by employing and training workers and contractors to undertake various labour-intensive projects, from clearing aliens, controlling erosion and cutting fire breaks, to establishing indigenous plant nurseries to assist with rehabilitation. By 2004, 25 contracting entities existed, employing 334 workers who had been involved in projects linked to the Ukuvuka Campaign.

A mid-term evaluation in 2003 revealed that the contractor system was not working optimally. A number of problems were identified, including a lack of management skills, poor supervision, low productivity, substance abuse and concerns that different contractors were paying their team members different rates. A



The Campaign included an imaginative advertising strategy.

PROFILE

Sandra Fowkes

A description of the C.A.P.E. Programme would be incomplete without the wise words of Sandy Fowkes. Sandra managed the public participation programme when the C.A.P.E. Strategy was being formulated, and was largely responsible for getting all of the main players on board. Blessed with a talent for avoiding conflict and soothing bruised egos, Sandy managed the Strategy Workshop in 2000 and kept consultants and stakeholders on the high road of constructive debate. When it came to putting together the Ukuvuka campaign that represented a risky experiment to link the interests of powerful stakeholders to deal with a highly charged topic, Sandy was the obvious choice. She summed up the situation well, saying that “campaigns like Ukuvuka work well as semi-independent partnership projects. When it all goes wrong, the partners can blame the Campaign Manager, and when it all goes right, the partners can all take the credit”. Wise words indeed, and which inform many of the project implementation mechanisms in C.A.P.E. Take heed, you project co-ordinators!





Campaign Manager Sandra Fowkes discusses progress with the then Minister of Water Affairs and Forestry, Ronnie Kasrils.

Contractor Development Working Group was set up and a six-month Contractor Development Programme put in place to strengthen skills and build professionalism. Ukuvuka also provided interest-free loans to contractors starting up new businesses to enable them to purchase protective clothing and equipment. This additional support bore fruit; an indication of the determination of the contractors to manage their new businesses effectively was that all contractors working for the City of Cape Town and 90% of contractors working for TMNP paid back their loans within six months!

Although short-term projects have their limitations, the Ukuvuka Campaign was able to focus on the issue at hand, mobilise expertise and resources efficiently and responsively, avoid some of the administrative processes of its institutional partners, and produce key outputs that have helped to translate laws and policies into practical action.



Ukuvuka Operation Firestop was an effective partnership that built capacity among staff and volunteers.

## What have we learned?

- Being a small, highly focused project, the Ukuvuka Campaign was able to respond rapidly to address short-term needs and catalyse key initiatives relating to alien clearing.
- Alien clearing should have been informed by a GIS database integrating all alien clearing information on the Cape Peninsula, but this was not available. Consequently it was not possible to plan effectively or accurately assess the impact of Ukuvuka's interventions.
- Implementing agencies battled to set up effective, integrated work programmes, making it difficult to provide alien clearing teams with regular work. The Ukuvuka Campaign therefore worked with the City of Cape Town and SANParks to set up systems to provide contractors with ongoing work and regular payment. Both the City and the Park appointed managers to co-ordinate alien clearing activities.
- Regular, predictable work and efficient payment of contractors builds worker morale; administrative delays in providing work opportunities or paying contractors undermines enthusiasm and forces teams to seek work elsewhere.
- Paying workers involved in poverty relief projects different rates causes confusion and leads to disputes.
- In order to monitor the effectiveness of interventions, you first need to set up systems to enable assessment. For example, the Ukuvuka Campaign could not accurately assess its impact on employment creation as it had no criteria against which to measure the readiness of contractors to operate in the open market. Furthermore,

## PROFILE

### Val Charlton

One of the enduring legacies of the Ukuvuka Campaign is the programme that has picked up many of its responsibilities, while expanding these countrywide, namely Working on Fire. And one of the most obvious reasons for its rapid success was the experience and tenacity of its manager, namely Val Charlton. Val managed a seamless transition to the new programme and set about building upon its public profile and management effectiveness through a well co-ordinated programme. Key to this has been an effective communication campaign that has used the summer fires of 2005/6 to draw attention not only to the risk to life and property, but the underlying risk to biodiversity when fires are too frequent or too intense as a result of increased fuel loads. A major challenge is to maintain institutional readiness when there is no immediate fire danger. A few years of lowered risk and complacency sets in. This has set the stage for a re-examination of the ecological effects of fire and the arrangements that need to be maintained to deal with the incidence of fire rationally and objectively. Val has her work cut out for her!





*workers were not monitored to see how many managed to establish their own businesses after their training.*

- *Legislative requirements to clear alien vegetation help to motivate private landowners to clear their land, but this is undermined when enforcement is ineffective. Using some of its funding to employ legal experts enabled Ukuvuka to start prosecuting negligent landowners and setting necessary precedents; however, this proved to be a very slow process.*
- *Short-term campaigns may be good at initiating programmes but they have to rely on institutional partners to maintain and develop these programmes once the campaign comes to an end. It is important to develop exit strategies to institutionalise key initiatives before the end of the campaign.*

#### (iv) P.R.O.T.E.A.—Poverty Relief in the Overstrand through Treatment and Eradication of Aliens

An inspiring example of an alien clearing programme in the CFR is the appropriately named P.R.O.T.E.A. project. In 2000 Craig Spencer, an environmental officer at the Overstrand Municipality, drew up a 10-year plan to remove invasive alien plants from the Hangklip-Kleinmond area of the Kogelberg Biosphere Reserve. With seed funding of R141 000 from the Table Mountain Fund, this three-year pilot project soon attracted the support of Working for Water, the local authority and private landowners. Today Working for Water provides a R5 million annual budget for invasive alien clearing in the Overstrand Municipality and employs over 200 previously disadvantaged individuals. The original 10-year plan for alien eradication has evolved into at least a 20-year plan for the entire municipality.

Some time ago, the P.R.O.T.E.A. project came up with a novel idea to encourage private landowners to remove invasive alien species from their properties. They put up a map of the municipality in a local shopping centre where they could record progress made with the alien clearing project. As an area was cleared, they shaded in that section of the map.



Properties of landowners who refused to co-operate were also marked on the map—in red! Now landowners who have cleared their properties are starting to put pressure on their non-compliant neighbours because they don't want seed drifting over the fence and causing their alien problem to recur.

Monique van Wyk has been co-ordinating P.R.O.T.E.A. since 2001 and her enthusiasm for the project is infectious. Like many other Working for Water project managers she is realistic about the day-to-day challenges but tremendously positive about the benefits of the programme and the way in which it has developed. "If you start as a project manager with Working for Water today, you get a full toolbox!" she says, "Everything you need is on a CD Rom and you can just get on with the job." She lists the institution of accredited training, the development of an exit strategy for contractors, and the introduction of a three-year project cycle as ways in which Working for Water has adapted and improved.

Monique is looking forward to an exciting new stage in the P.R.O.T.E.A. project: the establishment of value-added industries. The municipality will employ teams developed through the current Working

Funding from Working for Water has enabled the Overstrand Municipality to draw up a 20-year alien clearing plan for the municipality, which provides employment for over 200 previously disadvantaged individuals.







Employment policies in the Working for Water have ensured equal opportunities for both men and women to develop skills and improved livelihoods.



The Noordhoek-Kommetjie wetlands are an essential link in consolidating the Table Mountain National Park. Wetland restoration there has created many job opportunities.



Coastal and estuary wetlands are severely threatened by burgeoning development in the southern Cape.

for Water project cycle to start clearing invasive aliens in the area east of Stanford; Working for Water will appoint new contractors to set up secondary industries, like producing firewood, mulch and wooden items like outdoor furniture. Monique hopes that this project will address two of her concerns: the need to provide training opportunities in a broader range of skills, and the removal of cut wood from properties, which will reduce fuel loads linked to the risk of fire.

## What have we learned?

- *Particularly in small towns and rural areas, you need to train contractors in a wide range of skills because there is not enough work to sustain many people with similar skills.*
- *Project managers need to plan work programmes to ensure that teams have work throughout the year.*
- *Developing the competence and confidence of emerging contractors to quote for an alien clearing contract requires guidance and practice; competing with fellow trainees for contracts before competing on the open market provides these opportunities.*
- *In rural areas, daily wages for seasonal work on farms exceed poverty relief grants; this can destabilise alien clearing teams and force contractors to take on unskilled casual labour.*
- *The Conservation of Agricultural Resources Act (CARA) is not the only legislation that compels landowners to remove invasive alien plants; you can also invoke the Veld and Forest Fire Act, the National Environmental Management Act, the Water Act and even Common Law relating to neighbours and nuisance. The latter states that a land owner may not use his/her land in a way that impacts negatively on a neighbour's property. The neighbour may approach the court to compel the land owner to remove the source of the nuisance, which might be an alien tree shedding seeds.*

## (v) Adopt-a-Plot: Co-ordinating the efforts of volunteers

Lovers of the fynbos have long been passionate about eradicating invasive alien plants. Many a volunteer hack group patrols the CFR with a “seek and destroy” glint in the eye. With tasks ranging from chain saw massacres of towering pine trees to applying herbicide and pulling young seedlings, this is fun in the sun for the whole family!

Some hackers have become legends in their own time. Alf Morris, one of the stars of the TMNP's video Hoerikwaggo: People of the Mountain, has been a regular hacker for 20 years. Being an octogenarian isn't stopping him either. When he isn't sawing down aliens, you will find him planting and tending silvertree seedlings to grace the slopes of Silvermine.

Alf is a member of the Friends of Silvermine Nature Area. Since 1992 the Friends have co-ordinated an Adopt-a-Plot programme, which has enabled individuals, families and school groups to make a meaningful contribution to restoring the natural vegetation of the Silvermine section of the TMNP. The project started small with only one or two plots; today there are more than 30.

## What have we learned?

- *Effective co-ordination of voluntary alien clearing efforts relies on having a champion responsible for each area.*
- *Good communication between conservation authorities and volunteer groups greatly enhances the effectiveness of alien clearing efforts.*
- *Alien clearing is a dynamic process; co-ordinators must be able to respond to changes in alien plant populations and the availability of champions and helpers.*
- *Long-winded reporting systems don't work. A more efficient spreadsheet system would facilitate monitoring and record keeping.*
- *The regeneration of fynbos after alien clearing is astounding! Development is NOT the only alternative for badly invaded veld.*





Mick Farrow attacks a jungle of young pine trees at Silvermine.

Co-ordinator Sandy Barnes recalls that the Adopt-a-Plot programme originated when the Friends decided to approach WWF-SA for funding to support their alien clearing efforts. Having to put together a funding proposal motivated the Friends to come up with a system that would enable them to use the money most effectively: Adopt-a-Plot was the result. They used the funding to buy equipment and herbicides, which are shared by hack groups that meet on different weekends. In the case of chainsaw operators, the Friends bought equipment to suit the individuals who play this more specialised role. Some of the chainsaw operators now assist Friends groups in other areas to remove large trees. These volunteers are so skilled that they have helped SANParks to fell some particularly large pines that contractors were unwilling to tackle.

Although volunteer groups and management authorities sometimes find it difficult to work together, Sandy is delighted with the relationship the Friends have with the TMNP. She puts it down to two things: firstly, all the area managers they have worked with keep them informed of developments and involve them in decision-making; secondly, the Friends see their role as primarily supportive rather than critical. If the Friends notice that something needs to be done, rather than complain, they ask what they can do to help. Positive relationships like this allow volunteer groups to contribute meaningfully to overall conservation management plans.

### (vi) Sandberg Fynbos Reserve

With the cost of clearing invasive alien plants currently at about R6 000 per ha, private landowners who are unable to get help from programmes like Working for Water face an expensive challenge. Wil-



liam Stafford and Gerhard van Deventer have found a creative way to address this problem at Sandberg Fynbos Reserve, a 650 ha private nature reserve near the village of Elim on the Agulhas Plain. Historically, agriculture devastated vast swathes of lowland fynbos and renosterveld in this area; today alien *Acacia* and *Eucalyptus* trees threaten what's left.

International volunteers from the British Trust for Conservation Volunteers and Canada World Youth also spend time at Sandberg, hacking in the mornings and hiking and exploring in the afternoons. Sometimes a volunteer with a particular interest will tackle a special project, like drawing up a bird list for the reserve. Some groups volunteer for up to three weeks; having a team involved for this long makes it possible to address the invasive alien problem more strategically.

Schools from the Agulhas Plain are starting to find Sandberg a special place to experience and learn about the environment. After removing invasive aliens, they find out how their efforts are helping to restore biodiversity by taking part in an ongoing project to monitor vegetation in a cleared area. What's special about Sandberg is that the people who spend time here don't only work hard; they also have enormous fun with friends. People leave having deepened their relationships with both people and nature.

Sandberg Fynbos Reserve aims to protect and repopulate endangered indigenous flora, strengthen public awareness of fynbos, promote and practice permaculture and sustainable living, and attract ecotourism.



*Gerhard van Deventer and William Stafford have found that many people are happy to volunteer their time to help them remove the invasive alien plants that endanger the natural ecosystems and unique local plants on their property. Friends love to be part of their twice-yearly Big Hack, which William describes as an opportunity to "nurture nature and you". For an entrance fee of one indigenous tree, friends spend a weekend camping at Sandberg, hacking, pulling and planting.*



enabling stewardship



*Biodiversity conservation in the Cape Floristic Region will never succeed without the involvement of citizens, including private landowners. About 80% of conservation-worthy land in the region is privately owned and a vital component of the work of C.A.P.E. Partners has been to investigate incentives and design systems to encourage landowners to care for biodiversity on their properties. In the Western Cape, the Conservation Stewardship programme is a framework that enables landowners with priority biodiversity on their properties to choose which level of mutually beneficial conservation agreement they are willing to enter into with CapeNature.*

*Being good stewards also entails keeping an eye on biodiversity. Volunteers from across the region contribute thousands of person hours every year monitoring the whereabouts and population health of rare and endangered plants, birds and reptiles of all descriptions, coastal and marine resources, and the baboons of the Cape Peninsula. These are the true “fynmense” who prove the adage that “we will love what we know”.*

# 4

## 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-





Stakeholders deliberate options for conservation stewardship.

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 land-owners, 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

## Conservation Stewardship

*This programme is a strategic approach to reaching biodiversity targets by ensuring that conservation-worthy sites on private land receive appropriate levels of security.*

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

## Stewardship gets strategic

*CapeNature has always encouraged private sector involvement in conservation by facilitating the establishment of private nature reserves, community reserves and conservancies. The Conservation Stewardship project has made these initiatives more strategic. CapeNature now assesses the conservation-worthiness of a site before recommending which of three levels of stewardship is most appropriate, and uses wisely crafted incentives to leverage commitment from hesitant or less-willing land owners.*



*The land owner and CapeNature representative can negotiate an appropriate stewardship agreement based on a suite of three options.*

## PROFILE

### Chris Martens

Chris Martens is the Programme Manager for CapeNature's Stewardship Programme. He epitomises the “user-friendliness” of extension services with a thorough, knowledgeable and personable approach to land owners and communities. A key contributor to the Conservation Stewardship Pilot Project, Chris provided the ground-truthing to put the programme on a practical footing in the field. He has also supported the establishment of the Western Cape Stewardship Association.





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.**

Option	Where applicable	Possible land use restrictions	Benefits to the land owner
Contract Nature Reserve	<ul style="list-style-type: none"> <li>□ Critically important and threatened sites</li> <li>□ Priority areas adjacent to statutory reserves or sufficiently large to be self-contained ecosystems</li> </ul>	<ul style="list-style-type: none"> <li>□ No development or land use rights will be permitted in the protected area</li> <li>□ Access and residence rights will not be restricted</li> <li>□ Owners retain title, but restrictions are lodged on the title deed</li> </ul>	<ul style="list-style-type: none"> <li>□ Substantial assistance with habitat management</li> <li>□ Increased recognition and marketing exposure</li> <li>□ Lobbying on your behalf by conservation agencies for incentives (e.g. tax relief)</li> </ul>
Biodiversity Agreement	<ul style="list-style-type: none"> <li>□ Any conservation-worthy land, especially wetlands and water catchments</li> <li>□ Includes small and isolated fragments</li> </ul>	<ul style="list-style-type: none"> <li>□ Land must be managed to conserve biodiversity and support natural processes</li> <li>□ No development is permitted in the protected area</li> </ul>	<ul style="list-style-type: none"> <li>□ Specific agreements for fire, alien, plant and animal management</li> <li>□ Assistance with management plans</li> <li>□ Advanced extension services (e.g. alien clearing planning)</li> </ul>
Conservation Site [Entry level]	<ul style="list-style-type: none"> <li>□ Any natural land</li> <li>□ 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</li> </ul>	<ul style="list-style-type: none"> <li>□ 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</li> </ul>	<ul style="list-style-type: none"> <li>□ Advice and support through basic extension services</li> <li>□ Assistance with farm maps</li> </ul>



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



*Kerry Purnell (de lan Hunt) has been on the leading edge of developing stewardship programmes in the CFR.*

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

## 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!*

## 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.*







## 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 Robin-  
son
- **Kleinezeljacht Nature Reserve** – Carel Goosen  
Familie Trust
- **Porcupine Hills Nature Reserve** – Murray and  
Fiona Weiner

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*

*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



Landowners who have entered into stewardship agreements receive recognition awards from Minister Tasneem Essop.

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



Elandsberg Private Nature Reserve is the largest remaining tract of West Coast Renosterveld on earth, and home to three endemic plant species and the endangered Geometric Tortoise.





the largest contiguous area of West Coast Renosterveld. The Parkers have incorporated abandoned marginal farmland 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



*Willem Smith, Sarel Yssel and Adrie Koch compare notes regarding land use planning, protected area development and stewardship at the C.A.P.E. Partners' Conference 2006.*



Neil MacGregor never tires of imparting his knowledge to visitors to his farm where flora conservation is a priority.





Members of the Western Cape Conservation Stewardship Association Committee.

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.



The locally endemic erica, *Erica hansfordii*, was discovered only about three years ago in the Slanghoek Valley.

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 CEPE, 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.



GIS maps can enable negotiations regarding land use planning, when it is understood where the most critical biodiversity is located.





Municipal officials inspect the new maps of conservation priorities in municipalities.



Farm workers learn new skills and develop entrepreneurial opportunities at Flower Valley.



### Area-wide Planning project opportunities

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.

## 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.*

#### 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

The botanical survey will enable the farmers of the Bredekloof 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.

## 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.*

### (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 Koeberg 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.



Prehistoric finds at Cape St. Francis are evidence of long-term occupation by people of this biodiversity-rich coastline.





The St. Francis Conservancy Project made good progress in communicating with all stakeholders.



The Fourcade Botanical Group included enthusiastic volunteers who devoted themselves to identify threatened species.

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.

### 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.

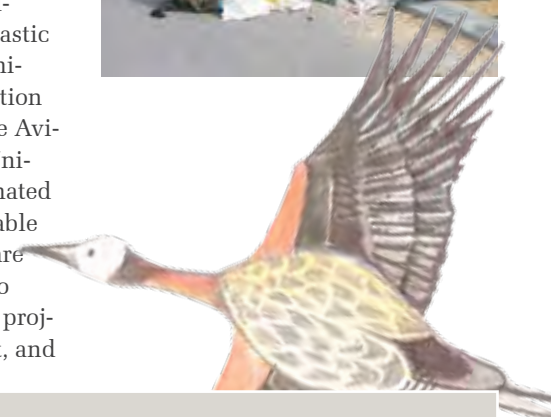
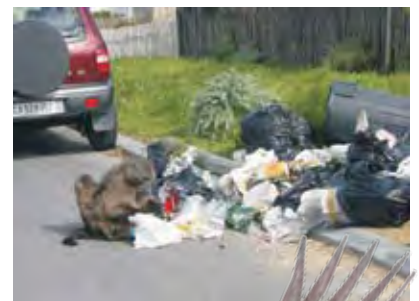
### (ii) Beginning with birds

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-



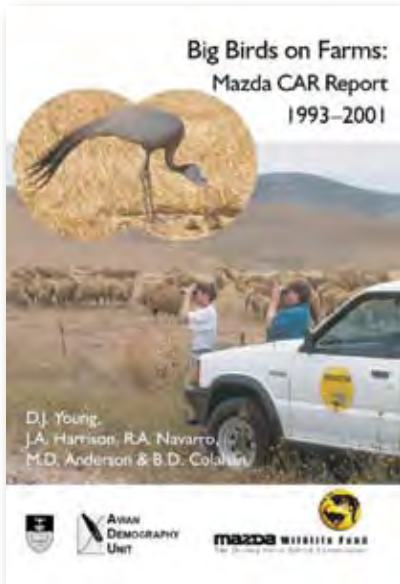
Baboon monitors not only assist in reducing conflict between baboons and people, they are already rapidly developing skills as tour guides and educators.



### A grand effort!

*The Southern African Bird Atlas is the largest biodiversity monitoring project ever undertaken on the African continent.*





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



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.



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

oped a standardised method to monitor threatened blue cranes and Denham's/Stanley's bustards in the Overberg. More than 10 years later, more than 750 people are involved in helping to monitor populations of more than 20 species of birds along 340 fixed routes around the country, 60 of these being in the Cape Floristic Region. Fourteen of these species have Red Data status. Twice a year, volunteers drive along these routes, recording sightings of particular bird species and information about the environment. ADU collates and interprets these records and publishes the results on their website. The information enables ADU to keep track of changes in the environment and bird populations.

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>

**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.



## What have we learned?

- Volunteer organisers help to coordinate 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

through regular feedback that the data they have gathered are being used. ADU acknowledges volunteers in news articles and project reports, and regularly updates bird records on their website.

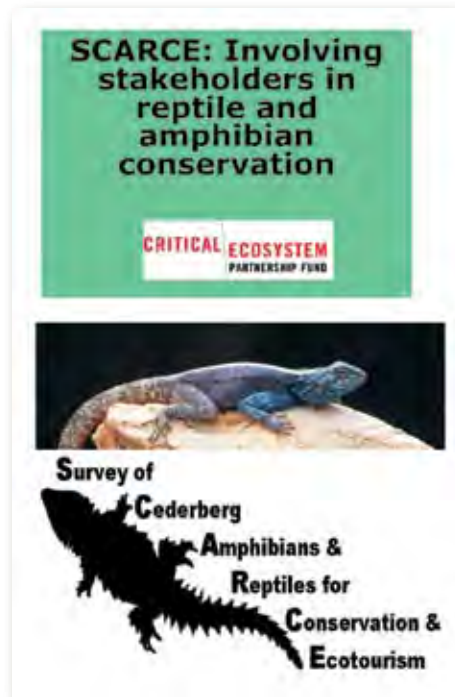
- The work of the ADU has been greatly enhanced by working in partnership with other organisations like conservation agencies, NGOs and bird clubs.
- Monitoring projects that involve the public have a habit of expanding as awareness grows; however, this is seldom reflected in an increase in project staff or running budgets. This puts undue pressure on co-ordinators and could in time compromise the effectiveness of these essential projects.

### (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.



SCARCE is involving members of the public in monitoring amphibians and reptiles and in helping to conserve these animals and their habitats. The University of Stellenbosch, CapeNature, SANParks, Northern Cape Nature Conservation, the Mountain Club of SA and Kontrei Toere are project partners.

### (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-

## New technology for a new reptile atlas

*The advent of digital photography has provided a new tool for the reptile atlas project. People are now able to e-mail digital photos of reptiles with locality information to ADU. These photos will appear on a ‘virtual museum’ page on the website, where experts will identify the species. Opportunities for people to receive feedback on their observations serve to maintain public interest and develop people’s knowledge.*



The critically endangered *Protea odorata*.





## Lots to monitor!

*The CFR has around 1 406 Red Data plant species—plants that are threatened with extinction or that are very rare.*

ment of CREW, or Custodians of Rare and Endangered Wildflowers (see below), an opportunity for members of the public throughout the Cape Floristic Region to participate in locating and monitoring populations of threatened and endemic plants.

### (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 south-east 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.*



Treasures rediscovered: *Lachenalia purpureo-caerulea* (left); *Satyrium hallackii* (above).



Species in trouble. In Langebaan, habitat destruction due to quarrying and lack of conservation has resulted in the loss of *Moraea loubseri*. Repeated searches by CREW have been unsuccessful.

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 Rondeborg. 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 jasminiflora*.

#### 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



Invasive grasses are choking out this beautiful species of moraea (*M. tulbaghensis*)—CREW could find only three populations.

## PROFILE

### 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."







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

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 spe-



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.

cies 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

**PROFILE**

**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 atlasers, he is now “spreading the energy” by sharing his passion—especially with the children in the communities where CREW works.





*Tilla Raimondo's passion for plants has led her to design and implement the CREW project, and has resulted in the C.A.P.E. Threatened Plants Programme being expanded to a national level.*

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

## Biodiversity database

*All data collected by CREW volunteers are captured in SANBI's centralised biodiversity database (SIBIS). Every year CREW updates a spatial GIS layer giving the location of all rare and threatened plant species in the CFR. This information is used to update the national Red Data List. It is also circulated to C.A.P.E. Partners and is used by CapeNature to prioritise areas that need to be conserved through the Stewardship programme, as well as to guide decision-making in respect of development applications.*



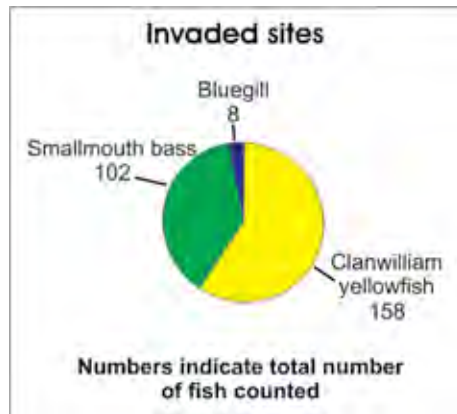
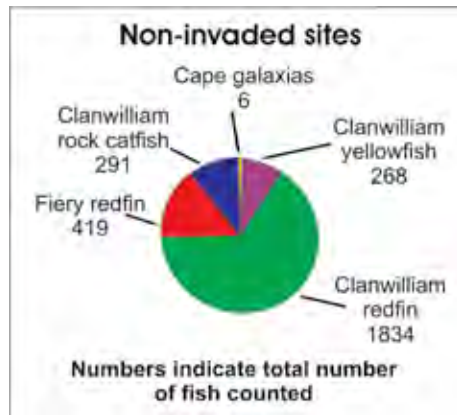
*Dean Impson has contributed to CapeNature's responsibilities in the River Health Programme. His particular passion is, however, the control of the alien invasive fish species that affect endemic fish in the Cape's rivers.*





Dean Impson demonstrates that there is very little life left in a damaged river ecosystem.

a devastating effect on indigenous fish populations, as these results from the Rondegat River in the Cederberg illustrate:



Pie diagrams showing the severe impact of smallmouth bass in the Rondegat River, Cederberg. Three indigenous species have disappeared from below a waterfall where bass have invaded.



After the alien fish such as this smallmouth bass take hold, rare species like the Witte Redfin are severely impacted.

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.

## More reasons to conserve rivers

*The South African Institute of Aquatic Biodiversity and the University of Pretoria have been conducting research into the features and genetics of indigenous freshwater fish. Amazingly enough, their results suggest that the Cape Floristic Region is home to more fish species than previously thought—and all of them are endemics. The work has shown that the humble Cape Galaxias (currently considered to be one species) represents a complex of species which may include up to seven new species!*



## 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 ash-trays 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.”



A beach clean-up is a great way to have fun while learning about the environment.



“Hey, it’s my turn to use the magnifier!” Moreson Primary School children get close to the beach and the box.



### 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%.*







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.*



### 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.

### 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

### Involving the community in marine monitoring

Also in the TMNP MPA, collaboration between the TMNP, Kommetjie 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.



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.





Marine conservation also includes programmes to monitor and protect seabirds.

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 co-operation 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



Conservation managers have their work cut out for them in controlling illegal harvesting.



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.*









**building the biodiversity economy**



*A growing focus of the C.A.P.E. Programme has been investigating what it means in practice to develop the “biodiversity economy” of the Cape Floristic Region. The landscapes and biodiversity of the region are an obvious tourism draw-card, and the natural marine and plant resources, if wisely managed, have the potential to sustain livelihoods in the region in the long term. Programmes like the Department of Agriculture’s LandCare programme and SANBI’s Conservation Farming project have provided opportunities for conservation managers to work with farmers to identify, conserve and sustainably use the biodiversity treasures on their land.*

*This chapter highlights both community-based initiatives like the sustainable harvesting of rooibos tea and fynbos cut flowers, and innovative partnerships between conservation and the tourism and wine industries. The stories illustrate both the potential and pitfalls of these partnerships, and bring to the fore the need to go beyond the rhetoric of sustainable development to an honest appraisal of what sustainability as a value position means in terms of our lifestyles and business choices.*

## CHAPTER 5 Building the biodiversity economy

### 5.1 Valuing the Cape Floristic Region

When the Cape Floristic Region (CFR) was declared a World Heritage Site in 2004, it said something significant to the people of South Africa: the world values this region as a site of “outstanding universal significance to humanity”.

There are many reasons why people value this place: its landscapes, waters and living things. For a start, it is simply stunning. Whether it is the grandeur of the coastal and mountain scenery, or the perfect detail of the tiniest flower, the region is a visual inspiration. The

biodiversity of the region—the diverse and unique ecosystems and species of the land, rivers and sea—is valuable in its own right, as well as in terms of the many goods, services and opportunities it offers to the people of the region and the world. This biodiversity has also given rise to

much of what is culturally unique about the region: the snoek fishery that sustains thousands of coastal dwellers; a belief in the healing powers of “buchu brandy”; thatched roofed cottages—these are all quintessentially Cape.

The people of the Cape have sometimes been slow to benefit from their biodiversity heritage. In the field of horticulture in particular, European plant breeders have, since the earliest days of colonisation, produced countless showy, even bizarre, hybrids from the genetic raw materials of Cape plants. Cape-based plant breeders, on the other hand, have been few and far between. Today this is changing. The Convention on Biological Diversity, as one of its three aims, emphasises the need for biodiversity benefits to be shared with the people of the countries of origin of that biodiversity. Slowly but surely, the communities with traditional knowledge of healing plants, and the government agencies with the mandate to conserve the country’s floral riches, are starting to derive benefits from the multinationals that invest in their beneficiation.

Although it is easy to draw up a long list of the reasons why the world values the biodiversity of the CFR (and therefore why this biodiversity should be conserved), our society does not permit the



The Cape coastline has always been a source of livelihoods for people of the region, although tourism is beginning to outweigh consumptive use in some areas.



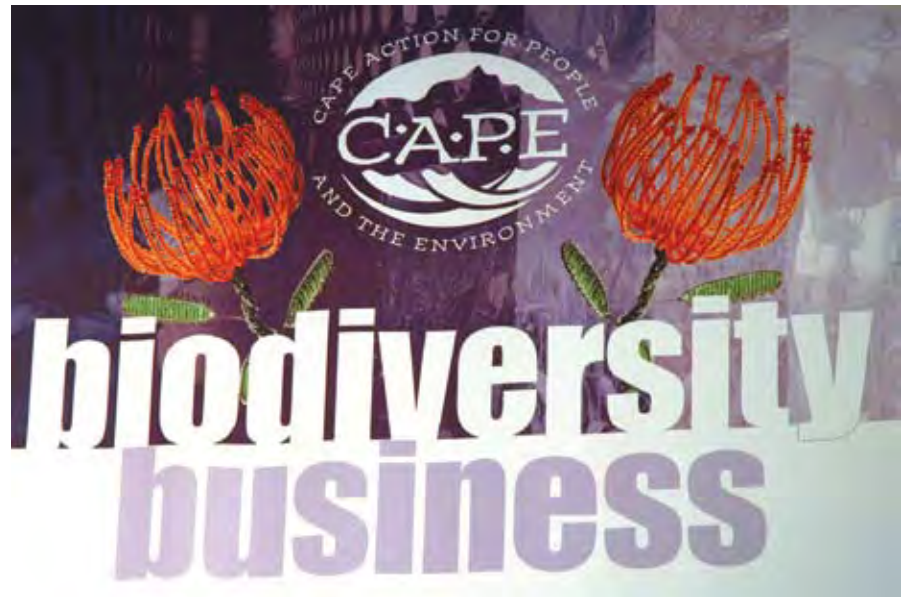
Although flowers have been traded for decades, it is only relatively recently that value is being added through bouquet-making using flowers certified as sustainably harvested.

## Floral fortunes

*Dutch and German plant breeders have created a multi-billion dollar horticultural industry by developing many fynbos plant species into garden plants.*

luxury of vague, qualitative generalisations. On the one hand, government must be able to justify why, in a country plagued by HIV/Aids, poor levels of education and soaring unemployment, biodiversity conservation deserves a slice of the budget pie. On the other hand, in a society that seems to value only what illustrates a profit on a balance sheet, it is necessary to start describing not only in words and pictures, but also in hard numbers, why the biodiversity of the CFR is worth looking after. This is the justification for trying to quantify, in rands and cents, what biodiversity actually contributes to the economy of the region—in other words, the monetary value of the “biodiversity economy”.

Some elements of the biodiversity economy are obvious: the value to communities of harvests of fish, reeds, flowers and tea; the value to the economy of nature-based tourism; the income derived from the sale of game animals and the issuing of licences by government conservation agencies; and the employment opportunities that these various industries provide. At another level, many of the poverty relief programmes that the South African government has developed to provide short-term employment for the destitute, have been created in the biodiversity sector.



The aspect of biodiversity that is most difficult to quantify, and therefore most often overlooked, is what we call “ecosystem services”, those essential processes like water purification, soil generation, erosion control, pollination and pest control that well-functioning natural systems carry out automatically. We take these services for granted, until they are no longer there. And then, when we have to pay scientists and engineers to restore or artificially replicate the essential life-support systems that nature provides freely, we start to count the cost.

It could be argued, that if people were expected to pay for the services that ecosystems provide, nobody would question the value of biodiversity. But for the most part, these services are invisible on balance sheets. Were these services to be paid for by users, the agencies which remove thirsty alien vegetation from water catchment areas, that conserve the stands of fynbos in which honeybees over-winter, and manage the estuaries that act as nurseries for many marine fish species, would no longer have to feel the pinch of inadequate budget allocations.

## What's it worth?

It isn't easy to put a monetary value to the biodiversity of the CFR, but a recent natural resource economics study estimated the total economic value of the CFR as at least R10 000 million per year, which is equivalent to over 10% of the regional Gross Geographic Product for the Western Cape.



The theme of the 2006 C.A.P.E. Partners' Conference was Biodiversity Business, exploring linkages and opportunities for business based on biodiversity and businesses that could make a difference to the way in which biodiversity is used and benefited sustainably e.g. rooibos products.



The C.A.P.E. Partners' Conference provided an opportunity for discussion and debate as well as showcasing of biodiversity-based enterprises.





*At the C.A.P.E. 2006 Conference on Biodiversity Business, Brent Walters from the Department of the Premier provided a sound framework for discussion.*



*Director of Conservation International's Southern African Hotspots Programme, Sarah Frazee, has not only contributed directly to the initiation and roll-out of both the C.A.P.E. and Succulent Karoo Ecosystem Programme (SKEP) but has with boundless enthusiasm worked at a local level to catalyse opportunities and funding for local conservation and development, such as the Nieuwoudtville Tourism Charette.*

A detailed natural resource economics study conducted on the Agulhas Plain found that, in 1999, fynbos flowers harvested from natural vegetation on the Agulhas Plain contributed about R10 million to farm incomes. In that same year, the fynbos flower industry as a whole generated a gross income of nearly R150 million from exports and local sales. Of this, about R86 million worth of flowers were harvested from natural vegetation. In terms of other fynbos products, about R12 million worth of buchu is exported each year, their oils being used to make food flavourants and cosmetic fragrances. And about R5.6 million worth of thatch was harvested in 1999. Marine resources such as linefish, rock lobster, abalone and bait species, contribute a huge amount to the provincial economy, with the industry being worth over R1 300 million per year.

In addition to these harvested products, fynbos vegetation also contributes significantly to the success of the deciduous fruit industry and to the honey industry. About half the honey produced in the fynbos region comes from bees collecting from fynbos flowers, amounting to about R5.8 million per year. In addition, Cape honeybees carry out an essential pollination service in the deciduous fruit-producing areas of the Western Cape. These bees forage in the fynbos for most of the year when the fruit trees are not in flower. Without the fynbos to sustain the bee hives, the fruit industry could not be sustained.

Tourism is the fastest growing sector of the South African economy. In the Western Cape, which has very little mining or heavy industry, tourism and agriculture are two of the most important economic sectors. It is estimated that the scenic beauty and the natural and cultural heri-

tage of the Western Cape attract 24% of South Africa's foreign visitors. A recent survey of tourism trends in the Western Cape revealed that activities relating to nature and wildlife are among the most significant reasons why foreigners visit the Western Cape (exceeded only by shopping and nightlife!). Caring for the natural environment is therefore a wise investment in sustaining tourism in the province.

### Getting involved in the biodiversity economy

The C.A.P.E. programme has identified three opportunities to build the biodiversity economy of the CFR in ways that will sustain both people and nature. First is investing in and extending the network of protected areas, in order to unleash their potential to contribute more effectively to sustainability. Second is by developing a system of incentives to encourage private land owners to conserve critical biodiversity on their land through involvement in conservation stewardship. And thirdly, C.A.P.E. is working to influence and engage the business sector, such as the wine and fynbos cut-flower industries, in order to conserve biodiversity in productive areas of the landscape.

### 5.2 Making agriculture more sustainable

#### (i) LandCare Area-wide planning

The Department of Agriculture in the Western Cape has adopted a strategy known as LandCare Area-wide Planning (AWP) to promote the sustainable management of land and natural resources. Area-wide planning recognises that many natural resource issues, such as erosion control, water management and control of invasive alien plants, need to be addressed at a community level as well as at individual farm level. The programme also appreciates that addressing social and economic issues is an essential component of sustainable rural development.

LandCare AWP provides a framework to enable people on farms to work with their neighbours and the wider community to identify issues of common concern and to develop and implement plans to address social and environmental priorities. Ideally, the process should be led by members of the farming community, with support





## LandCare Area-wide Planning

*A comprehensive problem-solving process that integrates social, economic and ecological concerns within a defined geographic area.*

provided by government agencies and local service providers. LandCare AWP processes feed into the development of municipal Integrated Development Plans (IDP), which means that projects are formalised and may qualify for part-funding from the government.

LandCare AWP provides groups of people in agricultural areas, whether they are members of a conservancy, wine co-operative, farmers' union or biosphere reserve, with a framework for addressing environmental and social problems in their area. Reflecting on the growing commitment of farmers to sustainable rural development, Francis Steyn observes, "The more I visit rural areas, the more I realise that I am just a 'conservation tourist'. It is the people who live on farms who are most committed to sustainability.

## Setting an example

*The Department of Agriculture is itself involved in a LandCare AWP process at its headquarters at Elsenburg. Elsenburg, together with its neighbours, the Klipmutsbos Conservancy, undertook an alien clearing and fynbos restoration project. Despite the severe drought, springs in the area started running again for the first time in 30 years!*

They see the streams drying up as a result of the spread of invasive alien trees; they understand better than anyone how climate change could impact on rural livelihoods; and they know that they must meet high standards of environmental and social responsibility if they are to continue supplying lucrative export markets." In this context, LandCare AWP helps people in rural areas to identify and address the most pressing local issues, and to mobilise limited resources and expertise to achieve a common purpose.



*John Donaldson is Director of the Kirstenbosch Research Centre and has co-ordinated an extensive research programme on the principles and practice of conservation farming.*



## PROFILE

### Francis Steyn

*LandCare AWP is a process that enables communities to craft their "future desired condition" and then implement projects to reach this sustainable objective.*

Francis Steyn, who champions LandCare AWP at the Western Cape Department of Agriculture, reports that 42 LandCare projects are currently under way in the province, most of them in the CFR. A number of key C.A.P.E. projects have been initiated through LandCare AWP, such as addressing priority issues in the Slanghoek Valley, conserving the Nuwejaars catchment and establishing the Bredasdorp integrated centre on the Agulhas Plain, and monitoring agricultural development in the Sandveld. Francis is particularly excited about a project in the Gouritz Initiative area where LandCare, in partnership with the Wildlife and Environment Society of South Africa (WESSA) and other NGOs, is responding to the community's request for more information about their unique environment. In 2006, through the medium of a puppet show, LandCare hopes to reach 17 000 children in the region. LandCare is also running ten three-day camps for underprivileged children through which they hope to reach another 1 000 children in all the districts of the Western Cape. Local businesses and individuals are encouraged to participate by sponsoring children to attend these camps.







*Jakobus Koopman is one of the founders of the Heiveld Rooibos Co-operative.*



Katie Stafford from Marks and Spencer in the United Kingdom provided insights to the Biodiversity Business Conference on the requirements of retailers for authentic products.



Woman harvesting rooibos plants for the Heiveld Co-operative.

## What have we learned?

- *To become sustainable, LandCare AWP must be led by the community; when institutional partners start to play too dominant a role, this tends to undermine community participation.*
- *LandCare AWP processes can help to identify IDP projects in rural areas and LandCare AWP groups can assist with project implementation in areas where municipalities often lack staff and experience.*
- *Starting by identifying an issue that needs to be addressed infuses energy into the LandCare AWP process; the group has a common purpose and there is no room for complacency.*
- *Environmentally conscious farmers make excellent resource managers; they have intimate knowledge of natural resources and are motivated to care for the land as their livelihoods depend upon its continued health and productivity.*
- *LandCare AWP exercises demonstrate that poor land management on one property can have adverse impacts on neighbouring properties. This awareness is contributing to growing social pressure within farming circles for land-owners to manage the land more sustainably.*
- *LandCare AWP creates opportunities for various government agencies and service providers to respond to project priorities identified by local communities. Because these priorities represent a diversity of social and environmental issues, it is important that a number of different agencies support planning and implementation.*
- *It is sometimes difficult for government agencies to deliver due to staffing and resource shortages, but this can be bridged by community efforts.*
- *It is difficult to focus on processes like LandCare AWP in the midst of a crisis like a severe drought. But the harsh realities of a disaster are often the trigger that motivates people to start managing the land more sustainably.*

## (ii) Heiveld Co-operative— everybody's cup of tea

### Tea and tradition

The Suid Bokkeveld, lying at the far northwestern end of the CFR, is not an environment for the faint-hearted. Particularly in the southern parts, the landscape is arid, the temperatures extreme and droughts frequent. For most people of the region, small-stock farming, rooibos tea production and social grants are the main sources of income. In this marginal farming area, overgrazing and inappropriate cultivation can easily degrade the land, making livelihoods even more precarious.

Most of the small-scale rooibos tea farmers in this region are members of the Heiveld Co-operative, a registered co-operative established in 2001.

### Establishing the Heiveld Co-operative

The Heiveld Co-operative was formed with the support of the Environmental Monitoring Group (EMG), an NGO with a particular interest in ensuring that global environmental policies are implemented at a local level. In 1998 the Northern Cape Department of Agriculture asked EMG to help them honour their commitment to implementing the United Nations Convention to Combat Desertification (UNCCD) by supporting sustainable agricultural development in marginalised communities. The Suid Bokkeveld was chosen because of the need to address the impact of decades of neglect during the apartheid years, when some “coloured” farmers did not qualify for agricultural extension services. Unfortunately, due to budgetary constraints, extension services are currently not available in the district.

At an initial workshop, members of the Suid Bokkeveld community identified the problems they faced and agreed on a common objective that clearly established the link between sustaining the local environment and their livelihoods. EMG and the community agreed on a set of principles that would guide their interactions, including active participation, mutual respect and transparency.

One of the catalysts that led to the formation of the Heiveld Co-operative was the concept of “knowledge exchange visits”. Members of the Suid Bokkeveld community visited other community groups to observe a community-based ecotourism

## Drought kills

*The drought of 2003 destroyed many hectares of rooibos plantations in the Suid Bokkeveld. Rainfall in 2004 and 2005 was also below average.*

## An inspiring objective

*The people of Suid Bokkeveld are empowered to manage their natural environment productively and sustainably and to establish sustainable livelihoods which satisfy the needs of all.*

project and alternative production and marketing strategies for rooibos tea. Community members were inspired by what they saw and realised that they could achieve something similar in their own context.

### A premium product

The lack of agricultural extension services in the past meant that members of the Heiveld Co-operative either harvested wild rooibos tea from the veld or cultivated it without pesticides or artificial fertilisers. Ironically, this meant that the product was in effect “organic”. This, coupled with the fact that sales of the tea would benefit marginalised farmers,

attracted the interest of the Fair Trade Organisation of the Netherlands. Members of the Heiveld Co-operative were certified as organic producers and now supply a niche market of consumers in nine countries who are willing to pay a premium for organic, fairly traded products. In fact, the co-op currently attracts the highest price per kilogram in the rooibos tea industry. The co-op has passed this benefit on to their members by setting a minimum wage for tea planters and harvesters that is nearly twice the legislated minimum for the area!

## Rooibos tea and climate change

*Rooibos tea is a traditional, health-giving South African tea produced from the shrub *Aspalathus linearis*, which grows naturally in the Cederberg and Bokkeveld regions of the Western and Northern Cape. Most commercially harvested rooibos is cultivated, while some is gathered from the veld. Some wild-harvested varieties of rooibos are longer-lived and more resistant to drought and fire than the cultivated varieties. With concerns mounting about the impact of global climate change on agriculture in the arid western areas of the country, researchers are starting to investigate how to adapt to this threat. Scientists are working with the harvesters, drawing on both local knowledge and scientific methods to investigate these drought resistant varieties and develop guidelines for the sustainable harvesting of wild rooibos. This research aims to help secure the livelihoods of rooibos tea farmers in the region.*

## Harvesters' handbook

*Members of the co-op are involved in research that will result in publication of a harvester's handbook to promote the sustainable harvesting of wild rooibos.*

## PROFILE

### Koos Koopman speaking at the C.A.P.E. Partners' Conference

Koos Koopman, a founder member and Secretary of the co-op, explains how it started:

“Local people have harvested rooibos tea from the veld for hundreds of years. When it became a popular drink, we started cultivating the tea and selling it. But it was hard to get a good price working alone. We needed to bring our small amounts of tea together and share the costs of production. So we started the co-op and got a chopping machine that all the members can use. Working together has created work for young and old, men and women. We harvest the tea, chop it and dry it in the sun on our tea-court using traditional methods. Some of the women in our community sew the cotton bags the tea is packaged in. Now they have work even after the harvest time is over. When chances come, you must grab them with both hands and then you will have a bright future!”







The Heiveld Co-operative puts traditional knowledge to work producing sustainably harvested organic rooibos tea for the export market.

### Collective action

Membership of the Heiveld Co-operative has grown from 14 to 36 small-scale farmers in just five years. The co-op has enabled rooibos tea farmers in this sparsely populated district to organise themselves within a democratic structure, to share the cost of equipment and infrastructure, and to supply a high-end overseas market that would have been extremely difficult to access individually. As a collective, members are now able to compete in the market place with the large rooibos tea producers.

Through the co-op, members have been able to share knowledge and skills of sustainable production, and this is helping the group to address problems like soil erosion and crop losses due to drought. In the absence of agricultural extension officers, two members of the co-op have been given additional training and appointed as “mentor farm-



*Neil Oettlé: We believe that every person or community has a potential for development that can be enhanced by positive experiences, or eroded by negative experiences. Conservation is inextricably linked to developing and expressing one's self-worth, and love for others and the environment."*

ers” to advise fellow farmers. Furthermore, the co-op participates in forums and broader sustainable development debates with representatives from government, researchers, other farmer groups and NGOs.

## Multiple Environmental Imperatives

*In its work in the Suid Bokkeveld, EMG is responding in an integrated way to the imperatives of three United Nations environmental conventions:*

- *The United Nations Framework Convention on Climate Change (UNFCCC): wild rooibos is more drought resistant than cultivated rooibos; learning to harvest wild rooibos sustainably is one way in which farmers can adapt to the more frequent droughts that are anticipated.*
- *Convention on Biological Diversity (CBD): EMG and the Heiveld Co-operative promote agricultural practices that contribute to biodiversity conservation, like retaining strips of natural vegetation between cultivated fields to reduce soil erosion, and sustainably harvesting rooibos tea from the wild.*
- *United Nations Convention to Combat Desertification (UNCCD): by enhancing livelihoods through the sustainable use of natural resources, the Heiveld Co-operative is addressing the causes of desertification.*

*In summary, an integrated approach seeks to build more resilient ecosystems and social systems by retaining or re-establishing indigenous plant diversity, enriching the soil with organic material, limiting erosion, and enhancing livelihoods through participatory approaches that lead to enhanced capacities.*

### Sustainability—beyond the rhetoric

Noel Oettlé from EMG explains that they are partners with the Heiveld Co-operative in an action research project that aims to inform national legislation and policy by presenting “best practice” experience in the field of sustainable rural development. Through involvement in cycles of planning, acting and reflecting, project partners have been developing a deeper and more practical understanding of what sustainability means to them.

The research has also shown that there is no place for “quick-fix” solutions when trying to integrate marginalised communities into the mainstream of a globalising economy. Developing socially and economically sustainable communities requires people to be conscious of the global context, and confident and competent to solve their own problems in locally appropriate ways. Agencies involved in sustainable development projects have a responsibility to act ethically and not to subject communities to projects with unrealistic outcomes, budgets or time frames.

Involvement in the Heiveld Co-operative has been an opportunity for members of the Suid Bokkeveld community to



*Hendrik Hesselman has a commanding knowledge of every aspect of the sustainable harvesting of wild rooibos.*

develop knowledge, skills, confidence and a sense of self-worth. Through harvesting and selling their tea to an overseas niche market, co-op members are contributing economically and socially to their families and community. By farming more sustainably they are caring for the local and global environment. And what they are learning and sharing about sustainable farming methods is making a contribution in intellectual and policy circles. Locally and globally, the members of the Heiveld Co-operative are making a difference. Knowing this makes them very proud.

## What have we learned?

- *It is vital to have a principled approach that is methodologically grounded: conservation and development do not just “happen”, but need to be carefully planned and facilitated.*
- *Don’t move ahead of where the community is and push your own agenda or process faster or harder than is appropriate: trust and understanding are delicate and if damaged can take enormous effort to re-establish.*
- *Don’t take ownership of the problems that land users experience, or the solutions that present themselves: this is a sure way to kill local initiative.*
- *Wherever possible encourage local institutions to take responsibility.*



The Koopman brothers of the Heiveld Co-operative receive their C.A.P.E. Gold Award from Minister Tasneem Essop.

*Help them learn from the inevitable mistakes, and to develop their capacities and wisdom in response to difficulties. Don’t try to solve other people’s problems: even if you succeed in the short term, in the long term the problem will re-surface.*

- *Building sound relations with local government may take time but is necessary and worthwhile.*
- *Avoid undertaking unrealistic projects or throwing money at problems.*
- *A learning approach has enabled members and office-bearers of the co-op to effectively manage an increasingly complex business.*
- *Integrating a number of funded projects into a holistic development programme can be challenging: each donor expects their particular objectives to be met and the burden of reporting becomes considerable.*
- *Unless small-scale rooibos tea farmers in the Suid Bokkeveld can access more land, the business will not be able to grow and will be in danger of stagnation.*



*Katiena Kotze explains how partnerships work for sustainable conservation and development in local communities.*



Members of the Heiveld Co-operative compare experiences with Grootbos in terms of developing and marketing products.





Spring flowers attract many visitors to Nieuwoudtville, albeit for a short season.



### iii) Conservation farming: lessons from Nieuwoudtville

With about 80% of land in South Africa managed by farmers, and only about 6% formally conserved, no national or regional biodiversity conservation strategy can afford to ignore the agricultural sector. Many farmers are committed to conserving biodiversity and farming in ecologically sensitive ways. But with farming becoming an increasingly costly exercise, conservation measures can place an additional financial burden on farmers, which may be hard to justify in purely financial terms.

Between 2000 and 2004, the National Botanical Institute (now SANBI) co-ordinated the Conservation Farming Project, with GEF support through the World Bank, in four regions of the country where biodiversity is particularly rich but poorly conserved. Two of the four sites fell within the CFR, the first being the Bokkeveld Plateau around Nieuwoudt-

### Taming the Wild

*Globally, agriculture is the largest single cause of habitat modification.*

ville (at the far north-western end of the region), and the other the thicket biome in the Albany district of the Eastern Cape. The project investigated the economic and ecological implications of conserving biodiversity on productive agricultural land. The project also considered what interventions would be necessary to enable farmers to conserve biodiversity, in cases where this might prove costly. An interesting aspect of the project was probing the factors that motivate farmers to conserve biodiversity on their properties, even when this does not make immediate economic sense.

Researchers developed an economic model (opposite) that represents the “production ecosystem” of a farm. This model reflects the fundamental challenge facing





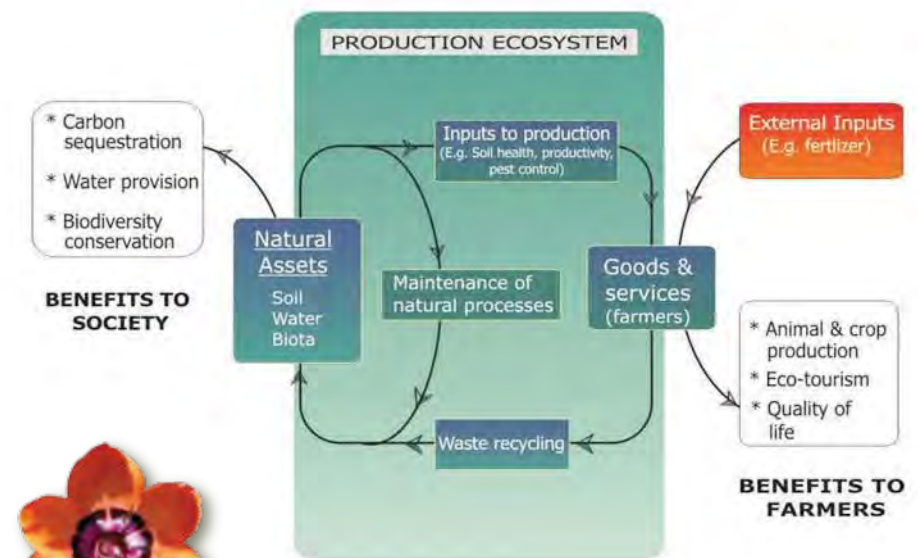
*It was the efforts of local farmer Neil MacGregor to stimulate bulb diversity and flower tourism on his farm that first attracted the Conservation Farming project to Nieuwoudtville.*

agriculture, which is balancing the need to produce commodities and developing rural livelihoods, with the imperative to conserve biodiversity and the ecosystem services that are essential for our survival and sustainable development. The project identified farms with rich biodiversity and evaluated the economic costs and benefits, as well as the biodiversity benefits, of biodiversity-friendly farming practices.

### What is conservation farming?

Research conducted in South Africa over many years has shown that conserving soil and natural vegetation on farms improves soil fertility and water infiltration, which in turn enhances agricultural production and the resilience of veld to drought. Since the 1920s the government has developed various pieces of legislation, incentive schemes and extension services to persuade commercial farmers to farm in ways that conserve soil, water and vegetation resources. In general, these efforts have resulted in an improvement in the quality of farmland. The concept of conservation farming is therefore not new in South Africa. However, in the face of international and national imperatives to conserve biodiversity, the concept is starting to broaden to include the conservation of indigenous species and ecosystems in production landscapes.

A farm with a rich diversity of indigenous plants and animals can provide many benefits for the farmer. In addition to obvious agricultural inputs like grazing and healthy soil, many of the benefits that biodiversity provides are taken for granted. These may include the natural



The Conservation Farming Project developed this model to illustrate the relative costs and benefits to farmers and to society of different approaches to farming.

pollinators that promote the development of fruit and seed; biological control organisms that help to control agricultural pests; trees and shrubs that provide shelter for stock; natural products such as firewood, cut flowers and medicinal plants; and ecotourism opportunities like birding and hiking.

Conserving species and ecosystems on farms can also have broader benefits for society. Meeting South Africa's obligations to conserve biodiversity is an obvious and direct benefit. Conserving indigenous vegetation along river courses and removing invasive alien plants from catchment areas on farms enhances the provision of clean water. Natural vegetation and healthy soils also act as important "carbon sinks", removing from the atmosphere carbon dioxide, which is one of the most important greenhouse gases contributing to global climate change.

The project investigated the relative benefits to farmers and society of conservation farming, and compared this with other land use options in the four study areas.

### A focus on Nieuwoudtville

The Bokkeveld Plateau around Nieuwoudtville is a world-famous hotspot of plant diversity. It lies at the meeting place of two global centres of plant biodiversity—the Fynbos and Succulent Karoo Biomes. During the short 30–40-day flower season in August and September, the town welcomes nearly 12 000 tourists who come to admire possibly the richest variety of flowering bulbs on the planet.

## What do we value?

*In working out which land use options were the most appropriate in the four areas studied, the Conservation Farming Project drew on principles of ecological economics, which attempts to give a value to elements that traditional economic systems often overlook. The value elements the project considered were:*

- *Value of farming activities*
- *Tourism and recreational value*
- *Indirect use value, e.g. carbon sequestration, water provision*
- *Option value, i.e. the value of potential future uses of the land and natural resources*
- *Existence value, i.e. the value people ascribe to the existence of species, landscapes, etc.*





Nieuwoudtville farmer Neil MacGregor welcomes thousands of visitors to his farm every spring and autumn to marvel at the spectacular displays of flowers.

Traditional income comes from livestock farming. It is not a simple choice to switch to new forms of land use and economic activity.

Over the centuries, sheep farming and the cultivation of crops have transformed most of the natural veld around Nieuwoudtville resulting in habitat fragmentation and biodiversity loss, particularly on the richer soils. The Conservation Farming Project found that the costs of rehabilitating cultivated areas to a natural state would be prohibitive, so if the biodiversity heritage of the Bokkeveld Plateau is to be conserved, as much as possible of the remaining natural landscape needs to be retained.

However much a land owner may want to conserve biodiversity, few can afford to take action if this implies a heavy financial investment. The Conservation Farming Project therefore compared four possible scenarios to see what impact different land use options would have on biodiversity and livelihoods. They concluded that increasing farming pressure or continuing with current levels of cultivation and grazing would both result in biodiversity loss, and could eventually undermine the carrying capacity of the veld. If losses of bulb-rich habitats were significant, this would also have an adverse impact on ecotourism.

On the other hand, implementing biodiversity-friendly conservation farming methods would safeguard the unique plant and animal diversity of the area. If landowners with priority biodiversity on their farms formed a conservancy, this could serve to strengthen local networks, ecotourism opportunities and efforts to secure rates rebates for the conserved areas.

The researchers also considered a fourth option: converting farmland into a protected area. While this would be the most beneficial option in terms of biodiversity and ecotourism, it was also the least likely, as few farmers in the area were interested in selling their land. In any case, the research revealed that until more tourism opportunities are developed in the area (see Nieuwoudtville Tourism Design Charette Chapter 5.5), it is unlikely that ecotourism will provide a viable alternative to farming in Nieuwoudtville.



It is interesting to note that the research found that some disturbance by livestock (e.g. rotational grazing with periods when the land is rested), is actually beneficial for biodiversity. This, coupled with the fact that most farmers are not actually interested in developing ecotourism activities, suggests that conservation farming may be the most viable option both ecologically and socially. Indeed, when all measures of value were taken into account, conservation farming within a conservancy proved to be the most viable option economically. The conservancy option ensures biodiversity conservation and secures rural livelihoods and networks; it therefore meets all three criteria of sustainable development: ecological, social and economic sustainability.

### Counting the cost

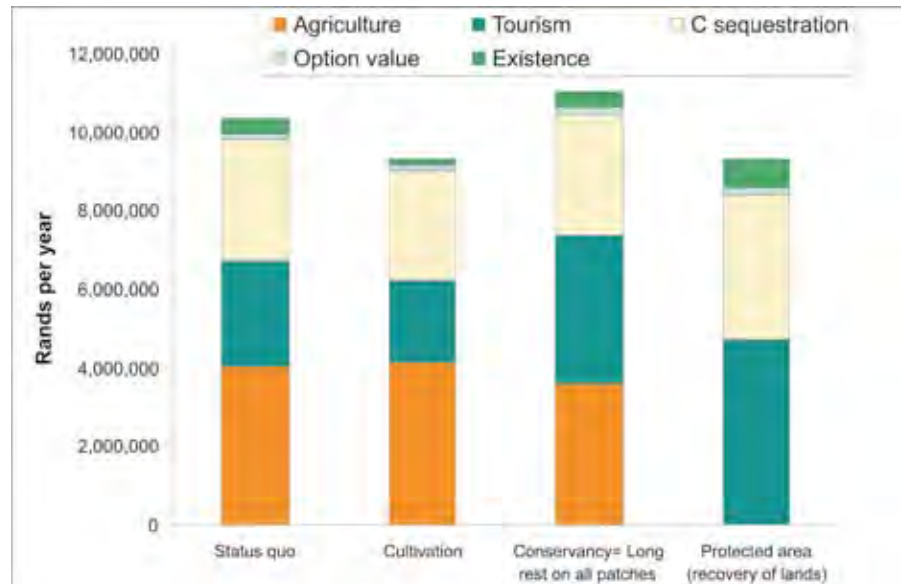
Although the creation of a conservancy in the Nieuwoudtville area may provide significant benefits to farmers and society in the medium to long term, in the short term biodiversity conservation is likely to represent an overall cost to farmers. The Conservation Farming Project identified various ways in which farmers could be assisted to implement conservation-friendly farming:

- Providing networking and capacity building opportunities to strengthen conservation farming knowledge and share best practice;
- Securing property rates rebates for conservation land on farms;
- Tourism companies paying farmers a fee if they allow tourists to view flowers on their farms;
- Establishing a research station where scientists and farmers could share their knowledge and experiences and learn together.

Most of the world-famous biodiversity in the Nieuwoudtville area is found on less than 20 farms. Ensuring that Nieuwoudtville remains the “bulb capital of the world” presents these land owners with an awesome responsibility. However, while farmers are the day-to-day managers of the land, South Africa’s biodiversity is a national asset that benefits society as a whole. Society must therefore share the knowledge, skills and resources necessary to conserve this heritage. We cannot expect a handful of farmers to shoulder the responsibility alone.

### What have we learned?

- Conservation farming is a complex notion; relationships between farming systems and ecosystems vary widely, and a model developed in one area cannot simply be extrapolated to other areas.
- The dominant economic system is based on an assumption that people are primarily motivated by anticipated monetary benefit; however, people are motivated by a number of other values and once subsistence needs are satisfied, these other values can have a powerful influence on people’s



Projected financial benefits for four land use scenarios on the Bokkeveld Plateau around Nieuwoudtville, which take into account a range of values.

choices. This should be remembered when considering possible incentives for conserving biodiversity.

- Farming can satisfy all the fundamental human needs within one integrated lifestyle. Farmers are generally reluctant to leave farming and turn to other ways of making a living; this means that it is more realistic to work with farmers to achieve conservation objectives than to consider converting farmland into protected areas.
- Our perceptions and actions are strongly influenced by our social and professional networks. New ideas have little impact on social groups until they are accepted by influential members of a network.
- If scientists wish to contribute to conservation on farms, they must be prepared to listen to and empathise with farmers. Through equal learning partnerships, farmers and scientists will be able to develop strategies for an improved and more conservation-conscious farming approach.
- Bioregional planning initiatives like C.A.P.E. provide farmer groups with opportunities to implement innovative conservation approaches, e.g. through stewardship programmes and making funds available for projects.



### Worth boasting about!

The diversity of plants on the Bokkeveld Plateau, in the area around Nieuwoudtville, reflects its complex geology:

- 1 360 plant species
- 309 bulbous plants
- 70 Red Data plant species
- 18 species endemic to just one quarter-degree square!



## Flower Valley—ABI Partner

*One of the original C.A.P.E. programmes, the Agulhas Biodiversity Initiative (Chapter 2), was established to conserve the unique lowland habitats of the Agulhas Plain and to promote sustainable livelihoods. In this region the harvesting of fynbos flowers is a major industry. ABI therefore identified the sustainable harvesting of wild fynbos as one of its key goals and appointed the Flower Valley Conservation Trust to manage this component of the project.*

The women at Flower Valley have become very skilled at producing export qualities bunches of flowers.



Flower Valley Farm could have been cultivated for wine production if it had not been for supportive donors.

### 5.3 A focus on flowers

#### (i) Flower Valley Conservation Trust

##### Securing Flower Valley

Some of the best environmental initiatives begin with a crisis, and such is the story of Flower Valley. In 1999 Flower Valley, a 580 ha farm near the hamlet of Baard-skeedersbos came up for sale. Neighbour Carol Blumenthal was worried: with wine farming spreading to the Overberg, how secure was

the indigenous fynbos and forest on this well-watered farm? There was no time to waste. Carol made an offer to purchase, put down the deposit, and went fund-

raising. The international NGO Fauna and Flora International (FFI) stepped into the breach and Flower Valley Farm, complete with its flower processing plant and export business, was secured. That same year the Flower Valley Conservation Trust (FVCT) was established to run the farm, with a few added elements in line with FFI's sustainable development agenda.

##### A sustainable development vision

FVCT set out to manage Flower Valley with three inter-related goals in mind: to conserve biodiversity, promote the sustainable use of fynbos and assist local communities to improve their quality of life. With consumers becoming increasingly environmentally and socially conscious, the idea was to use Flower Valley Farm as the base from which to encourage fynbos operations on the Agulhas Plain to harvest wild fynbos more sustainably and to improve the social and economic conditions of workers in the industry. Ethically traded products can command premium prices, so operators supplying Flower Valley's export business would have an incentive to comply with strict codes of sustainable harvesting, environmental management and social development. FVCT would help to access these niche markets and investigate issues like eco-labelling.

An innovative social development programme was developed at Flower Valley focusing in part on early childhood development (ECD). An early learning centre provided pre-primary education and day care for children from local farms, and women from the community were trained as ECD practitioners. To provide year-round employment in a seasonal flower-picking industry, alternative income streams like hand-made paper were investigated. The environment and development vision was clear and inspirational. There was hope for a sustainable future.

But Flower Valley was not just a development project relying on external funding; it also had to become economically sustainable. The conservationists and development practitioners needed a commercial partner to manage and expand the business locally and internationally and to develop a marketing strategy. Changes in South African tax law also required the separation of the commercial and non-profit aspects of the Trust's operations. Consequently, in 2003 a group of UK-





*Lesley Richardson, whose initial involvement in C.A.P.E. was through her responsibilities at WWF-SA, took up a position as CEO of the Flower Valley Conservation Trust and was the lead negotiator for the Trust with Flower Valley. Lesley has combined her deep passion for the development of people with her commitment to conservation, helping maintain trust and confidence in the activities of the FVCT.*

based investors bought the business from FVCT and established FYNSA (Pty) Ltd. Together, FVCT and FYNSA were to make the three-fold sustainable development dream come true, sustaining the planet, people and profits.

#### No common ground

Sadly, this attempt at building a working relationship between conservation, rural development and business had in the early days met with difficulties. There were misunderstandings by both parties of the others' commitments and understanding of the relationship. Decisions that were taken for good business reasons had negative impacts on stakeholders. As a result, many of the farm workers were retrenched and replaced, projects like the permaculture garden were closed down, and the management relationship faltered. Eventually, after 18 months, the parties had to agree to re-negotiate the arrangement.

#### A new start

FVCT and FYNSA learnt much from this experience. FYNSA agreed to appoint



Flower Valley farm was one of the first farms to be certified by CapeNature as meeting sustainable harvesting standards. Lesley Richardson is seen here flanked by Gail Cleaver on the left and Roger Bailey on the right.

new managers who were more in tune with the sustainable development vision and willing to co-operate with the supply network on the Agulhas Plain. Alternative agreements were proposed in March 2005 and the negotiations began. FVCT also learnt about the importance of structuring contracts carefully in advance, and of spending enough time at the outset negotiating mutually acceptable terms.

#### Developing sustainable systems

Supplying a niche market with sustainably harvested flowers sounds like a fairly straightforward exercise, but it isn't. The market first needs to be developed and this takes time. Flower Valley had worked hard to find new customers and was delighted when one of its funders was able to broker a relationship with a super-market chain in the United Kingdom that has an ethical procurement policy.

Ensuring that your product is sustainably harvested is also an extremely complex and time-consuming process. The Flower Valley team acknowledges that their targets were over-optimistic for the first two years. We now look at some of the obstacles they faced in the quest to promote the sustainable harvesting of wild fynbos on the Agulhas Plain.



*Roger Bailey is currently the farm manager at Flower Valley, but more importantly provides a key service to landowners on the Agulhas Plain to certify their flower harvesting practices as sustainable.*



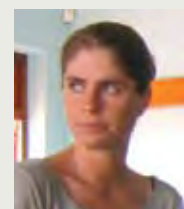
*Laurette Afrikaner became of the first women at Flower Valley to take up a management position. She is now a partner in a flower harvesting business on the Agulhas Plain.*



PROFILE

### Gabbi Cook

Gabbi Cook who has the responsibility for Flower Valley's Early Childhood Education programme has also been the organiser of the capacity-building project to promote sustainable harvesting







Flower picker with pincushions.

In an attempt to provide year-round employment for the flower pickers, Flower Valley has investigated additional product lines like hand-made paper with pressed-flower decorations.

### ● Getting accredited

Consumers who have concerns about the environmental and social impacts of their purchases want to be confident that when they buy eco-friendly, fair trade produce this has indeed been harvested

sustainably by people who have earned a fair wage. Trade organisations exist in different countries to accredit producers in various agricultural sectors. In order to supply the European market, Flower Valley applied to the Flower Label Programme (FLP) in Germany for ethical trading accreditation.



Obtaining FLP accreditation is a relatively costly exercise: international inspectors must visit potential suppliers to conduct an audit, and FLP certification fees are high. To make this process more affordable for local producers, Flower Valley invited other suppliers to apply for accreditation with them as a collective and offered to subsidise the FLP fees. FVCT is trying to build up a network of suppliers who could be accredited by FLP and benefit from the market for flowers bearing their label. Failing to secure this market would naturally diminish the interest shown by other suppliers in the network. A concerted effort is being made to secure FLP accreditation.

FLP focuses mainly on labour and environmental standards, and not specifically on the conservation of biodiversity, and





*Maryke Middelman was one of the founders of SAPPEX and responsible for putting together the guidelines for sustainable harvesting.*

this was a gap the Trust sought to fill by developing an accreditation system for biodiversity-friendly harvesting practice. As CapeNature issues the permits for harvesting it was thought best to expand this into the certification scheme. Funding and capacity constraints have made this a time-consuming process, but great strides have been made in the past year towards putting in place a system to accredit suppliers who harvest wild fynbos sustainably. Together with FVCT, Cape Nature has developed a Code of Practice for Sustainable Harvesting. The Code needed to be tested and finalised so that it could form the other, as yet missing, leg of the accreditation system. In 2005 FVCT, in partnership with CapeNature, used grant funding to pilot an auditing system for sustainable harvesting of wild fynbos based on a draft version of the Code of Practice. Branding and a consumer education strategy are the next stage in the process.

### ● Developing a Supply Network

In order to produce sufficient sustainably harvested wild fynbos to supply the developing market, FVCT needs a network of accredited suppliers. FVCT has conducted surveys to identify potential suppliers, who are then invited to join the supply network and apply for accreditation. FVCT offers incentives to potential members, including training, subsidised FLP fees and marketing support.

One of the goals of the sustainable harvesting project is to improve communication with suppliers by setting up a Supply Network Forum. Suppliers are very willing to co-operate, even though the establishment of the forum has been

## SAPPEX Sustainable Harvesting Guide

*What does it actually mean to harvest wild fynbos sustainably? What criteria do organisations like CapeNature use when deciding whether or not to accredit a supplier? Until ABI started investigating sustainable harvesting, no comprehensive guidelines existed to inform farmers, contractors or exporters. A few researchers were investigating the impact of harvesting and some managers were developing experience in the field, but this information was not widely shared.*



*The South African Protea Producers and Exporters network (SAPPEX) took the initiative to compile the first set of guidelines for the sustainable harvesting of wild fynbos plants, including cut flowers, medicinal plants, indigenous teas and thatching reeds. They also organised a road show to draw attention to the need for sustainable harvesting and to distribute the handbook.*

slower than expected. Membership of the Forum is open to suppliers who are harvesting sustainably and who are either accredited or working towards certification. A steering committee will arrange regular meetings, workshops and field trips for members.

### ● Building capacity to harvest sustainably

With no courses in the sustainable harvesting of wild fynbos being available at the time, and with the need for an accredited supply network, FVCT joined forces with local and other experts to put together courses for flower pickers, supervisors and managers. The aim was to mesh local knowledge with scientific information in an appropriate learning package. This required the development of Unit Standards at three levels within the Primary Agriculture Education and Training Authority (PAETA, now AGRISETA), the Sector Education and Training Authority (SETA) that regulates accredited training in the primary agriculture sector. A grant from PAETA then made it possible for



*Rosie Theunissen is one of the workers at Flower Valley, pioneering the production of fynbos bouquets that meet international consumer standards.*







Green Futures (Chapter 5.4 (iii)) to offer the courses to those in the FVCT supply network.

The courses cover a wide range of topics, including sustainable development, fynbos ecology, basic plant identification, map work, sustainable resource management, appropriate harvesting techniques, environmental regulations and marketing. The pilot course was presented in 2005 and, despite a few logistical hiccups, went extremely well. CapeNature has since asked Green Futures, the accredited training provider, to repeat the course for a number of its staff members.

### ● Strengthening the regulatory environment

FVCT's sustainable harvesting project has also been slower than anticipated because CapeNature has simultaneously been revising the provincial regulations (the Ordinance) which affect the harvesting of wild fynbos. FVCT has contributed in a small though valuable way to the process by employing a botanical expert to update the list of fynbos species that may be harvested for the flower trade on the Agulhas Plain. CapeNature will now use this list to guide their issuing of permits to fynbos harvesters.

FVCT also convened an expert group to develop a "Species Vulnerability Index", which is a tool that can be used to determine how susceptible a plant species is to harvesting and to recommend a sustainable level of harvesting for each species. They have worked out vulnerability indices for 79 plant species and the botanical consultant has compiled digital images of all these species, which will enable both harvesters and conservation officers to ensure sustainable levels of harvesting of appropriate species.

### Back on track

Proposal documents usually outline clear, simple and logical steps that will be followed to achieve project aims and outcomes. However, real life is far from

simple. The Flower Valley story highlights the many difficulties inherent in trying to develop a fully sustainable business within a commercial and regulatory context that has not yet come to terms with the tenets of sustainable development. If this project has taken longer than the funders or project managers anticipated, it is because (in common with many other initiatives in South Africa's young democracy) the project partners have been "making the path by walking it".

Despite the problems caused by a lack of alignment between FVCT and the first FYNOSA management team, there are signs that the partnership with the current FYNOSA Board and managers is working. The new business partners have extensive marketing experience and an entrepreneurial edge, and already the project has managed to expand its markets in the United Kingdom and the Netherlands beyond its expectations. The demand for flowers has been growing, even during traditionally quiet periods, enabling the project to provide greater employment security and income for the people of the Agulhas Plain.

## What have we learned?

- *Achieving sustainable development is complex and partnerships should not be entered into lightly. Satisfying the "triple bottom line" requires people with experience in diverse, even potentially conflicting, fields (e.g. conservation, rural development, farming, marketing) to work together. The partners may have very different ideas of what sustainable development means, and the business environment in which they operate may also not understand or support sustainable development. Allow enough time to develop a common understanding of the issues—and be wary of entering into contracts too soon in the process.*
- *When projects arise in response to a crisis, there may not be time to establish a sound foundation of partnerships and project goals before starting work. An adaptive management approach that allows flexibility in the early stages can*

enable the project team to respond to emerging opportunities and developing insights.

- Partners involved in a business founded on sustainability principles must share an understanding of these principles and be committed to implementing them in practice. Where the fundamental values of the business are not shared, there is a lack of coherence and integrity. This in turn undermines open communication, trust and confidence. Ensure balanced power relations through representation by all parties on project committees and boards, and equitable shareholding of the business.
- Tailoring promotional materials for international markets is costly. It requires constant product research and development, since trends in the fresh flower market are governed by fashion and sentiment and are therefore transient.
- Running an on-site capacity building programme for staff requires management commitment and good planning, so as to avoid peak production times and minimise impact on production.
- Funders who see themselves as project partners rather than simply as providers of finance can add a great deal of value to a project by providing strategic advice, business skills and access to markets, especially those with ethical procurement policies.
- Relying on an international body for accreditation is difficult for a local project in its development stages. Standards are high and meeting them is time-consuming and costly for small, growing operations. View accreditation as a developmental process, with each step in the process of reaching the standards resulting in some improvement.
- Progress can be limited by a lack of capacity, funding and equipment by key partners responsible for critical aspects of a project. Innovative partnerships between civil society, government and business can help projects find “out of the box” solutions to carry out tasks and share responsibilities.



*Michael Lutzeyer and his family invested in one of the first biodiversity-based tourism businesses in the Cape. The tourism lodge at Grootbos is also closely involved in the Walker Bay Fynbos Conservancy, the Green Futures horticultural college and with Flower Valley. He never loses an opportunity to explain the fascinating relationship of fynbos and fire to guests at Grootbos. Despite enormous losses due to fires that damaged part of the lodge in early 2006, Michael is buoyant about the valuable relationship between the lodge business, the conservation of biodiversity and the upliftment of people.*

## (ii) Grootbos Private Nature Reserve

What has happened at Grootbos Private Nature Reserve since the Lutzeyer brothers bought the property in 1990 is nothing short of transformational. Starting with an overgrazed cattle farm infested with alien plants, in a remarkably short space of time the family has created one of South Africa's premier guest lodges, offering the discerning ecotourist an abundance of experiences. The lodge shares with visitors the spectacular views of Walker Bay that first attracted the interest of Michael and Tertius Lutzeyer. The reserve offers hikes and horse trails through fynbos and thicket, and the bay is awash with options, from boat trips to see sharks and whales, to beautiful beaches and strandloper caves.

For all the magnificence of the stone and thatch lodges, with their tastefully appointed rooms and delectable dining, the tourism establishment is only one facet of the gem that is Grootbos. The Lutzeyer family sees a deeper beauty and purpose in the estate, and this vision is reflected in one of the founding principles of Grootbos: “The business should generate employment and training for local people as well as income for con-

## Big bush – small shrub

*Grootbos means “big bush” and refers to the groves of milkwood trees found there. The estate has in turn given its name to an Erica species found only on the property, Erica magnisylva.*



Grootbos set a new standard for biodiversity business in the tourism industry, supporting both conservation and skills development.





Green Futures, the horticulture and landscaping school at Grootbos Private Nature Reserve, has provided unemployed members of the Gansbaai community with training and opportunities for employment. When the Agulhas Biodiversity Initiative needed a venue for accredited training in sustainable harvesting, Green Futures stepped in to assist.

servation related activities.” Today more than half the employees on the property come from nearby townships, benefiting from the estate’s commitment to job creation and professional development in various fields.

One of the first jobs the Lutzeyers undertook after buying the Grootbos property was to start rehabilitating degraded natural areas. They employed botanist Sean Privett to oversee the removal of invasive alien plants and the restoration of in-

digenous species. Sean has worked for Grootbos ever since, and has played a vital role in establishing the indigenous nursery and educational centre on the property. These developments culminated in the establishment in 2003 of Green Futures Horticulture and Lifeskills College (see below).

The lodge employs biologists and conservationists who undertake a number of environmental projects, run tours for visitors and assist with staff development.

PROFILE

Sean Privett

Sean Privett has found the ideal niche. His research on sustainable harvesting has been of crucial importance in the development of accreditation schemes for flower harvesting on the Agulhas Plain, and his conservation management expertise has helped Grootbos become a leading private sector conservation manager. In addition, he is a Trustee of the Flower Valley Conservation Trust and Director of the Green Futures College. One of the “fynmense” wearing multiple hats.



Grootbos has its own herbarium and conducts species surveys on the property. Already botanists have identified more than 674 different types of plants at Grootbos, including 54 Red Data species and three previously undescribed species.

Grootbos is a prime example of an eco-tourism enterprise that is walking the talk of sustainable development. Economically, the business is not only sustaining itself but has stimulated tourism in the Gansbaai area. Ecologically, it is restoring and conserving a valuable piece of lowland vegetation. And socially, this remarkable family business is creating training and employment opportunities for local people, and increasing the environmental awareness of visitors from all over the world.

### (iii) Green Futures

Sean Privett, Director of Green Futures Horticulture and Life-skills College, is inspired by the Green Futures mission because he has seen it work. Based at Grootbos Private Nature Reserve, the college opened in 2003 and is committed to “building sustainable livelihoods through nature-based education”.

Each year 12 students from nearby townships are selected to participate in a horticulture, landscaping and life-skills course. Most have no prior knowledge of indigenous plants, but within a year they are brimming with enthusiasm and ready to put their new knowledge and skills to work. The course combines essential life skills like personal finance, business skills, driving and health education, with knowledge of environmental and conservation issues, and skills of horticulture and landscaping. Classroom sessions, practical involvement in nursery and landscaping projects, and field trips to interesting places make learning relevant, stimulating and fun. Already two cohorts of students have graduated from this exciting programme. What is most encouraging is that all Green Futures graduates have either been snapped up by employers or, in one notable case, opted for self-employment.

After graduating in 2004, Nozuko Pelem decided to share what she had learnt at Green Futures with friends in Masakhane township who had been unable to attend the course. She started a project called Siyakula, meaning “we are growing up” in isiXhosa. Based at the local crèche, she



### Valuable qualifications

*Green Futures is an accredited training provider registered with AGRISETA, the Agriculture Sector Education & Training Authority. This means that its qualifications are officially recognised.*

is teaching three students to grow vegetables and propagate indigenous plants.

#### Becoming sustainable

Seed funding to establish the Green Futures College was donated by the German Development Bank (DEG), which matched an investment by Grootbos Private Nature Reserve on a rand-for-rand basis. In terms of the original grant, Green Futures was expected to become self-funding after two years. This was the incentive for some creative thinking that resulted in the college building economic sustainability into the design of its courses.

All students spend about 20% of their time at college working in the Grootbos plant nursery and assisting with the fynbos landscaping business. This not only provides them with essential practical experience but also enables them to generate funds through the sale of plants and provision of landscaping services. These earnings are invested into the Grootbos

### Successful graduates

*Grootbos is so proud of the Green Futures graduates that they don't want to let them go. The Grootbos estate manager, landscape manager at the new Forest Lodge, nursery assistant, and three of their nature guides are all ex-students. Guide Nzuzo Nkhili has made such an impression at Grootbos that the South African government recently honoured him with a merit award for his contribution to ecotourism. Graduates have also found employment at landscaping companies, nurseries and a local golf course, where their specialist knowledge of indigenous plants and water-wise gardening is greatly valued.*





Each year a few hard-working Green Futures students have the unparalleled opportunity to visit the Eden Project in Cornwall for a few weeks.

Green Futures Foundation, which helps to finance students attending the following year's course. Grootbos also uses the college facilities to run residential courses for the public on indigenous water-wise gardening. Income from these courses helps to fund Green Futures.

If you want to give a donation, the college won't turn it down, but Sean would rather not rely on external funding. He is proud of the fact that the symbiotic relationship between Green Futures and Grootbos has enabled them to make the



The Green Futures Siyakula Project.

college economically sustainable. He is also delighted that this project is demonstrating that the conservation and sustainable use of the natural resources of the region can provide real benefits in the form of sustainable, nature-based livelihoods.

## What have we learned?

- A major factor contributing to the success of Green Futures is that it is a full-time course that runs for a whole year and only 12 students are involved at one time. Too many of this kind of courses are funded on the basis of "credits x students", which results in rushed courses and inadequate supervision.
- Student selection is extremely important: they must have an interest in nature and be self-motivated and able to grasp what is taught.
- One of the most gratifying aspects of Green Futures is to see how people's confidence and sense of self-worth grows as the course develops.

## 5.4 The Biodiversity and Wine Initiative

### A successful coloniser

The introduced species, *Vitis vinifera*—the grapevine—has made itself very much at home amongst the fynbos of the Cape. Since the early years of Dutch settlement when Jan van Riebeeck established the first vineyards on Wynberg Hill, the promise of fine wine and smooth brandy has brought rich and poor into its service. Unable to invade the landscape unaided, the grapevine has enlisted people to plough, plant, pluck and press, ensuring its successful colonisation of the Cape lowlands. Today it is hard to imagine the Cape without its winelands. They are as deeply embedded within the region's cultural identity and economy as its natural landscapes and biodiversity.



## Why indigenous?

*The Green Futures course is offered to unemployed young people from townships around Gansbaai and Stanford. So why the focus on indigenous gardening—wouldn't food gardening be more relevant? Director Sean Privett explains: "There is a growing trend in the Cape to grow water-wise gardens using indigenous plants. Not only does this make practical sense in a hot, dry region, but also indigenous plants are exceptionally varied, very beautiful and attract a wide variety of birds and other wildlife into gardens. But who is going to do this gardening? There is a severe shortage of knowledgeable people with the practical and theoretical experience to develop indigenous private or public gardens." Green Futures is equipping young people to fill this gap in the market, and at the same time enabling them to play an important role in helping to conserve the unique flora of the Cape.*



*Using his experience in marketing (and clearly a passion for wine), Tony Hansen has been able to win over many champions of the wine industry to the conservation cause.*

The post-apartheid period breathed new life into the wine industry, as foreign markets started to welcome South African products once more. Exchange rates made Cape wine farms irresistible to foreign investors and the development of new cultivars opened up opportunities to plant vines in new areas. In the ten years from 1990 to 2000, the area under vines increased by 15%. It was boom time in the winelands.

As vineyards started creeping up mountain slopes and expanding into the Overberg, conservationists started getting worried. The already embattled fragments of lowland renosterveld and fynbos, of

which only 9% remained, were threatened by this new wave of viticultural expansion.

#### Wine and conservation—finding synergy

Building on its extensive experience in lowlands conservation, the Botanical Society of South Africa, with Conservation International, undertook a research project in 2002 to assess the status of the wine industry and investigate possible impacts of its expansion on critical vegetation fragments. Dr Johan van Rooyen, Chief Executive Officer of the South African Wine and Brandy Company (SAWB), acknowledges the “non-arrogant manner” in which the Botanical Society approached the industry to discuss their findings and concerns.

The meeting came at an opportune time. The wine industry was under pressure mainly from the European market to demonstrate its commitment to social, ecological and economic sustainability (the triple bottom line). The industry had set up an accreditation system, Integrated Production of Wine (IPW) to ensure sustainable production standards at farms and cellars; however, biodiversity conservation was not included as a criterion. The meeting between SAWB and the conservation sector enabled the wine industry to expand the IPW standards to include biodiversity conserva-

## A vital industry

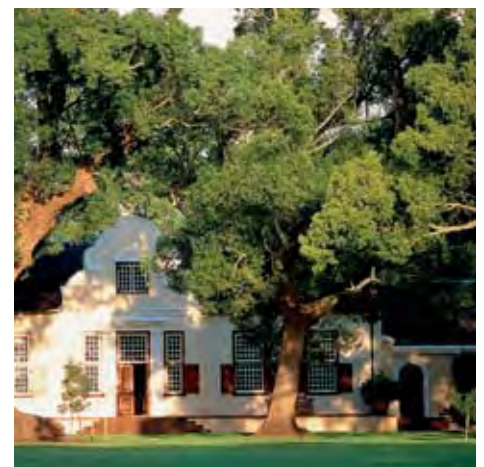
- *South Africa is the eighth largest wine producer in the world, contributing 3.5% of global production.*
- *90% of South African wine is produced in the CFR.*
- *4 600 wine farmers, 505 private cellars and 66 co-ops provide employment in SA.*
- *Currently 110 200 ha of vineyard in South Africa.*
- *By December 2005, 11 700 ha had been set aside for conservation through BWI (21 members and one champion).*



## Vergelegen: South Africa's first Biodiversity and Wine Champion

*The famous Vergelegen Estate owned by Anglo American was appointed as South Africa's first BWI Champion at a launch event held on 22 March 2005. The BWI's Champion Programme honours wine estates and wine farms that are playing exemplary roles in conserving the highly threatened species and habitats found in the Western Cape winelands.*

*Vergelegen has spent nearly R4 million to date on alien clearing and environmental projects, paid for by profits from wine sales. In ten years the estate has restored 316 ha of endangered Boland Granite Fynbos, previously invaded by woody alien plants, to a pristine condition and kept 250 ha of Swartland Shale Renosterveld unploughed on the Schapenberg ridge, despite the renowned viticultural potential of these habitats. To assist them in this major conservation project, the estate employed Gerald Wright, previously the manager of the Helderberg Nature Reserve, to oversee the implementation of the veld management plan.*







The Vergelegen Estate leads the way in the removal of invasive alien plants and the restoration of threatened habitats.



The Biodiversity and Wine champions have adopted stringent measures to ensure best practices in production of wine, but also stewardship of biodiversity on farms.

tion guidelines. As an economic incentive, the BWI strategically presented the concept of biodiversity to Wines of South Africa (WOSA, the marketing wing of the industry) as a unique marketing angle for South African wines.



### The Biodiversity and Wine Initiative launched

Co-operation between the wine industry and the conservation sector led to the launch in March 2004 of a further two-year project, the Biodiversity and Wine Initiative (BWI). This partnership project has developed a strategy to minimise the loss of threatened natural habitat on farms and to promote sustainable wine production.



Vergelegen in Somerset West was the very first Biodiversity and Wine Initiative Champion. Handing over the award are IUCN President Mohammed Valli Moosa and CEO of the BotSoc, Dr Bruce McKenzie.

An early achievement of BWI was the development of biodiversity guidelines for the wine industry, which were adopted by IPW in August 2004. These guidelines enable the industry to promote biodiversity-friendly wine farming among its members and to acknowledge good practice. Wine farmers and producers may be recognised in one of two categories:

and cellars. Individual estates and privately owned farms are required to fulfil different criteria than BWI Co-operative Cellar Members.

- A Biodiversity and Wine Champion must demonstrate a two-year track record of good conservation practice, have started implementing conservation actions in management plans, and conserve at least 10% of the property, preferably under one of the Conservation Stewardship options (Chapter 4).

### A unique selling point

The South African wine industry will never be able to compete with high volume, low-cost wine producers like Australia and Chile. The strength of the South African wine industry is its potential to produce a great diversity of interesting, specialist wines, establishing it firmly as a high-quality, niche market player. WOSA had been looking for a unique angle from which to market South African wines, which is exactly what BWI's emphasis on biodiversity provided.

Both the wines and the flora of the Cape are unusually diverse. This diversity results from the varied topography, soils and micro-climates of the region, known to wine makers as "terroir". Just as the diverse terroir of the Cape has created a richer biodiversity than is found in any other wine-producing country on Earth, it has also enabled South Africa to make the world's most interesting wines. This is the concept behind WOSA's new slogan in their advertising campaign: "Variety is in our nature".

- A Biodiversity and Wine Member allows entry-level membership, with the member signing a statement of intent to set aside an area of natural habitat and implement IPW sustainable production guidelines for farms

During the initial two-year implementation phase of the BWI project, wine producers with existing track records in biodiversity conservation, are being enlisted as champions to promote the initiative



*Sue Winter impressed the Fynbos Forum with her research on land owner attitudes to conservation, concluding that farmers were only too keen to co-operate when they were well-informed about the special biodiversity in their care. She has followed this through in her work with conservation stewards among the wine industry.*

to their peers. BWI extension officers are helping these champions to implement the biodiversity guidelines and to integrate biodiversity conservation into the identity of their winery. The current focus for BWI is broadening the membership base as widely as possible, particularly in wine regions where threatened vegetation fragments still exist, such as the Bottelary, Darling Hills, Paarl Mountain and Slanghoek Valley.

A membership recruiting phase coincided with Cape Wine 2006, a wine trade show that also hosted a Wine Diversity Conference in April 2006. For the first time, the conference included sessions on the biodiversity of the Cape Winelands. It demonstrated to the world's wine media the extent of conservation commitment of the Cape's wine producers.

The first biodiversity wine route involving BWI members, the Green Mountain Eco-Route, has been developed in the Elgin-Bot River area. This route is an opportunity for participating estates and cellars to develop a wider range of biodiversity-related products and services, and to tap into the growing ecotourism market. This in turn has the potential of creating additional employment opportunities and revenue streams for these companies. It's early days, but Dr van Rooyen believes that through this kind of innovative partnership, the wine industry is paving the way for other agricultural sectors to follow.

## What have we learned?

- *The conservation and business sectors must work together to conserve biodiversity and realise sustainable development goals.*
- *Substantial research into the industry is required, prior to engagement, in order to understand its core business, market leaders, key markets, marketing strategy, approach towards sustainable production, missed opportunities, etc.*
- *In general, the conservation sector lacks people with business skills to engage with industry.*
- *Developing innovative cross-sectoral programmes requires stakeholders to collaborate from project conceptualisation to implementation.*
- *To secure long-term commitment from the industry, creative short-term economic incentives are needed.*
- *There is a need to work through existing industry structures rather than creating new institutions. This reduces implementation costs and time, and is far more likely to result in industry endorsement.*
- *It is more productive to co-operate than to make enemies; maintain good relationships with all sectors of the industry and be sensitive to how far you can push an issue before it leads to conflict.*
- *Sustainable production systems can be a useful tool to acquire market share; bear this in mind when engaging with the industry.*
- *Synthesise relevant environmental and agricultural laws into an understandable format for farmers, and demonstrate that sustainable production and conservation guidelines are a tool to help them comply with the legislation.*
- *It is important to speak to and motivate different players in the industry (e.g. farmers, wine-makers, marketers) in ways that are meaningful to them.*
- *Land owners can be influenced to farm sustainably by working through the agricultural industries they supply.*

## Support these wine producers!

*In November 2005, the Botanical Society of South Africa honoured the first group of 21 BWI members and the existing BWI champion, Vergelegen. Rooiberg Winery, representing eight farms in the Robertson district, is the first BWI co-operative cellar member to be registered. The following 20 individual producers have also been registered as BWI members. By choosing wines produced by BWI champions and members, you will be supporting biodiversity-friendly wine production:*

- *Stellenbosch wine route: Delheim, Hartenberg, Koopmanskloof, Louisenhof, Mooiplaas, Spier Vineyards, Waterkloof (False Bay Vineyards)*
- *Paarl wine route: Avondale, Backsberg, Black Pearl Wines, Boschendal, Montagne, Plaisir de Merle*
- *Overberg wine route: Beaumont, Oak Valley & Paul Cluver Wines*
- *De Grendel (Tygerberg), Glenwood (Franschoek), Towers (Swartland) & Tulbagh Mountain Vineyards*

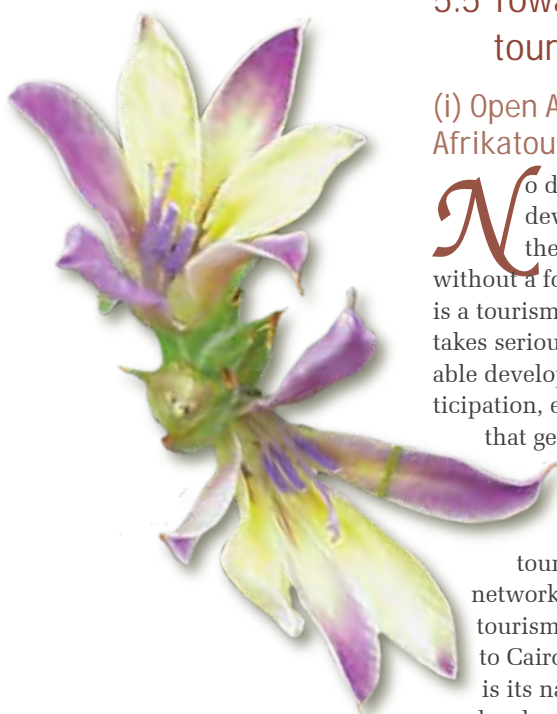




## 5.5 Towards sustainable tourism

### (i) Open Africa – enabling Afrikatourism in the Overberg

No discussion on sustainable development opportunities in the CFR would be complete without a focus on tourism. Open Africa is a tourism development company that takes seriously the principles of sustainable development and community participation, encouraging tourism ventures that generate job opportunities and conserve the environment. This non-profit organisation promotes a vision of “Afrikatourism”—creating a continuous network of sustainable nature-based tourism routes linking Cape Town to Cairo. “Africa’s greatest strength is its natural resources,” says route developer Georgie Nelson, “so we work with communities to use this rather than destroy it.” Not surprisingly, the first Open Africa route was the Fynbos Route established in 1999 in collaboration with a tourism forum in the Overberg. Since then, another 55 routes have been developed in five African countries.



Open Africa responds to requests from communities needing help to develop local tourism routes. Facilitators take participants through a systematic three-month route development process, helping them to recognise the uniqueness of their natural and cultural heritage, and building the capacity of a representative community forum that develops and

manages the route. Open Africa raises funding to cover the costs of this process, to ensure that nobody is excluded from participating.

The route development process culminates in the publishing of the route on the Open Africa website ([www.africandream.org](http://www.africandream.org)). Using GIS technology, information on all the tourism partners and their products and services is linked to the route map. Once the route exists on the website, new entries can be added at any



### Local website

*Encouraged by the route development process, guest house owner Andy Carpenter developed a website for the Gansbaai area ([www.danger-point-peninsula.co.za](http://www.danger-point-peninsula.co.za)), which provides detailed information on the local environment and tourism opportunities.*

time. Because there is no charge to contribute information, Open Africa routes promote all businesses equally, whether they are large or small, established or emergent.

### Reviewing the original Fynbos Route

The original Open Africa Fynbos Route was reviewed in 2004 and renamed the Overberg Fynbos Route. The route incorporates the towns of Gansbaai, Stanford, Napier, Elim and Pearly Beach. It falls within the broader Agulhas Biodiversity Initiative (ABI, Chapter 2) area, where numerous C.A.P.E. partner organisations are actively involved in biodiversity-related projects and businesses.

The route forum recognises the value of working as a collective, and organises regular workshops to keep both route members and the general public informed about opportunities like adventure tourism, ecotourism and sustainable resource use in the Overberg. The forum provides an opportunity for C.A.P.E. partners and others to develop a more strategic, regional approach to sustainable tourism, and to benefit from promotion of the route as a whole. In addition to using the Open Africa website, the forum also works through tourist information offices, the local media, and expos and shows throughout the region.

For Hardus Botha, chairperson of the Overberg Fynbos Route, promoting the uniqueness of the Overberg is necessary not only to attract tourists, but also to generate an interest in tourism in local communities that have not previously been involved in the sector. Through forum meetings, tours and workshops, cultural festivals and articles in community newspapers, awareness is starting to grow and the first township-based tourism operation has been established in the area.

The Overberg Fynbos Route has started to strengthen sustainable nature-based tourism in the Gansbaai area. Now Hardus believes it is time to start developing a network of Open Africa routes throughout the Overberg. Other nodes already exist, like Blue Crane routes around Agulhas, Caledon and Heidelberg, but new opportunities need to be explored to spread the Afrikatourism vision throughout the Overberg.

## What have we learned?

- *Tourism routes can provide communities with an incentive to conserve their environment, particularly if the benefits of tourism are shared broadly by the community.*
- *For a tourism route to be sustainable, the community must be involved in its development and make all the management decisions.*
- *A tourism route enhances local business through referrals between members.*
- *Many communities have become cynical about development projects that promise much but deliver little. The fact that Open Africa can establish a route within only 90 days is motivating and generates commitment.*
- *The involvement of talented and energetic local champions is essential to the process of route development.*
- *A route forum stimulates the development of local tourism products, and provides a supportive environment in which emergent providers can develop capacity.*
- *Especially in rural areas, lack of transport can make it difficult for people to attend forum meetings. It is important to overcome this problem to enable a representative forum to meet regularly and maintain enthusiasm.*

## (ii) Nieuwoudtville Tourism Design Charette

Nieuwoudtville is a unique community perched high on the Bokkeveld Plateau above Vanrhynsdorp. A village established to serve the needs of a sheep farming community, it is also famously known as the “bulb capital of the world”. The veld is jam-packed with an extraordinary variety and number of plants that grow from bulbs, corms and tubers. For much of the year, these plants beat the heat by lying dormant in the soil. But come the first autumn rains, buds and leaves start to break through in profusion. From amaryllids in autumn to spectacular spring displays, this is a plant-lover’s paradise.

Nieuwoudtville’s botanical bounty has attracted a lot of interest in recent years. Research projects like the Conservation Farming Project and CREW (Chapter 4.2), and sustainable development initiatives like the Heiveld Rooibos Tea project (see above) have brought scientists and development practitioners to the town. Local NGO, Indigo Development and Change, has been exploring job creation opportunities based on the sustainable use of the region’s resources, such as the rooibos tea co-operative and a nursery to propagate indigenous bulbs. Tourism was an obvious possibility, but the limited focus on a short and fickle flower season was not enough to generate sustainable year-round employment.

During March 2004 representatives from the Hantam Municipality, the Nieuwoudtville community and Conservation International convened a five-day workshop in Nieuwoudtville to develop a community vision for tourism that would benefit biodiversity and improve local livelihoods. Called a “Design Charette”, this opportunity brought together local residents and international consultants, subsistence farmers and architects, local shop owners and tourism specialists, scholars and conservationists. Up to 120 people from all walks of life met each day to discuss how tourism could help to create a brighter future for the people of Nieuwoudtville. It was the first time

## Sustainable Tourism Development

*“Tourism development must play a critical role in supporting the constitution’s commitment to improve the quality of life of all citizens, while protecting the natural environment for the benefit of existing and future generations. The policy is guided by the goals of reconstruction and development to meet basic needs, to develop human resources, to build the economy and to democratise the state and society.”*

*- White Paper on Sustainable Tourism Development*



## Porcupine heaven

*B*ulbs are so plentiful in the Nieuwoudtville area that as many as 10 000 have been counted in a single square metre of veld!



## What is a Charette?

*A charette is an intensive workshop organised to solve a specific design or planning problem in a short space of time. The process brings members of various sectors together into a flexible workshop format that generates consensus and practical design solutions relating to the particular problem. Although this process is widely used in other parts of the world, the charette in Nieuwoudtville was the first time this effective methodology had been implemented in South Africa. (The origin of the term 'charette' is that architecture students at the Ecole des Beaux Arts in France were given a design problem to solve within an allotted time. When that time was up, the students would rush their drawings from the studio to the Ecole in a cart called a charette. Students often jumped in the cart to finish drawings on the way.)*



*Rhoda Louw, an environmental scientist working in the Nieuwoudtville district, found the Design Charette inspirational: "I have never seen or heard of the kind of intra-community participation that we experienced during those five days."*

## Reasons to visit

*Charette participants identified many reasons why Nieuwoudtville is worth visiting at any time of year:*

- *Ancient geological formations*
- *Dramatic vistas and waterfall views*
- *Pioneer architecture*
- *Country guest houses and restaurants*
- *Hiking in Oorlogskloof*
- *Warm hospitality*
- *And, of course, the wild flowers*

in living memory that such a large and diverse group of people had met together in the town—it was certainly the first time that such a diverse group had listened to one another so intently.

During the Design Charette, Mr J F van Wyk, the Northern Cape MEC for Safety and Liaison, pointed out that Nieuwoudtville needed "a co-ordinated, integrated, and community-driven tourism development strategy" to enable the community to benefit from the "abundant assets" of the region. This is precisely what emerged from the workshop process. The group identified a theme that gave cohesion to the region's many tourism opportunities: "Experience Evolution: Nieuwoudtville, place of hidden treasures".

They have since chosen a logo for Nieuwoudtville tourism initiatives, and are working on an integrated system of interpretive signage for the natural, cultural and historical routes that are being developed.

In a region with rich but threatened biodiversity and many people in desperate need of employment, it was appropriate that the Design Charette focused explicitly on sustainable tourism development. The group established principles of responsible tourism development that would benefit the local community, and generated guidelines for

locally appropriate, eco-friendly design and construction.

The community identified three major projects:

- Redesigning the proposed upgrading of the caravan park according to eco-friendly principles;
- Constructing a new visitors' centre;
- Developing a community park in the town.

Plans to redevelop the existing caravan park had been set prior to the Charette. However, in a demonstration of commitment to community participation and sustainable development, the municipality halted its activities on the site, allowing the Charette process to transform their plans for a conventional upgrade of municipal facilities into an innovative, eco-friendly, community-oriented facility with the potential to become a year-round attraction.

Also during the Design Charette, three learners from Nieuwoudtville High School came up with the idea to develop a neglected and unattractive piece of land adjacent to the local taxi rank into a local park. A group drew up a proposals and one of the architects attending the Charette invited the learners to participate in a short internship at his office in Cape Town, where they helped to build a model of the planned visitor centre.

Tourism has the potential to stimulate complementary industries, such as crafts, products and services. The Charette gen-





erated a variety of innovative craft ideas, and identified local artists and crafters who could both benefit from tourism development and contribute to skills development in the community. As tourism routes are developed, the need for branded items—from route markers to tea towels—will grow. Who better to supply these items than the crafters of Nieuwoudtville?

### Things are happening!

The Charette inspired many dreams, ideas and possibilities, and enabled the Nieuwoudtville community to develop their own vision for local tourism. A comprehensive report was published outlining the priorities identified by the Charette, and this is currently guiding the local task team and working groups that are responsible for developing and implementing more specific action plans.

Sustainable tourism is starting to take off in Nieuwoudtville. The caravan park has been redesigned, the Eco Chalets should be completed by mid-2006, and an eco-friendly rock pool has been built that is the pride of Nieuwoudtville. Although the Community Resource Centre has not yet been built, a tourism office has been opened in the town. It is staffed by two previously unemployed Nieuwoudtville residents who are honing their skills in tourism management through knowledge exchange visits to other tourism offices. Now the South African National Biodiversity Institute is conducting a feasibility study to develop a National Botanical Garden in the town..... watch this space!

A group of people with a passion for bulbs and other plants has formed an organisation growing and marketing indigenous seed under a fair trade label. The group, Seeds Aplenty, started in their first season with seed from Kirstenbosch



and is planning to expand their range by sustainably harvesting plants that will produce seeds and bulbs in the coming years. Seeds Aplenty exported their first seed to the United Kingdom under the Fair Trade label in December 2005.

Two biodiversity facilitators have been appointed and one of their roles is to support the recently established Eco-Club that involves the youth of Nieuwoudtville. Lu-Anne de Beer and Donna Kotze help teachers and learners from the local primary and secondary schools with biodiversity projects and field work during the term. With help from CREW they convene week-long summer and winter schools during the holidays. Learning about nature can only be fun when it includes activities like “Nieuwoudtville Survivor” and “Caterpillar race—stuff your face!”—complete with a biscuit-eating competition!

The youth love learning and are developing a deep respect for their town, reports Lu-Anne. “The Eco-Club started learning about the threatened plants of Nieuwoudtville. They realised that municipal workers were actually destroying some of these plants when they mowed and weeded the parks and verges. First they identified the threatened plants and marked their positions with wire. They then had a meeting with the municipality to ask them not to weed in areas where these plants grow.” This story reflects the spirit of the Nieuwoudtville Design Charette—every voice was listened to, every link in the chain was valued.



There was participation in the Design Charette from every part of the community.





The Eco-Club gets involved in all sorts of activities

## What have we learned?

- *Flower tourism is insufficient to create a sustainable tourism industry as it is seasonal, weather-dependent and appeals to a limited market; other aspects of nature, plus cultural, historical and adventure tourism are year-round attractions that can stimulate a local tourism industry.*
- *Participation and active involvement of all parts of the community takes time but once it is achieved it changes the community for the better.*
- *By bringing diverse sectors of the community together; the Charette process generated a much wider range of ideas that would otherwise have been the case.*
- *Awareness raising and increased networking with service providers and others have been important outcomes of this successful project.*
- *Local capacity development is crucial for local ownership and thus for the success of such a project.*



### (iii) CapeNature – exploring commercialisation

In the late 1990's, the provincial nature conservation function in the Western Cape was placed under the control of a new statutory board. At the time, the organisation could not realise its optimal potential, as support from government funding was declining. More importantly, the organisation was not able to retain its own funds or to aggressively seek other means of revenue-generation to support conservation. The C.A.P.E. programme was about to enter its implementation phase, and Board-status would enable the organisation to access donor funding for projects, in addition to generating income from other sources. Once established, the Western Cape Nature Conservation Board undertook many initiatives, one being a due diligence investigation into ecotourism.

It is now five years later. The Western Cape Nature Conservation Board has since become CapeNature, complete with a revamped corporate image. It is time to reflect: has its financial situation improved? The Annual Report for 2004/5 suggests that during this reporting period CapeNature experienced severe cash flow problems as a result of tourism revenues being below expectations.

So, what challenges has CapeNature faced as it has striven to become more financially sustainable? Have there been successes in the past five years, and what can we learn from their experiences?

To start with, becoming a Board did enable CapeNature to access significant amounts of funding during 2005: about R30 million in a single year, in fact, from state and private donors. More than two thirds of this amount represents poverty relief funding for projects like the development of a new hiking trail and employment of baboon monitors. During 2004 CapeNature received poverty relief funding from Umsobomvu for a Youth Service Programme (Chapter 6.4) as well as funding for invasive alien plant clearing. While this enabled CapeNature to achieve a number of its goals, there have been problems associated with some funding. Not least of these is the time lags between funding cycles, which causes projects to lose momentum. It was partly because a major provider of funding reduced its annual payment to CapeNature by



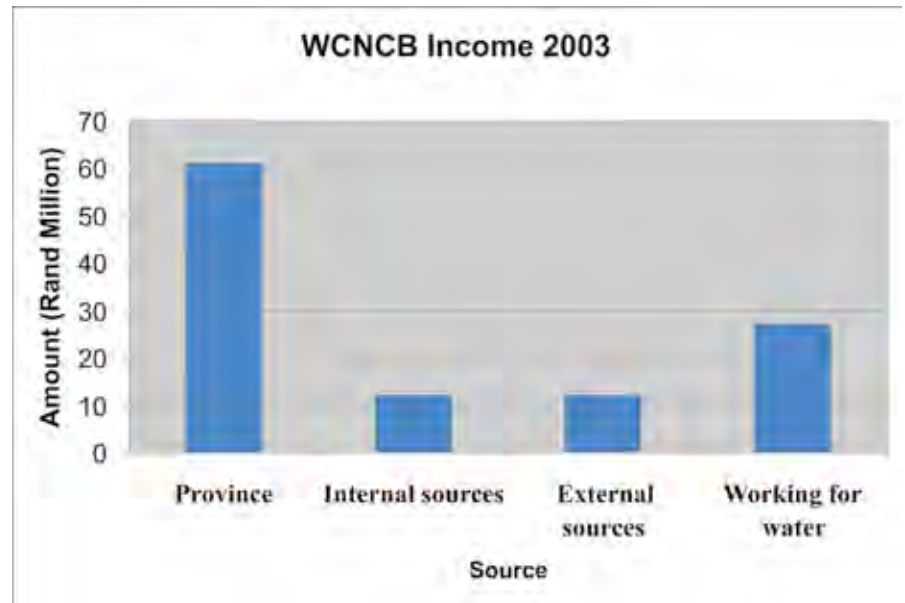
*Adnaan Abrahams has the challenge of developing the potential of protected areas in the Western Cape to meet the needs of growing numbers of domestic and international visitors, and of ensuring that this results in a net increase in revenue for effective conservation management.*

R1 million in 2004 that the organisation experienced serious cash flow problems in the last financial year.

Another problem associated with donor funding is that it is invariably project-linked and does not fund personnel or project administration costs. The money may be used for specified purposes only and the organisation generally has to contribute about 15% of the overall project budget. In the case of CapeNature, this amounted to R3.6 million over five years, placing a significant burden on their operating budget.

And what of commercialisation? How have plans progressed in the past five years? Currently, CapeNature earns income from accommodation, visitors, Wild Card subscriptions and the provision of permits and licenses for a range of activities, from filming to events. Ecotourism concessions, which were expected to contribute significantly to the income stream, take time to establish and have not yet generated sufficient income for the organisation.

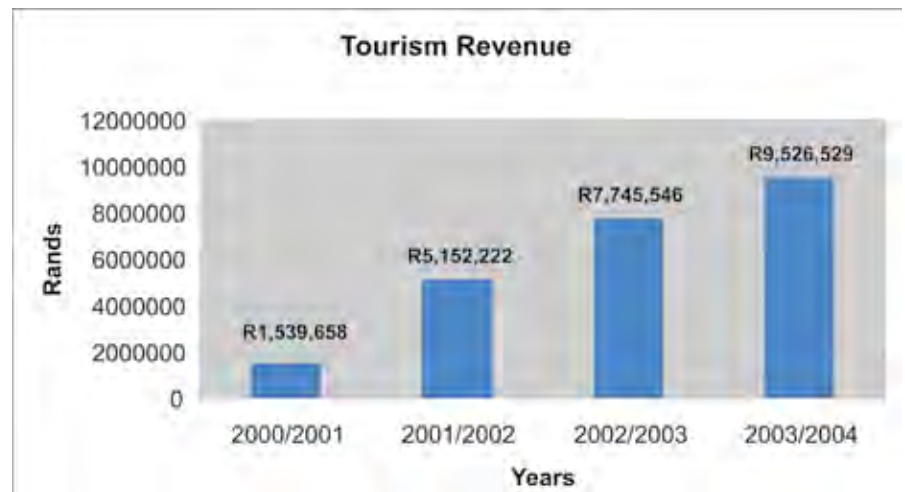
In 2000, ecotourism looked like an obvious income-generating opportunity to explore. CapeNature undertook a due diligence audit, which identified 17 sites in 12 of its reserves where ecotourism products could be established. CapeNature planned to enter into formal Public-Private Partnerships (PPPs) with the hospitality industry, allowing investors to build and run lodges in return for a percentage levy on earnings. Outsourcing tourism operations to providers with



Income breakdown for 2003 reveals that government funding, although inadequate, outweighs combined income from donor funding and services.

experience in hospitality and marketing would allow CapeNature's staff to focus on their core business of conservation. CapeNature also anticipated that neighbouring communities would benefit from increased tourism, by being able to supply goods and services.

In 2003, CapeNature advertised a number of ecotourism concessions and invited businesses to tender. The response was



very poor and there are currently two PPPs in the pipeline, one at Robberg and the other at De Hoop Nature Reserve. It is important to understand why this plan has been so slow to bear fruit. Adnaan Abrahams, Director of Business Development for CapeNature explains that, despite being a Board, CapeNature must comply with government PPP application procedures, which are particularly onerous and time-consuming. Few potential business partners are willing to get

Income from tourism has risen steadily since CapeNature became a Board; however, this represents a very small proportion of the organisation's total operating budget.



## Time to reflect ...

*The difficult financial situation in which CapeNature found itself is of concern to C.A.P.E. for a number of reasons. CapeNature is one of C.A.P.E.'s key institutional partners, responsible not only for rolling out a number of donor-funded projects but also for managing 5 000 km<sup>2</sup> of protected areas in the Western Cape. The success of the C.A.P.E. programme and the future of biodiversity in the Western Cape relies on the effective functioning of this major conservation agency.*



bogged down in the bureaucratic mire of lengthy studies, thick reports and negotiations.

Business partners may also not purchase the State land upon which they develop their tourist facilities; nor is CapeNature, as a parastatal agency body, permitted to borrow money to invest in infrastructure. So the private partner stands to lose any investment made in infrastructure upon termination of the PPP contract. An investor would far rather purchase their own property outside of the protected area where their investment in infrastructure will be secure. Add to this the fact that CapeNature wished to restrict infrastructure development to already developed sites within the reserves (which were seldom the most appealing to developers), and it is not surprising that what had initially looked like a winning combination started to feel bogged down in complexity.

Furthermore, in trying to fulfill its many obligations to government, CapeNature placed too many demands on its potential partners. Not only would they be expected to pay a levy to the organisation, but their developments would be subject to exacting environmental

standards, their activities in the reserve would be limited, and they would be expected to contribute to black economic empowerment as well as job creation and social upliftment in neighbouring communities. In a region that does not actually have a well-established safari lodge culture, investors had ample reasons not to engage in a PPP with CapeNature, however socially responsible this would be.

CapeNature has certainly learnt a great deal about PPPs over the past three years, not least that these agreements take a lot longer to set up than initially anticipated. As a result, they have been actively negotiating more workable agreements with government and potential business partners. The first concessions will probably come on stream in 2006, whereupon the next phase of learning will begin.

The greatest tourism success during this period has been the Whale Trail at De Hoop Nature Reserve, one of the complex of sites making up the Cape Floristic Region World Heritage Site. Offering world-class land-based whale watching opportunities and stunning coastal and mountain scenery, this five-day hiking trail is booked out a year in advance. Hikers have the option of having their packs delivered to the cabins, which provide basic creature comforts like electricity and hot showers, so the trail appeals to a wide audience. CapeNature is keen to develop similar trails in other reserves, but a lack of investment funding is



hampering developments. They have, however, recently received poverty relief funding to develop a second whale trail, this time for the “high-end” tourist.

In the face of insufficient financial support from provincial government, CapeNature is looking at providing a mixture of products for all income groups. Currently CapeNature does not offer any high-end tourist facilities, and is looking at adding a few such facilities to boost income. “We can afford to employ three staff members for every high-end tourist, but we actually make a loss providing accommodation for the middle income self-catering visitor who has traditionally stayed in our protected areas” says Adnaan. He believes that CapeNature can no longer afford to use core funding to subsidise visitor accommodation, as their first priority is biodiversity conservation. This financial predicament has forced them to ask some tough questions, like: “Is free or subsidised access to reserves part of CapeNature’s mandate?” and “What is the benefit of access to biodiversity?”

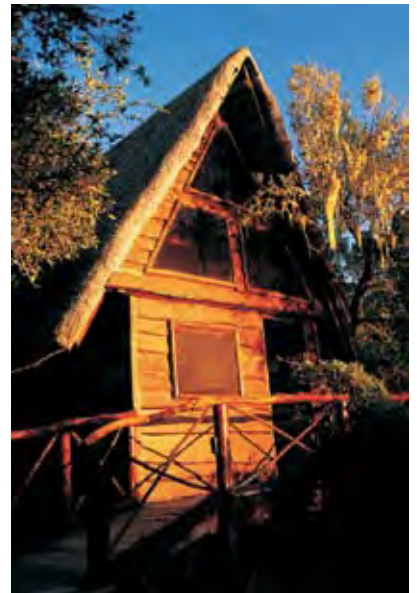
CapeNature has in the meantime had many discussions with the Ministry and Provincial Government regarding the organisation’s financial position. Provincial government fully understands, and the provincial treasury agrees, that the organisation is unsustainable at current levels of government funding. CapeNature anticipates a positive response to its request for greater funding in the future. In fact, the Western Cape provincial government recently provided R15 million for capital improvements. This is a sure sign that provincial government is keen to see CapeNature adequately funded and achieve its potential.

## What have we learned?

- *Becoming a Board gave CapeNature access to funding that they would not have been able to use as a government department.*
- *Donor funding is no substitute for core funding from government; without adequate core funding for staff and project administration, spending donor funding can put a strain on the organisation.*
- *CapeNature, as a major landholder in the province, has the*

*potential to help the provincial government fulfill its job creation mandate, particularly in rural areas.*

- *Delays in receiving donor funding can put an organisation under serious financial pressure, especially if it has to provide bridging finance for projects that are already underway.*
- *While poverty relief funding enables conservation organisations to accomplish numerous tasks, it does not provide neighbouring communities with stable employment, and more sustainable funding streams are essential.*
- *Trying to address too many imperatives through any single commercial venture is unrealistic. Making money, addressing the socio-economic development needs of neighbours, and promoting Black Economic Empowerment are all important goals, but should be accomplished as part of an overall commercialisation strategy, not necessarily by each individual project.*



A range of experiences is offered by CapeNature.







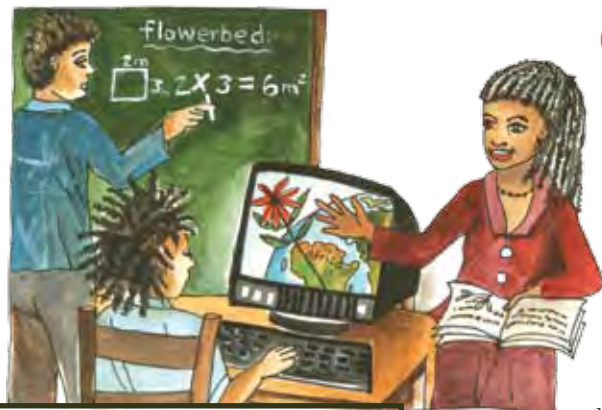
*The C.A.P.E. 2000 Strategy acknowledges that if the people of the Cape Floristic Region are to understand the benefits of biodiversity and participate in addressing biodiversity issues, then environmental education processes in the region must be strengthened.*

*For decades, many organisations and individuals have been involved in raising awareness, developing environmental literacy and involving people in environmental action projects in the region. But over the years, as conservation budgets have declined, a number of organisations that were once leaders in the field have lost environmental education capacity. Guided by the Rhodes University Environmental Education and Sustainability Unit, C.A.P.E. is striving to reverse this trend by developing a strategic framework for conservation education in particular, conducting audits of organisational capacity and resource materials, and providing professional development opportunities for practitioners.*

*This chapter reflects on a range of existing environmental education and youth development initiatives in the region and describes how the advent of C.A.P.E. has started to provide existing programmes with a stronger biodiversity conservation focus.*

# CHAPTER 6 Supporting conservation education

## 6.1 A long tradition and a vibrant programme



### (i) Biodiversity conservation and education in the Cape Floristic Region

The big picture of conservation education in the Cape Floristic Region (CFR) is so expansive that the challenge in this section is to select a few illustrative examples to focus on drawn from the numerous projects and programmes. We shall look in detail at a few current initiatives. It is also important to acknowledge the many committed educators who have inspired and enabled learners of all ages to understand more about, and care more deeply for, the fynbos and “fyn mense” (fine people) of this region.

#### Centres of influence

Conservation education has been one of the strongest influences on the development of what could be called the environmental education movement in Southern Africa. Led by government and

non-governmental organisations, such as the Wildlife and Environment Society of South Africa (WESSA), CapeNature, WWF-SA and the Environmental Education Association of Southern Africa (EEA-SA), environmental education evolved out of concerns about the need to conserve nature and the natural resources of the country.

Many of the early efforts in conservation education were championed by environmental education centres, which became popular throughout South Africa in the 1980s. It is worth noting, however, that one of the very first “centres” dedicated to teaching scholars about the natural environment was established at the Kirstenbosch National Botanical Gardens in 1923. Run for 70 years by the Provincial Department of Education, the Nature Study School was taken over by the National Botanical Institute in 1993 and renamed the Gold Fields Environmental Education Centre (Chapter 6.3 iv). This and other centres, such as the Parmalat Enviro Centre near Kommetjie and the Environmental Education and Resources Unit at the University of the Western Cape, continue to provide people with places to meet, share, learn, and mobilise around environmental concerns. Unfortunately, declining levels of investment in education as a key performance area

### Why conservation education?

*C.A.P.E. refers quite specifically to “conservation education” rather than environmental education or education for sustainability. C.A.P.E. sees its role as supporting education initiatives with a particular focus on biodiversity.*





Luzuko Primary School in Gugulethu was one of the first schools in South Africa to receive their Eco-Schools flag.

in some conservation organisations has resulted in the loss of some highly influential environmental educators, centres and programmes.

### C.A.P.E. meets Eco-Schools

It is not surprising that schools are very often the focus of environmental campaigns and programmes. They are, after all, sites of learning and socialisation, where environmental knowledge can be infused and the habits of sustainable living inculcated. An organisation or project wanting to disseminate information or promote a cause can reach large numbers of people relatively efficiently and effectively through these institutions. In fact, schools do sometimes feel besieged by the good causes they are expected to adopt!

The international environmental programme Eco-Schools has developed a useful framework that helps schools to respond more strategically to environmental challenges by identifying their particular environmental priorities and developing policies and action plans for sustainable management and lifestyle choices. Since the programme was first introduced in South Africa in 2002, a growing number of schools have signed up, with 224 nationally and 20 in the CFR achieving Eco-Schools status in 2005. Some C.A.P.E. partner organisations are finding that the Eco-Schools programme is helping them to work more productively with schools, and some have chosen to support a cluster of local schools as a “node co-ordinator”.

Rhian Berning, regional co-ordinator of Eco-Schools in the Western Cape, reports that Crestway Secondary School in Retreat on the Cape Flats, is one school that has made a significant contribution to local biodiversity conservation. “Learners protested against the Blouvlei wetland



being converted into a parking lot for the library,” reports Rhian. “They motivated that the area be leased to the school and have been granted a ten-year lease from the City of Cape Town. Now they are cleaning up, protecting and utilising the area for environmental education. The learners played an integral, proactive role in preventing the destruction of the wet-

Environmental education centres in the Cape Floristic Region involve hundreds of thousands of learners in environmental learning and action every year.

## Educators doing it for themselves

*One of the most inspiring stories of environmental education capacity development in the CFR is an initiative undertaken by Natsoc (the Naturalists’ Society), an interest group started during the 1980s by a group of biologists, mainly from the University of the Western Cape, and teachers employed by the then House of Representatives. For Natsoc members, the Potberg Environmental Education Centre at De Hoop Nature Reserve became their second home. The educators regularly took their students there on field trips, and as a group, they shared their knowledge of the diverse ecosystems at the reserve as well as field work and outdoor education skills. As their competence grew, they started sharing their knowledge and skills with colleagues. The cadre of skilled and committed environmental educators that was developed as a result of these processes of peer education and mentorship has had a significant impact on environmental learning in schools, community groups and further education institutions, and on environmental education policy in the Western Cape Education Department (WCED). Potberg has continued to be involved in the Environmental Education Lead Teacher Project co-ordinated by the WCED’s district office, serving the southern areas of Cape Town.*

## Enabling environmental education in the City of Cape Town

*C.A.P.E. has identified the critical role of municipalities in enabling biodiversity conservation and sustainable livelihoods. At the Fynbos Forum workshop, the City of Cape Town stood out as a local authority that has taken its role in environmental education to heart. Through the vision and commitment of its environmental education co-ordinator, Lindie Buirski, the City's Environmental Management Department has taken the lead in supporting and strengthening environmental education processes in the City.*

*The City's Environmental Education and Training Strategy and its monitoring and evaluation handbook for environmental education serve to guide and strengthen the City's initiatives and those of its many partners. One of the City's initiatives that has had a profound effect on schools and environmental organisations is the annual Youth Environmental School. Every year since 1998, children and teachers from primary schools all over the City have participated in a week-long programme of environmental lessons provided by City departments and environmental service providers, which has raised awareness of environmental issues as well as the organisations and learning support materials that can help people live more sustainably. This annual event has also strengthened networking among environmental education providers in the City and, through the implementation of an evaluation component, provided partners with valuable feedback to help them improve the quality of their programmes.*

*Through organising or supporting a busy programme of environmental events, workshops, resource material development initiatives and partnership projects such as Eco-Schools and the EduTrain, Lindie has done more than most people to enable environmental education in the largest metropolitan area in the CFR.*



*Lindie Buirski, City of Cape Town environmental education coordinator, has taken the lead in supporting and strengthening environmental education processes in the city.*

in this publication. Richard Cowling, a C.A.P.E. Gold Award winner received this recognition, for among other things, his contribution to a whole generation of scientists and practitioners (Chapter 7). Working with learners of a very different age, Ali Corbett of Cape for Kids has developed story books about the adventures of "Monty the Mongoose" that have delighted thousands of pre-schoolers over the last ten years. Presenting regular environmental puppet shows at venues like Kirstenbosch, Table Mountain and Rondevlei, Ali and her team focus on an age group that is often overlooked by conservation organisations, but who are open and responsive to learning and caring about their world.

### The scope of it

At the Fynbos Forum in 2004, a workshop session was held to investigate the scope of environmental education processes in the region. People involved in a wide range of initiatives, from public awareness, community development and formal education to agricultural extension and skills training, shared their experiences.

In addition to numerous projects supporting environmental learning and action in schools, the session also revealed that there is a lively tradition of community participation in biodiversity monitoring and conservation projects in the region. The Protea Atlas Project and CREW were highlighted as projects encouraging community participation and a "learning through doing" approach (Chapter 4.2). People also reported on initiatives in agricultural areas, such as LandCare (Chapter



*Deliberations at the Fynbos Forum and C.A.P.E. Partners' Conference have resulted in sound recommendations for both policy and practice in the Conservation Education Programme, managed by Jayne Coleman (left).*

land and made a short video of their success story. Crestway High School achieved Eco-School status in 2005 and certainly is a role model for other schools!"

### Educating at many levels

In the CFR, the educators based at further education institutions—the universities and colleges—have had a profound impact on many generations of students, equipping them with knowledge, honing their critical faculties and fanning the "fire in the belly" that has motivated people to initiate many of the projects



5.2), the Gouritz Initiative (Chapter 2.7) and the Badger / Beekeeper Extension Project, which are vital because of the challenge to conserve biodiversity within productive landscapes. Some of the workshop participants (e.g. Flower Valley Conservation Trust and Green Futures, (Chapter 5.3 i)) discussed the accredited training programmes they were developing, which were starting to contribute to the development of sustainable nature-based livelihoods in the region.

## What have we learned?

The Fynbos Forum workshop identified a number of issues as well as opportunities in relation to environmental education processes in the region:

- In most conservation organisations, education capacity and resources are extremely limited; there is a need for capacity building in education and communications.
  - Education programmes must be relevant to their particular context (e.g. age, social group, language, aspirations). It is important to monitor and evaluate programmes.
  - Working through existing community structures, meeting places and communication channels is effective and contributes to the sustainability of programmes.
  - In a region of huge biodiversity, there is a need for more site-specific information.
  - The cities are generally very well provided for in terms of environmental service providers and education programmes; rural areas tend to be overlooked.
  - An “us and them” approach tends to polarise rather than involve people and is not effective.
  - The process of accrediting training providers and courses is extremely bureaucratic, slow and challenging, especially for micro-enterprises. However, trainees would rather attend accredited courses.
- *Enthusiastic individuals or “champions” can have an enormous influence within their communities.*
  - *The new National Curriculum for schools provides numerous opportunities for environmental learning, but many educators need a period of mentoring and support to integrate biodiversity and sustainability issues.*
  - *Environmental education processes within the CFR can be strengthened by networking. Networks such as the EE Friends and GREEN exist, and there are also opportunities to communicate via the C.A.P.E. Coordination Unit and the Fynbos Forum.*
  - *Opportunities to share information about biodiversity and sustainable living are limited only by the imagination.*

### (ii) The C.A.P.E. Conservation Education programme

C.A.P.E. has identified education and capacity building as one of its cross-cutting programmes. In September 2004, the C.A.P.E. Conservation Education programme was launched to work with C.A.P.E. partners to strengthen learning and local action for sustainable living in the CFR. The project management team is based at the Rhodes University Environmental Education and Sustainability Unit in Grahamstown.

Through the C.A.P.E. Conservation Education programme, developments in biodiversity conservation policy and practice in the region can inform approaches to conservation education, and vice versa. For instance, the project team has identified a number of biodiversity research and planning approaches in C.A.P.E. that resonate with active learning approaches in the National Curriculum (see diagram). Practically, educators and learners in the CFR can survey landscapes, audit biodiversity, investigate ecosystem services and livelihoods and assess risks. These investigations can inform discussions on



**R**ob O'Donoghue, now Professor of Environmental Education at Rhodes University, manages to combine the challenges of academic rigour in conservation education research with its practical application in the field. Indeed, his particular approach to action research embodies learning for local action, particularly among educators, whatever their background. This approach provides a firm foundation for the C.A.P.E. Conservation Education programme.

### A question of sustainability

**D**o we know what sustainable development is so that we can educate people “for” it? Sustainability is a question; as educators, we need to provoke people to ask questions, rather than lead people to answers we already have.

—Rob O'Donoghue



## C.A.P.E. Conservation Education programme activities

The C.A.P.E. Conservation Education programme works with C.A.P.E. partners and provides support through the following activities:

- Co-ordination and networking
- Strategy development
- Professional development
- Materials development
- School and education sector support



The C.A.P.E. Conservation Education programme has identified opportunities for learning and action that respond to issues of biodiversity and sustainable living in the CFR.

human well-being and lifestyle choices, enabling educators and learners to make informed decisions about living sustainably.

The C.A.P.E. Conservation Education Programme began with a road show and audit of resource materials for conservation education at the end of 2004.

During 2005 a number of people involved in conservation education in the CFR participated in a certificate course run through Rhodes University, which served to strengthen conservation education capacity and networking in the region. This section highlights some of the projects that participants in this in-service professional development course have been involved with (see articles on the education initiatives of GREEN (6.3 v), Kirstenbosch (6.4 iv), Natures Valley Trust (6.1 ii), SEED (6.3 iii) and Table Mountain National Park (6.3 ii)).

### An audit of resource materials

The resource materials audit led to the compilation of a data base of many of the materials that are available to support biodiversity conservation education in the CFR. This list of books, field guides, magazines, posters, videos, websites and teachers' guides is available from the C.A.P.E. Conservation Education coordinator. It will be updated on a regular

basis to ensure that it serves as a useful first port of call for people seeking information on biodiversity and conservation education in the region.

The audit revealed a large number and variety of materials dealing with the biodiversity of the region, most of which provide fairly generic information. However, because of the high levels of endemism in the CFR, the challenge is to develop materials that help people to identify, investigate and care for the biodiversity of their particular area. The Botanical Society's series of wildflower guides is an excellent example of field guides that focus on particular areas and therefore enable relative novices to make sense of South Africa's rich biodiversity. A number of C.A.P.E. partners also demonstrated that digital technology can enable people to design and produce small print-runs of interpretative and educational materials that are relevant at a local level. For example, CREW, Nature's Valley Trust and the Table Mountain National Park have used digital photography and desktop publishing very effectively to develop full-colour materials such as plant identification guides for vegetation monitors, interpretative signage for self-guided trails, and activity cards for visiting school groups.

The audit encouraged educators to work more closely with researchers and



*Jayne Coleman's involvement as C.A.P.E. Conservation Education co-ordinator, began at the C.A.P.E. Strategy workshop in 2000. She brought with her experience from the Land Claims Commission and on-the-ground experience in the Eastern Cape. Jayne has been responsible for the compilation of a database of materials available to support biodiversity conservation education in the CFR. Jayne discusses the programme with Rob O'Donoghue and Trevor Sandwith.*



## The EnviroLearn portal

*The Department of Education has set up an environmental education Internet portal, enhancing access by schools to environmental information and learning activities. [www.envirolearn.org.za](http://www.envirolearn.org.za).*

resource managers and to draw on the rich stores of biodiversity information being compiled through C.A.P.E., for example by the BGIS Unit (Chapter 7.5). Closer collaboration can enhance both the relevance of conservation education programmes, and the ability of researchers and resource managers to communicate with the public.

Educational materials tend to be used most effectively when they are developed to support learning and action within the context of a programme, rather than when they are produced as an end in themselves. People intending to develop materials should consider the context in which they will be used and in some cases may need to help people to use the materials. A pilot phase is also recommended in order to refine the resource materials through observing them in use.

The audit noted that people wanting to develop resource materials for schools must take the requirements of the curriculum into account. The fact that the new National Curriculum provides many environmental learning opportunities should encourage environmental organisations to identify where they can most usefully support learners and teachers with information and active learning opportunities.

## What have we learned?

- *One of the principles upon which the new National Curriculum in South Africa is based is to promote a healthy environment, as defined by the Constitution. All learning areas provide opportunities for environmental learning, and conservation agencies need to explore how they can best use these opportunities to work with schools.*
- *Simply “raising awareness” about environmental issues like biodiversity loss is not enough; it tends to lead to a sense of fear and disempowerment. Learning through doing enables people to become aware and learn while doing something practical about these issues.*
- *Once-off education projects have limited value; in order for education processes to be sustained and effective, they need to be embedded within institutions.*
- *For conservation agencies to be effective, they need to make education an integral part of their core business.*
- *To support local action, locally relevant information is necessary. Conservation agencies can help to adapt generic materials for local use.*



*Heila Lotz-Sisitka heads the Rhodes University Environmental Education for Sustainability Unit. With a background in participatory educational materials development, she has been a leading figure in establishing environmental education in Curriculum 2005 and the National Qualifications Framework in South Africa. Her research interests include Curriculum Policy Research, course accreditation within the National Qualifications Framework, environmental education in industry and participatory approaches to adult learning.*



## PROFILE

### Andy Gubb

Andy Gubb provides leadership for the Western Cape Branch of the Wildlife and Environmental Society of Southern Africa. He has championed the role of NGOs, not only as advocacy organisations, but more recently, as effective project implementers. Andy has not been afraid to take on even the most powerful adversaries when the principles of environmental justice or sound decision-making are at stake. It has largely been under his influence that the membership of WESSA has been effective in a range of programmes, including EcoSchools, CoastCare, Working for Water and many “Friends” groups that undertake local environmental action programmes. A willing and active participant in the many C.A.P.E. structures, Andy provides a critical and constructive voice in CFR conservation circles.





## 6.2 The children of C.A.P.E.

### (i) Conservation education in the City of Cape Town's nature reserves

Politically and administratively, the City of Cape Town has been in a state of transition for over a decade. Separate municipalities have been welded into a UniCity, and elected representatives and managers have come and gone. Despite the ongoing belt-tightening a, it is noteworthy that a

number of the reserves have managed to make conservation education a priority, and have made considerable and effective progress.

#### Making a plan for education

In 2004 an evaluation of conservation education programmes in four nature reserves revealed that, despite a severe shortage of nature conservation posts within the City, one reserve had chosen to dedicate one of its two conservation positions full-time to education. In another reserve, the Friends group had made education a priority, and appointed a full-time education officer plus a part-time assistant to run their well-equipped resource centre. The managers and friends of these urban nature reserves know that education capacity is essential in order to enhance access to, and support for, these open spaces in the midst of densely populated suburbs.

The reserves that participated in the survey, Helderberg, Rondevlei (Chapter 2.3), Tygerberg / Durbanville and Zandvlei Nature Reserves, are not the only ones offering education programmes. Cape Flats Nature (Chapter 2.3) co-ordinates programmes at four small natural areas, a Friends group is active at Rietvlei, and the Blaauwberg Conservation Area (Chapter 2.3) appointed an education officer in 2005.

At Zeekoevlei Nature Reserve, a non-profit Trust runs the Zeekoevlei Environmental Education Programme (ZEEP), employing five staff members plus international volunteers to offer high quality, low-cost three-day programmes for schools and community groups from the Cape Flats. Participants have the unique experience of spending one of the two nights in a bush camp at Rondevlei, the only wetland in Cape Town with resident hippos. The educators provide environmental programmes for schools that are relevant to the curriculum and can custom-design programmes that include life-skills, leadership and health education.

#### Sharing across the City

With the formation of the UniCity and the planning of a Biodiversity Network (Chapter 2.3), the opportunity exists to build on the efforts of these nature reserves, and to develop a more integrated approach to conservation education across the network of natural areas in the City.

## Transforming young lives at Zandvlei

*Zandvlei, which enters the sea at Muizenberg on the False Bay coast, is one of the most important functioning estuaries in the CFR. The Zandvlei Trust is an NGO that has been taking a keen interest in the conservation of the vlei since 1988. In partnership with the City of Cape Town, which manages the nature reserve, the Trust started an education and outreach programme in 2002. In only three years, school visitor numbers have grown from 300 to more than 2000 per year, with most children arriving either on foot from local schools or by train.*

*The Zandvlei Trust has a special relationship with three local schools – children from Lavender Hill and Steenberg have formed environmental clubs and visit the reserve regularly. The club from Zerilda Park Primary has been visiting every month for more than five years, and these experiences have had a profound effect*

*on some of the learners. Erika Foot, the manager of Zandvlei Nature Reserve has experienced the transformative impact of conservation education on one young learner, Giovanni, who started visiting Zandvlei in Grade Five, a number of years ago: “He became so interested in the environment that he would take bird books out of the library on weekends. He developed his own knowledge and shared it with others. Giovanni often gets a group of children together during the school holidays and takes them on guided tours of the reserve.”*



Giovanni with a leopard toad.



As part of the evaluation process in 2004, the education officers participated in an “Educators’ Week” during which they visited one another’s centres, shared programme ideas and materials, explored new opportunities and developed common procedures and systems. Having worked fairly independently and in different contexts, the education officers had much to learn from the approaches of their peers, and the week was an eye-opener in terms of what different people and centres had to offer. They left determined to make Educators’ Week an annual event.

### Benefiting from biodiversity

The City’s network of nature reserve is ideally placed to serve the people of Cape Town and provide access to a wide range of natural areas and biodiversity, from wetlands and coastal areas to fynbos and renosterveld. Small reserves scattered throughout the metropolitan area mean that, in theory at least, most communities can enjoy the recreational, educational and economic benefits of biodiversity literally “on their doorstep”. This reduces the cost of transport and can serve to enhance the sense of local ownership of these natural areas by neighbouring communities. However, it is generally only those natural areas that have adequate staff and basic facilities that are truly accessible to people. In a society where most people see the bush as a hazardous place where people are in danger, having biodiversity on your doorstep may not necessarily be seen as an advantage. It can take as little as access control and clean toilets to start turning a natural area into a community asset rather than a liability.

Despite limited staff, the nature reserves in the City that have education officers offer an impressive range of services, including educational visits for all ages from pre-school to the elderly, environmental clubs, overnight camps, teacher workshops, an annual environmental Olympiad, and support for school projects. The four education officers who participated in the evaluation engage with about 20 000 people each year between them; that’s 20 000 opportunities to make these natural areas and their biodiversity more meaningful to neighbouring communities and visitors.

A vision worth cultivating for the City’s network of nature reserves is to make



quality biodiversity experiences accessible to all neighbouring communities, and that every learner in Cape Town should visit a City nature reserve at least once during their school career. With the nature reserves recently having amalgamated with the environmental planning department in the City of Cape Town, it may be time to start developing a more co-ordinated approach to conservation education within the City’s Biodiversity Network.

## What have we learned?

- *Conservation education programmes in local nature reserves are helping the City of Cape Town to achieve a key objective in its Biodiversity Strategy: the empowerment of the citizens of Cape Town with regard to biodiversity issues in order to effectively share, own and take collective responsibility for the City’s exceptional biodiversity resource.*
- *Conservation education in the City of Cape Town’s nature reserves could be managed as an integrated programme. This would increase co-ordinated planning and reporting, analysis of the overall effectiveness of programmes, and opportunities for staff to collaborate to address issues of common concern (e.g. visits from township schools).*
- *The majority of groups visiting the City’s nature reserves for education programmes are from areas close to the reserves; in addition to communities benefiting from their neighbouring reserves, the reserves also benefit from greater support from their neighbours.*
- *Conservation education programmes in natural areas need to provide more opportunities for active learning in order to enhance not only environmental literacy, but also action compe-*





## NVT Mission

*To maintain the long term environmental integrity of Nature's Valley and surrounds by becoming proactively involved in issues that impact on the future of the area.*

tence (the will and ability to take action) in response to understanding of environmental issues and risks.

- The new National Curriculum, with its emphasis on the development of skills and its foundation in principles of a healthy environment and social justice, can guide the development of relevant, innovative education programmes in urban nature reserves.
- The appointment of a full-time education specialist would provide needed guidance and support for education officers in the City's nature reserves and improve career opportunities.
- Because senior management required education officers to report on monthly visitor statistics only, it appeared that they had little interest in programme content or quality.
- Most of the education programmes in the City of Cape Town's nature reserves depend on partnerships with other organisations (e.g. Friends groups, clubs, Trusts and environmental organisations).

### (ii) Nature's Valley Trust

Nature's Valley is a small coastal village lying alongside the Groot River estuary, just east of Plettenberg Bay on the southern Cape coast. Entirely surrounded by the Tsitsikamma National Park and Marine Protected Area, the village attracts residents and holiday-makers who appreciate its natural beauty and tranquility.

In December 2000, a group of local families who were concerned about the possible impacts of inappropriate development on the area, launched a community initiative to proactively maintain the environmental integrity of Nature's Valley and its surrounds. The Nature's Valley Trust (NVT) now takes the lead in mobilising an environmentally aware community, promoting appropriate and sustainable development in the area, and minimising negative impacts on the environment. Its energetic members have raised funds, formed partnerships and taken on a num-



*Julie Carlisle, project manager of Nature's Valley Trust, has been involved in projects such as the re-introduction of the Brenton Blue butterfly to Nature's Valley, raising awareness about threats to the Salt River in The Craggs near Plettenberg Bay (home to unique aquatic insect species probably dating back to the ancient continent of Gondwanaland) from a number of proposed new property developments, and the establishment of the Salt River as an "outdoor classroom" in Nature's Valley.*

ber of projects to conserve and restore their natural environment.

### Bring back the Brenton Blue!

Just how far the community is willing to go in their efforts to restore their natural environment is demonstrated in their project to "Bring back the Brenton Blue". This critically endangered butterfly, the emblem of NVT, was found in the valley until the 1980s. Unfortunately, it lived exactly where most people wanted to build their houses—in the coastal dune fynbos between the estuary and the forest. Fortuitously, right in the middle of the residential area of Nature's Valley, a small area of coastal dune fynbos still remains. Without regular veld fires, the fynbos vegetation had become very old and the butterfly's host plant (*Indigofera erecta*) could no longer be found. After considerable negotiation with neighbours, NVT organised a controlled burn in this remnant patch of fynbos! In early summer of 2005, hand-reared butterfly larvae were carefully placed on healthy specimens of the regenerated host plant; the community now eagerly awaits the emergence of the first Brenton Blues in Nature's Valley in about 25 years.

### Children's routes through Nature's Valley

The diversity of natural ecosystems in and around Nature's Valley is remarkable, and NVT has been making sure that





The Natures Valley Trust provides children from local schools and holiday visitors alike with exciting opportunities to experience and protect their environment, including coastal monitoring.

the “little people” of the valley have fun exploring them. Drawing on her storytelling and design skills, NVT Project Manager, Julie Carlisle, has created fascinating “outdoor classrooms” for children of all ages, complete with resource booklets and activities.

The Hobbit Trail wends its magical way through a tiny patch of indigenous forest; Billy (the Brenton Blue butterfly) leads children on a journey through the Fynbos Reserve; and the Treasure Route opens their eyes to unexpected finds in the local botanical garden. Using WESSA’s “Adopt a Beach” materials (Chapter 4.3), young people from two local schools regularly monitor the beach and rocky shore; and the Jurassic Trail draws attention to unique and ancient invertebrates recently discovered in the Salt River.

Julie explains that developing outdoor classrooms has enabled NVT, which lacks the staff or resources to visit schools, to make the diverse habitats of the valley accessible and interesting to teachers, learners and families. While having fun in beautiful surroundings, children gain a deeper insight into these sensitive habitats and learn to think critically about actions that impact negatively on these environments. The outdoor classrooms are also having an impact on the community as a whole, with parents reporting that their children are sharing with them what they have learnt and experienced.

During 2005, four Grade Eight learners from The Craggs Primary School impressed audiences at both the C.A.P.E. Partners’ Conference and The Fynbos Forum with a play they had written about the Brenton Blue butterfly after a class



Ashby Prins, Brigette Alexander, Ashleigh Solomons and Nathan Windvogel from Craggs Primary presented their own play on the Brenton Blue Butterfly at the C.A.P.E. Partners’ Conference.

visit to Nature’s Valley. It showed not only how much they had learnt about the environment in the Fynbos Reserve outdoor classroom, but also that they were willing to advocate its conservation. “Never underestimate a child’s ability to absorb information and reason through



## Weird, wonderful and VERY old!

*The Salt River near Nature’s Valley is a unique river system. A few years ago, surveys revealed that it is home to a number of very unusual aquatic insect species, most of which had not yet been described by scientists. These insects seem to be related to species that lived before the super-continent Gondwanaland broke up, and Africa separated from South America, Australia and Antarctica. Some of these insects were so unusual that scientists had to create new groups (genera) in order to classify and name them.*

*Ongoing developments in the Salt River catchment pose a very real threat to the quantity and quality of water in the river, and to the survival of these strange invertebrates. NVT has raised funds to commission a survey to monitor the health of the river, and a stakeholder engagement process to produce management guidelines for river users.*



Advocate Naledi Burwana-Bisiwe hands over a C.A.P.E. Recognition Certificate to Julie Carlisle for the project work being undertaken by the Nature's Valley Trust.

action, or to critically look at his or her environment," Julie cautions. "Children have an enormous capacity to make a difference and to raise awareness in their own communities."

### Seeking tangible benefits from conserving nature

People who live in the area are not only interested in the Salt River because of its strange insects, but also because this small river supplies The Craggs with water. Plans to build a low-cost housing development, Kurland Village, in the catchment of the Salt River resulted in concerns about possible impacts on river flow and water quality. As an "interested and affected party", NVT participated in meetings to discuss the environmental impacts of the development. Misgivings about the quality of the environmental management plan drove a wedge between the Nature's Valley and Kurland Village communities, and it soon became clear that something needed to be done to address the misunderstandings and foster more positive relationships between these neighbouring communities.

Adopting a 'triple bottom line' approach has helped the communities to move beyond the stage where focusing on their separate interests left them vulnerable to political manipulation by the developers. They have worked together to develop a project that both raises awareness of the value of the natural environment and contributes towards local job creation.

NVT invited 18 people from the area who are part of the CoastCare programme to become accredited Tsitsikamma Eco-Guides, providing them with an opportunity to earn an income from sharing the Nature's Valley environment with visitors. They appointed an accredited company to run a six-month eco-guiding course focusing on various aspects of local natural history and culture, plus training in small business development and marketing. SANParks is a partner in this project and provides the office space from which the trainee guides can operate. The training experience is very practical, with the students participating in market research and the development of a business plan, and obtaining practical experience as "development guides" during the December school holidays. Once qualified, the Eco-Guides will be able to earn an income from conducting interpretative trails in the forest, fynbos and along the coast, as well as specialist birding and cultural trails.

This project aims to demonstrate to both visitors and residents of Nature's Valley and Kurland Village that when natural ecosystems are conserved, people benefit. By ensuring that the Kurland Village development does not negatively impact on the sensitive Salt River ecosystem, not only will the river be more likely to supply sufficient clean water to meet local needs, but the Eco-Guides will be able to earn an income from introducing people to this and other unique ecosystems. This innovative response to a conflict situation promises to address not only concerns about biodiversity conservation and local economic development, but also to contribute to better relationships between neighbouring communities in this part of the Garden Route.



Brenton Blue Champs.



### 6.3 Working with the educators

#### (i) Ushering in the United Nations Decade of Education for Sustainable Development (UNDESD)

The 1992 Earth Summit in Rio de Janeiro marked the beginning of an unprecedented effort to understand and work toward achieving sustainable development – addressing human needs holistically by integrating environmental, economic and social goals. The World Summit on Sustainable Development (WSSD) held



in Johannesburg in 2002 highlighted the vital role of education, not only in building awareness of the need for sustainable development, but in fostering the necessary changes to make it a reality at all levels. Even so, sustainable development is still a foreign concept to most people, and we generally lack the will and motivation to make the necessary changes in our lifestyles and actions. As a result, the global environment continues to deteriorate. The United Nations therefore appointed UNESCO as the lead agency to promote Education for Sustainable Development during the decade 2005-2014, creating an opportunity to rally the support of people at all levels to learn to live in a way that sustains all life on earth.

The **United Nations Decade of Education for Sustainable Development (UNDES)** was officially launched at United Nations Headquarters in New York on 1 March 2005, by UNESCO's Director General Koïchiro Matsuura. Recognising the significance of this international initiative, the EE Friends, a network of environmental educators based in Cape Town (Chapter 7.6) approached the Western Cape Department of Environmental Affairs and Development Planning (DEA&DP) to launch the Decade in the Western Cape at the Sustainable Development Conference in June 2005. MEC Tasneem Essop gave her full support and consequently the Western Cape became the first province in South Africa to launch the Decade. This took place on 20 June 2005 at the International Convention Centre, with the MEC for Education, Cameron Dugmore, officiating.

In the Western Cape, environmental educators have seen the UNDES as an opportunity to initiate new partnerships and programmes:

- The City of Cape Town hosted its first Youth Environmental Symposium during World Environment Week 2005, providing learners from Grades 7 to 12 with a platform to share their environmental concerns, dreams and projects. Learners from more than 20 schools presented their posters and displays, computer presentations, videos and environmental dramas on a range of issues affecting them and their City. In response to what they had heard in the presentations, they participated in discussions and drew up a list of recommendations for the Junior Mayor.

## Objectives of the UNDES

- *Enhance the profile of the central role played by education and learning in the common pursuit of sustainable development;*
- *Facilitate networking, exchange and interaction among stakeholders;*
- *Provide an opportunity to refine and promote the vision of, and transition to, sustainable development – through all forms of learning and public awareness;*
- *Improve the quality of teaching and learning in ESD;*
- *Develop strategies at every level to strengthen capacity in ESD.*



- EnviroEds and SEED (6.3 iii), with the support of the City of Cape Town and in collaboration with six environmental organisations, worked with the Western Cape Education Department (WCED) to pilot an environmental education course for teachers at the Cape Teaching Institute (CTI), the WCED's in-service professional development college. Fifty teachers participated in the five-day course "Enabling Environmental Education in the Intermediate Phase". The course enabled teachers to work closely with environmental service providers to interrogate the National Curriculum Statements, identify environmental learning opportunities, research their issues



The City of Cape Town celebrated the start of the United Nations Decade on Education for Sustainable Development by launching a Youth Environmental Symposium and an environmental education course for teachers at the education department's Cape Teaching Institute.



## From the official UNDES D launch address ...

*At the heart of the UNDES D is a simple idea with complex implications; after being taught over past centuries to live unsustainably, we now have to learn to live sustainably ... Ultimately, the test of the Decade of Education for Sustainable Development will be its capacity to foster educational change and improvement so that, in learning to live sustainably, we learn to live together in peace and in productive harmony with our environment. Education has a key role to play in addressing challenges like poverty, wasteful consumption, environmental degradation, urban decay, population growth, gender inequality, health, conflict, and the violation of human rights. Education must help us to acquire the values, attitudes, capabilities and behaviours essential for meeting those challenges.*

*Koïchiro Matsuura,  
Director-General of  
UNESCO  
1 March 2005, UN  
Headquarters, New York*

in depth with the help of the service providers, and develop exciting lesson plans. The programme served not only to strengthen environmental learning in the curriculum but also to enhance networking between environmental service providers and the WCED.

- The WCED, DEA&DP and CapeNature have joined forces in a pilot programme to strengthen environmental education in the schools in the southern part of the City of Cape Town. By working with environmental organisations that support schools in this part of Cape Town, the WCED is trying to improve the co-ordination of environmental education and ensure that all schools in the district are responding to the imperatives of the UNDES D.

The Decade is an opportunity to integrate the principles of sustainable development into a multitude of different learning situations. Through these initiatives, organisations and individuals can be catalysts for action, contributing to the goals and objectives of the Decade and participating actively in the global movement for sustainable development.

For more information, see the UNESCO website: <http://portal.unesco.org/education/en/ev.php>

### (ii) Table Mountain National Park: environmental experiences programme – resourcing educators

The educational value of protected areas is self-evident. They are important heritage sites – part of the birthright of every citizen to know and enjoy. They are also magnificent “outdoor classrooms” where students of all ages can experience, investigate and respond to a multitude of learning opportunities. The new National Curriculum for schools promotes active environmental learning in all areas of learning, giving teachers and learners more reasons than ever before to get to know their local heritage sites.

Ironically, while the need for education support in protected areas has been increasing, declining government spending on conservation agencies has resulted in a number of organisations shedding their education departments. When the Table Mountain National Park (then the Cape Peninsula National Park) was



*Ally Ashwell has specialised in developing resource materials for conservation education. She is seen here with Trevor Farr who has been one of the driving forces in CapeNature's Youth Development programme that incorporates conservation education approaches. Collaboration among environmental education practitioners is a hallmark of the EE friends network, who work with people from all walks of life. Whilst common principles of environmental education are applied with diverse stakeholders, resource materials are customised to meet a particular need.*

established in 1998, education was not a high priority and the decision was made to develop resource materials for teachers and to leave it up to them to organise their own visits to the Park. A wonderful resource pack was developed, covering topics as diverse as the history, ecology and management of various sections of the Park. It soon became clear that this was not enough; teachers needed guidance to become familiar with the TMNP, to work through the materials and to develop appropriate fieldwork lessons for their learners.

In 2004, the TMNP made a concerted effort to make the Park more accessible to Cape Town schools through their Environmental Experiences programme. A significant first step was entering into a formal agreement with the Western Cape Education Department by signing a Memorandum of Understanding. This enabled the education officers to work closely with curriculum advisors in the four education districts in Cape Town to develop a professional development programme for teachers. Because teachers were at that time being introduced to the new National Curriculum, an important aim of the workshops was for teachers to develop their own lessons based on the curriculum that incorporated a visit to the Park. Teachers participated in three workshops and a field trip to the Cape of Good Hope, sharing ideas and inspiration





*Christa Botha, Education Officer with Table Mountain National Park, perceives that turning community attitudes away from poaching towards conservation is a slow process and that children are the key to achieving this aim.*

with colleagues from other schools in their district. Each teacher who completed the course was then eligible to bring a class to the Park on the brand new Table Mountain Bus.

For many of the teachers, the field trip during the course was their first visit to the TMNP. It is therefore not surprising that, despite the workshops, many of these teachers still lacked confidence to conduct their own lessons in the Park. TMNP therefore made additional support available in the form of a group of Park volunteers. While the teacher is responsible for preparing and presenting the lesson, the volunteer (who may have only introductory knowledge of the curriculum) knows the area well and can welcome the group, answer questions about the TMNP, recommend an appropriate route and assist the teacher where necessary.

Through the Environmental Experiences programme, about 100 teachers from all over Cape Town were introduced to the TMNP. The Park is committed to keeping in touch with these educators and providing them with ongoing opportunities to get to know new sections of the Park, find out about other aspects of the environment and explore different approaches to learning.

#### Table Mountain National Park: Working together for sustainable communities

The Table Mountain National Park (TMNP) is responsible for managing one of the richest areas of marine and coastal



biodiversity in South Africa. Despite its small area, about 43% of all the country's marine species are found around the Cape Peninsula. The pressures on the marine environment from development, pollution and over-exploitation are enormous, not to mention the impact of illegal poaching of abalone (perlemoen) and rock lobster.

In addition to trying to address the poaching problem through law enforcement (Chapter 2.2), the TMNP also recognises the need to educate the public about the impacts of poaching and to encourage communities to live more sustainably. Education Officer Christa Botha understands that there are no quick-fix solutions to this problem: "To change behaviour towards poaching in a community that has been using this resource for years is a very sensitive and slow process. The process of learning and changing is continuous and will need to be sustained over years to become a part of everyday life."

Because many of the people arrested and fined for poaching live in Ocean View, the TMNP decided to make a start by involving children from this community in a Sustainable Living pilot programme during Marine Week 2005. Christa invited 90 children from the two primary schools in Ocean View to visit the TMNP's marine education centre at Bordjiesrif at the Cape of Good Hope. During their visit, the children built an understanding of what



The Table Mountain National Park encourages teachers to bring learners to the Park, providing training, resource materials, subsidised transport and volunteer assistance.





the concept of sustainability means to them, and spent time exploring some of the most beautiful rock pools on the Cape Peninsula.

Christa was surprised to find that most of the children had very little knowledge of the marine environment, despite living in a community where many people make a living from the sea. She realises that it will take time to address this: “Environmental learning is a continuous life-long process and schools need guidance and support from environmental organisations.” The TMNP therefore intends involving the teachers from Ocean View in the Park’s teacher development programme next year, and introducing the schools to other environmental organisations like SEED, Kirstenbosch and Eco-Schools, which can provide ongoing support for environmental learning.



## What have we learned?

- *In the new National Curriculum, environmental health is a fundamental principle and there are numerous environmental learning opportunities in all learning areas. The curriculum therefore provides environmental organisations with a basis for productive collaboration with schools.*
- *For environmental organisations to work productively with schools, it is advisable that they work through the Department of Education and become conversant with the curriculum and the realities in schools.*
- *Many teachers lack the site-specific knowledge and fieldwork skills to effectively integrate visits to heritage sites into their learning programmes. It is not enough to produce learning support materials and expect teachers to use them.*
- *Building the capacity of educators to integrate knowledge of, and visits to, natural and cultural heritage sites into their learning programmes is a developmental process, which cannot be achieved through once-off interventions. Ongoing engagement is necessary to build knowledge, skills and confidence.*



Conservation education activities apply sound education theory to learning in action. Addressing the needs of children and adults alike, the scope and depth of activities can be customised to meet learners’ needs.

- *Under-investment in education capacity in conservation organisations militates against the development of substantive and sustained programmes with education stakeholders. For example, in the case of the Environmental Experiences programme, valuable lesson plans developed by teachers in 2004 have not yet been published.*
- *By collaborating closely and strategically with other environmental organisations and projects, it is possible to provide schools with a framework and sustained support to enable environmental learning and action.*
- *Addressing critical environmental issues requires both short- and long-term approaches; law enforcement needs to be complemented by education and sustainable livelihood opportunities.*
- *The imperative to live more sustainably is not just about what others should be doing; it is primarily a challenge that applies to each one of us. The TMNP Sustainable Living project urges us to reflect on the environmental and social impacts of our own lives, and to engage with the individuals and organisations that can guide and support us to live more sustainable lives.*

### (iii) Rediscovering indigenous food plants - Schools Environmental Education and Development (SEED)

On the Cape Flats, the NGO SEED (Schools Environmental Education and Development) is introducing an innovative angle to their Education-through-Permaculture programme. Co-ordinator of their “Curriculum for Growing” project, Kirsten Zsilavec explains: “SEED is involved in establishing food gardens using common exotic food plants. Because we are experiencing a loss of indigenous plants and indigenous knowledge, I thought it would be an interesting challenge to plant a few indigenous edible plants and see what the learners thought about them as a potential food source.”



Few people realise that most of the plants they eat originated in other parts of the world. While making children aware of this fact, SEED decided to introduce them to a few unusual indigenous food plants. The plants would give SEED the opportunity to introduce discussions on indigenous knowledge systems – and give the learners a good (edible) reason to value indigenous flora!

The “edible fynbos” project started off as a pilot project in 2005 and will continue to be refined through implementation in 2006. For Kirsten it has been a surprise to discover just how few edible plants the fynbos biome has to offer, and how little information is available on the subject. Because of the ever-present risks of poisoning, it is important to be absolutely sure about the plants chosen, how to prepare them and what information to present to the learners. Once a reliable list has been compiled, SEED will be able to introduce these species into its permaculture plantings, enhancing both the culinary and biological diversity of their food gardens. Being indigenous, these plants may also demand less water and fertiliser than the more commonly eaten exotic species.

Kirsten Zsilavec, Co-ordinator of the SEED “Curriculum for Growing” Project, has identified a paucity of information about indigenous knowledge in the use of fynbos plants and hopes that the project will help fill this gap and raise awareness about the heritage of the past. This project has in a very practical way illustrated to Kirsten why the fynbos biome was, in the past, able to support only small, relatively nomadic populations of San hunter-gatherers and Khoi herders. “There are not that many edible plant species, nor are they available throughout the year”, she says, suggesting that people may have migrated in response to the availability of food plants, as much as in response to the movements of game animals.

Kirsten makes a final, rather poignant, observation: “We have lost an incredible amount of indigenous knowledge ... and it is difficult to ‘trust’ the little we have, since there are very few sources to verify what we think we know to be right.” Hopefully this project will retrieve and consolidate much of this knowledge, and kindle a sense of respect for the people who once lived far more sustainably than we do today in this biologically diverse but food-scarce environment.



Rocklands Primary School learners were each given a different name of an indigenous edible plant and then proceeded to look for “their” plant in the school’s food forest.

#### (iv) Biodiversity, education and sustainability at Kirstenbosch

Generous funding from the National Lottery has enabled the Gold Fields Centre at Kirstenbosch National Botanical Garden to undertake an exciting and comprehensive education programme involving teachers and learners from schools in disadvantaged areas of Cape Town. Appropriately, in the wake of the transformation of the National Botanical Institute (NBI) into the South African National Biodiversity Institute (SANBI), this three-year project (2005-2007) focuses on Biodiversity and Sustainable Living.

Each year, this sponsorship enables Kirstenbosch to invite 50 schools to bring 180 learners each to the Garden for a fully-subsidised educational excursion. Determined to make the most of this opportunity, the Kirstenbosch education officers delved into the new National Curriculum documents looking for opportunities to make the programme as relevant as possible to schools. Thanks to the strong environmental focus of the curriculum, they were able to develop lessons on biodiversity and sustainable living to suit



Zwai Peter worked as an educator for Working for Water, building both understanding and know-how to support restoration programmes.





The Kirstenbosch courtesy bus.



George Davis uses video technology to capture and communicate conservation messages involving people and action particularly in urban areas.

The sustainability game allows educators to create their own definition of sustainable development.



five different grades at primary and high school levels. Dedicated education officers welcome the learners and provide an active learning experience in the Garden that is fun, challenging and memorable.

While the garden-based lesson stimulates a great deal of interest in biodiversity and sustainable living, it is not enough to ensure that learners engage fully with these topics. Kirstenbosch therefore also invites the educators of these classes to participate in a Teacher Professional Development programme that explores these two issues in greater depth. Over the course of three workshops, educators conduct a school environmental audit, develop an in-depth understanding of terms and concepts, and work on their own lesson plans.

Roleen Ellman is the education officer responsible for this part of the programme, while Sally Hey coordinates the lessons in the Kirstenbosch Garden. Roleen explains that they are trying to equip educators to continue exploring these topics with learners when they return to school after their visit to Kirstenbosch. "We are building the capacity of educators to engage with environmental education in all the learning areas," she says. "We focus specifically on the topics of 'biodiversity' and 'sustainable living' and encourage educators to

conduct lessons on these topics in their classrooms, school gardens, surrounding communities or local nature reserves."

In order to emphasise to schools that biodiversity and sustainable living are locally relevant issues, the Gold Fields Centre has especially invited schools situated close to protected areas on the Cape Flats to participate in the project. They have also asked Cape Flats Nature (Chapter 2.3) to provide follow-up support to help educators who have participated in the workshops at Kirstenbosch to develop and conduct their own lessons at Edith Stevens Wetland Park, Wolfgat Nature Reserve or the Macassar Dunes.

While 'biodiversity' and 'sustainable living' may be new topics in the curriculum, they are issues that feature prominently in the media and everyday discussions. Roleen was therefore surprised to discover, through the results of an audit that she conducted, that almost 90% of the educators involved in the programme in 2005 either had no understanding of these terms or only a vague idea of what they meant. Despite the importance of these issues and the fact that the National Curriculum requires educators to teach about them, most educators had never actually included these topics in their lessons.

The implications of this lack of environmental literacy are disturbing. Without the basic vocabulary or understanding of concepts, a large proportion of educators and, presumably, huge numbers of learners, are currently unable to participate in debates regarding biodiversity and sustainability. Without even introductory knowledge of these issues, it is unlikely that people will be concerned about them or indeed have the will or the ability to make informed decisions about sustainable living.

The Biodiversity and Sustainable Living project has proven not only to be a response to the need for more education around these issues; it has also served to demonstrate just how serious that need is. Through its comprehensive response to the need for greater environmental literacy amongst educators and learners, and its involvement of partners, Kirstenbosch is playing a vital role in ensuring that the people of Cape Town understand environmental issues and are prepared to make the choice to live more sustainably.



### (v) Garden Route Environmental Education Network (GREEN)

Environmental education is alive and well in schools in the southern Cape. Teachers and learners from about 40 schools from Mossel Bay to Plettenberg Bay, and as far inland as Oudtshoorn, regularly participate in environmental projects, workshops and events with organisations such as WESSA, the Southern Cape Herbarium and Garden Route Botanical Garden, CapeNature, SANParks and SKEP. Helping to keep the momentum going is Lorraine McGibbon, co-ordinator of the Garden Route Environmental Education Network (GREEN). Funded by WESSA Southern Cape since 2003, with office space provided by the Garden Route Botanical Garden Trust, GREEN organises and supports a wide range of environmental education activities, including Eco-Schools (Chapter 6.1 i), Adopt-a-Beach (Chapter 4.2), regular workshops with teachers, Arbor Day events and the annual Schools Environmental Expo in George.

#### The Schools Environmental Expo

The Schools Environmental Expo has come a long way since 2001. It was initiated in response to concerns expressed by local schools that could not afford the cost of transport to attend the annual Wild Flower Show at the George Museum. So that year, the Southern Cape Herbarium took their display of southern Cape biomes to the Conville Community Centre and organised presentations and activities for visiting classes. In 2001, only four school projects were displayed; three years later the 14 schools from George and Mossel Bay that participated had to limit their displays to four metres of wall space and two metal tables each so that everyone could fit into the hall. Each year teachers decide on a theme for the Expo and Lorraine invites suitable environmental organisations to exhibit. The Expo provides teachers with a focus for setting environmental projects, and planning starts early in the year with a teachers' workshop in February to help teachers develop and schedule projects that learners will present at the Expo.

The quality of projects and presentations has improved noticeably over the years. This is due in part to schools learning from one another, but support from GREEN cannot be underestimated. Lorraine pays special attention to helping

teachers and learners prepare their projects. She visits the schools, provides information, helps to organise outings and guest speakers, and ensures that project planning is on track. Schools book to visit the exhibitions and the learners who prepared the displays present their projects to small groups of visitors during their hour-long tours.

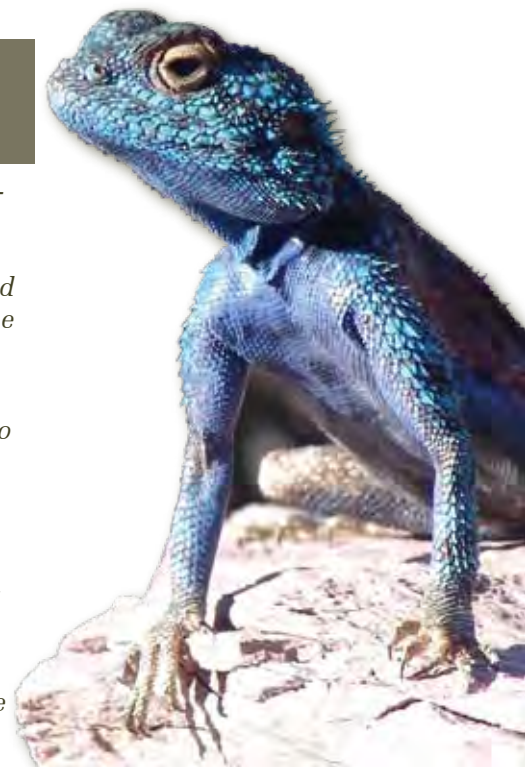
The annual Expo is an excellent opportunity for local schools to network with one another and with environmental organisations, and to share their ideas and achievements. It has helped to raise environmental awareness amongst teachers and learners, encouraged schools to learn more about the southern Cape environment and to investigate local issues, and strengthened environmental learning in the new curriculum. Visitors are amazed by the quality of environmental learning reflected in the learners' projects.



Each year, Southern Cape learners participate in an environmental expo held at the Conville Community Hall.

## What have we learned?

- *Having a dedicated environmental education networking position in the southern Cape has strengthened communication and co-operation between schools, the education department and environmental organisations.*
- *GREEN has contributed greatly to the professional development of teachers and the quality of environmental project work because of the developmental approach taken by the coordinator.*
- *The value to teachers and learners of a regular gathering like the Environmental Expo cannot be underestimated: it has a positive impact on many levels, from helping teachers to plan meaningful*





This team from the Baviaanskloof used theatre to convey their message about the importance of the Baviaanskloof mega-reserve, one way to catch and hold attention.



**T**revor Farr, CapeNature's Youth Development manager, appreciates the fresh perspectives and enthusiasm of students who attend the Youth Development Programme. He considers that their involvement has led to constructive transformation in attitudes of both managers within CapeNature and the broader community. He is seen here with Hettie Gets who anchors WWF-SA's Environmental Education Programme.

projects, to improving environmental learning, enhancing the quality of projects, and developing the confidence of learners. Having a dedicated environmental education networking position in the southern Cape has strengthened communication and co-operation between schools, the education department and environmental organisations.

- GREEN has contributed greatly to the professional development of teachers and the quality of environmental project work because of the developmental approach taken by the coordinator.
- The value to teachers and learners of a regular gathering like the environmental expo cannot be underestimated: it has a positive impact on many levels, from helping teachers to plan meaningful projects to improving environmental learning, enhancing the quality of projects, and developing the confidence of learners.

## 6.4 Youth development in CapeNature

CapeNature has a vision of establishing a "conservation economy" in the Western Cape, which entails making biodiversity conservation a key component of local economic development in the province. One of the ways in which the organisation is striving to achieve this is through youth development.

The first major initiative within CapeNature's Youth Development Programme took place during 2004/5 and was funded by the Umsobomvu Youth Fund to the tune of nearly R5.5 million. During that year, 72 young people were selected from an overwhelming 2 500 applicants to participate in an accredited National Resource Guardianship Certificate course.

Based at Driftsands, George or Vrolijkheid, the full-time students received accommodation, transport, clothing, food and a stipend. In addition to learning environmental and life skills, the students visited and had practical work experience at a number of Cap-

## Successful graduates

*Of the 72 students who enrolled in CapeNature's course, 65 graduated. 60% were later employed, 2% enrolled in learnerships, 5% started their own businesses and 8% took up volunteer positions.*

eNature reserves. The in-service training approach enabled them to apply what they were learning practically, and to develop experience and confidence.

The course was run by a project management team of ten people, comprising educators, managers and peer councillors recruited by Umsobomvu. CapeNature provided logistical support and the team reported to Trevor Farr, CapeNature's Youth Development manager. Although the project management team had limited conservation background, Trevor explains that they brought with them "people skills", which were essential to the developmental nature of the course.

Because the course was fully sponsored, CapeNature was able to attract people who might otherwise never have considered a career in conservation. The youth proved to be great ambassadors for CapeNature in their communities, sharing their knowledge and experiences of the organisation and biodiversity conservation with their families and friends.

The students brought energy and enthusiasm to CapeNature, as well as new perspectives. Their constant questions required staff members to look afresh at old assumptions and ways of doing things. "The programme was the start of real, constructive transformation; slowly and gradually we started to see a change in attitude and significant changes in management style," recalls Trevor. "What started as a training course and job creation opportunity stretched us far beyond what we had expected." The programme served to place youth development firmly on the agenda of CapeNature, elevating it to one of the organisation's key focus areas, which all staff members must report on.

Unfortunately, despite the success of the pilot project, funding has not yet been



forthcoming to continue the project, so CapeNature has been unable to implement the improvements recommended in the detailed evaluation of the pilot course. The organisation is involved in ongoing negotiations with Umsobomvu and other funders in an effort to secure the funding necessary for the next cycle of implementation. In the interim, CapeNature has been planning for the strategic roll-out of the programme in rural areas. They have identified possible learning centres for youth development and have drawn up a schedule of renovations that will commence as soon as funding becomes available.

## What have we learned?

- *The youth brought new energy, enthusiasm and passion into CapeNature and had a definite positive impact on the organisation.*
- *Implementing a youth development programme, especially for the first time, requires high levels of commitment, co-ordination and co-operation between the different staff members and service providers involved. For such a programme to succeed, it must have the full backing of management.*
- *It is very difficult to implement a programme demanding this level of commitment within a large and under-resourced organisation.*
- *In addition to providing job-related training, youth development programmes also need to take account of the social needs of students and provide general life-skills training to address the negative impacts of social problems in the students' communities.*
- *Full-time youth development programmes often require that students be paid a stipend. Administrative arrangements must be made well in advance to ensure that the organisation is able to pay students on time, particularly if such arrangements require changes to normal organisational policies.*
- *A lack of funding to continue the YSP after its pilot year resulted in*



Proud graduates of the first Youth Service Programme run by CapeNature.

*a loss of momentum; to repeat the course at a later date will require much greater effort than if the course could simply have kept going. Externally funded development projects that provide only short-term funding are problematic, as development is essentially a long-term process.*

- *Fundraising for major projects like the YSP requires a great deal of experience and project administration time (e.g. compiling proposals, monitoring and evaluating, reporting, ensuring publicity for funders, etc). Staff members who were appointed as nature conservationists are not always trained or skilled in these areas.*
- *The involvement of a cadre of youth in CapeNature had a profound effect on the staff, many of whom had not previously had to interact with youth and youth-related issues.*
- *CapeNature cannot employ all the graduates of their Youth Service Programme; the challenge is to work with other C.A.P.E. Partners to identify employment opportunities in advance, and to develop future courses accordingly.*



## Vrolijkheid student involved in partnership project



*Reginald Jantjies, nominated by the project management team as top student in CapeNature's Youth Service Programme in 2003/4, is now involved in an exciting project on Paarl Mountain. Partners in the project include CapeNature, the Table Mountain Fund, LandCare, the Department of Water Affairs and Forestry, the Drakenstein Municipality and local land owners. The project involves fine-scale biodiversity planning of this core lowland area, and Reginald is responsible for taking fixed point photographs and mapping invasive alien plants. He is also helping to educate land owners about the need to conserve biodiversity. The Table Mountain Fund is funding incentives to encourage landowners to commit to Stewardship agreements, while LandCare is helping land owners with alien clearing projects.*







strengthening institutions

*A vital component of the C.A.P.E. 2000 Strategy, which supports all the activities covered in previous chapters, is the strengthening of the many institutions responsible for biodiversity conservation in the Cape Floristic Region (CFR).*

*The C.A.P.E. Strategy (Chapter 1) provides the strategic framework that enables institutions in the region to align and co-ordinate their activities. Some organisations like CapeNature have used the C.A.P.E. Strategy as a model for developing their own strategic plans. In other cases, organisations have aligned project proposals with components of the C.A.P.E. Strategy in order to qualify for funding. The numerous inter-agency committees and task teams convened by C.A.P.E. also strengthen co-ordination and contribute to a more integrated approach to conservation management across the bioregion.*

*C.A.P.E. recognises that in order to build strong, capable institutions, all partners must have access to information and participate in relevant “knowledge networks”. Projects such as the C.A.P.E. fynbos i-Forum, BGIS, fine-scale planning and the development of a wetland inventory for the CFR are all helping to generate, collate and make available locally relevant biodiversity information. Many networks and forums also bring the people of the CFR together to share information and experience, and some key capacity building initiatives are contributing to more effective conservation management.*

## CHAPTER 7 Strengthening institutions

### 7.1 An enabling policy context for C.A.P.E.

The analysis of the root causes of biodiversity loss in the CFR (CFR) identified many issues, described in Chapter 1. Many of these have ultimate causes in economic policies and conditions that promote short-term exploitation without considering the long-term consequences of change. But at the heart of this problem are the prevailing legal and institutional arrangements in the country and the region. At the time of the development of the C.A.P.E. Strategy, there was no effective law for the conservation of biodiversity in the region; protected areas legislation was contained in a variety of statutes at both national and provincial levels; there was contestation of powers at national and provincial levels; and the land-use planning and development laws did not adequately provide for the integration of biodiversity priorities into spatial planning frameworks. This resulted in a reactive decision-making process that relied on environmental impact assessment on a case by case basis.

At the time that the C.A.P.E. Strategy was drafted, two processes that offered some respite to this situation were in progress, namely the promulgation of the World Heritage Convention Act that brought the World Heritage Convention into South African domestic law, and the establishment of a new nature conservation agency in the Western Cape. The World Heritage Convention Act offered an opportunity to assert the significance of the CFR internationally and to encourage an appropriate domestic response to secure its integrity through effective long-term management. The establishment of the Western Cape Nature Conservation Board offered the opportunity for a new vibrant statutory body, with responsibility for most of the CFR, to adopt the key interventions embodied in the C.A.P.E. Strategy as the basis for re-engineering conservation management in the region.

The C.A.P.E. Strategy recognised that policy and legal gaps, institutional fragmentation and a lack of co-operation among key management agencies was the cause of ineffective and inefficient management. At that time, the choices were clear, but the means to implement







the variety of options were less certain. For example, it was argued that the CFR was so important that it demanded a purpose-built institution such as a CFR Management Authority to convene and drive a programme that would effect change. Realising the impracticability of that option, it was conceded that there were so many institutional role-players that the only feasible alternative was to support the strengthening of a range of institutions to undertake their responsibilities in such a way that they would be aligned with the goals of the C.A.P.E. Strategy. Specific actions to address weaknesses in the legal and policy environment, to support organisational strengthening and to develop technical skills and capacity were therefore identified and promoted. At the same time, a need was expressed to investigate alternative arrangements for rationalisation and consolidation of functions in the future. Fundamentally, despite the weaknesses evident in the institutional framework, the programme has sought to strengthen existing insti-

tutions, rather than to seek alternative means to achieve programme outcomes. This choice is in the interests of institutional sustainability.

## 7.2 Establishing C.A.P.E.

### (i) Learning about institutional governance

As described further in Chapter 8, the key organisational response recommended by the C.A.P.E. Strategy was the development of an inter-agency Memorandum of Understanding (MoU) that would result in a co-operative framework for governing the programme. Its most profound effect has been the willingness of organisations to collaborate with one another in undertaking some of the most important interventions that are required by the C.A.P.E. Strategy. The C.A.P.E. programme has learned from and supports a number of initiatives that pilot inter-agency co-operation and therefore strengthen the institutional framework for

Two World Heritage Sites in the Cape Floristic Region. Robben Island commemorates the intangible triumph of the human spirit over adversity, and the history of banishment and reconciliation symbolised by the island and mainland. From Robben Island, Table Mountain stands as an icon of the Cape Floristic Region's World Heritage properties.





*Mohammed Valli Moosa, held the position of Minister of Environmental Affairs and Tourism of the Republic of South Africa from 1999–2004. He is an environmental leader who is passionate about democracy, sustainable development and freedom. An anti-apartheid activist, he was one of the key negotiators of the African National Congress during the drafting of South Africa's new constitution and the country's transition to a new democratic order. Moosa has won acclaim both in South Africa and abroad as a competent and insightful mediator, especially during the preparation process leading to the World Summit on Sustainable Development held in Johannesburg in 2002 and the Vth IUCN World Parks Congress in Durban in September 2003; both events were held in South Africa largely due to his initiative and effort. Valli Moosa was the first signatory of the C.A.P.E. MoU and has supported many aspects of the programme, not least of which was to pursue the agenda of legislative reform for the environment and for biodiversity.*

implementation. As these processes are ongoing, they are inconclusive, but offer many insights and experiences for implementing agencies and observers. Among these are:

- the development of legislative provisions for bioregional programmes by the National Department of Environmental Affairs and Tourism;
- the establishment of the South African National Biodiversity Institute;
- the ongoing management of the Table Mountain Fund;
- the establishment of the Western Cape Nature Conservation Board (Cape-Nature);
- the establishment of the Eastern Cape Parks Board;
- the mobilisation of implementation capacity by NGOs, e.g. the Botanical Society of South Africa and the Wildlife and Environmental Society of Southern Africa (WESSA);
- the exploration of interagency implementation programmes, including Working for Water, Ukuvuka and Working for Wetlands;
- the involvement of civil society in planning and decision-making, including the Table Mountain National Park Advisory Forum and the Department of Agriculture's Area-wide Planning process.

### (ii) The genesis of bioregional programmes

The C.A.P.E. Strategy noted that biodiversity conservation was promoted in a number of policies and laws, but for these to be effective, national legislation was required that would draw together and focus biodiversity conservation policies from different sectors. The then national Minister of Environmental Affairs and Tourism, Mohammed Valli Moosa, in introducing the C.A.P.E. Strategy, noted that the government's priority was implementation, to be guided by a National Biodiversity Strategy and Action Plan (NBSAP), and that because of its global significance and vulnerability to threat, the CFR would be a high priority in this plan. He noted further that the C.A.P.E. Strategy provided an important example of how the government would go about implementing its priorities. The National



*Caroline Gelderblom played a significant role in the development of the C.A.P.E. Strategy and in co-ordinating the activities of the Interim Co-ordinating Committee.*

Environmental Management: Biodiversity Act (Act No. 10 of 2004) and the National Environmental Management: Protected Areas Act (Act No. 57 of 2003) prepared by this Minister and promulgated since 2000, are evidence of government's commitment to the implementation of the C.A.P.E. Strategy, and of enabling other similar processes countrywide.

The Biodiversity Act provides for the management, conservation and sustainable use of biodiversity in South Africa. The legislation promotes an ecosystem and programmatic approach to the management of biodiversity, which takes into account the need for key social transformation and developmental goals to be met. It provides specifically for the preparation and adoption of a national biodiversity framework that will ensure an integrated, co-ordinated and uniform approach to biodiversity management by organs of state in all spheres of government, non-governmental organisations, the private sector, local communities, other stakeholders and the public. It also provides for the identification of bioregions, the preparation of bioregional plans and biodiversity management plans. The promulgation of this legislation is a significant milestone in South Africa's legislative reform process, in that it is the first time that biodiversity has been explicitly recognised, and that measures to secure an ecosystem approach to biodiversity management have been introduced in South African law. The Government has subsequently also completed a National Spatial Biodiversity Assessment, and the NBSAP. The National Spatial Biodiversity Assessment has, without doubt, benefitted from the world-class conservation planning that emerged





from the C.A.P.E. Strategy. The need for systematic conservation planning and the identification of explicit and measurable targets was asserted by these planning exercises. These have subsequently become requirements in law, as expressed in provisions regarding bioregional plans in the Biodiversity Act.

In the absence of national laws governing the implementation of bioregional conservation programmes, the more informal mechanism of the MoU entered into by key national and provincial ministries was used to give effect to this intention. This MoU (Chapter 8) provides legitimacy and authority for the programme. It is now necessary for the C.A.P.E. programme to undertake a transition where the bioregional priorities embedded in the C.A.P.E. Strategy are adopted as the key elements of statutory bioregional plans, and the interim co-ordination arrangements are formalised in terms of the Biodiversity Act.

### 7.3 A Focus on C.A.P.E. Partners



#### (i) The establishment of the South African National Biodiversity Institute (SANBI)

The promulgation of the Biodiversity

Act has resulted in the National Botanical Institute (NBI) becoming the South African National Biodiversity Institute (SANBI). The Act provides for the National Minister to mandate SANBI to advise him, *inter alia*, on matters pertaining to the identification of bioregions and the contents of any bioregional plans. In this way, biodiversity programmes that had their foundations in NGO-moderated planning exercises like C.A.P.E., have become part of the mainstream of environmental governance in South Africa. A new statutory agency has been mandated to nurture and expand the programme, and to ensure horizontal integration at both national and provincial levels, and vertical integration among implementing agencies at both levels. It remains for the regulatory provisions in the legislation to be prepared, and this could elicit a strong reaction across sectoral interests as the

power of this new legislation becomes apparent.

In the preparation of SANBI's Business Case to the South African Treasury, the preferred institutional design is that of a 'managed network', whereby the national agency determines relationships with other institutions of government and civil society and delivers its functions more efficiently and effectively. SANBI's experience in building the managed network of organisations that is the C.A.P.E. programme has been identified as an example of the 'managed network' approach to institutional governance and coordination in the pursuit of SANBI's broader mandate.

#### (ii) The ongoing management of the Table Mountain Fund

The Table Mountain Fund (TMF) was founded by WWF-SA in 1998 based on donations amounting to approximately R10 million, and focussed initially on the conservation of biodiversity on the Cape Peninsula mountain chain. The contribution by the GEF of a further US\$5 million boosted the fund to R40 million



Participants at the Western Cape Sustainable Development Conference were exposed to the C.A.P.E. programme through exhibits and farm workers preparing bouquets of wild flowers.



## What have we learned from TMF's performance?

*A recent participatory review of TMF's performance has underlined its role as the original and sustained source of funding for the implementation of the C.A.P.E. Strategy. It highlighted its role as a project catalyst, as many of the projects initiated by TMF have been carried forward and grown by others. It is regarded as a successful and sustainable means of achieving significant conservation interventions. It remains widely accessible, flexible and local in its application, and consequently enjoys positive support from stakeholders.*

*Stakeholders identified that TMF should continue to provide a mechanism for sustainable funding support to implement the C.A.P.E. Strategy. In particular it should remain a gap-filler, especially for smaller scale projects that are identified on an ongoing basis. To do this, it needs to grow its capital base over the next five years and increase the funding support to a wide range of projects. It also needs to develop funding mechanisms, including "ring-fenced" funds for project support and land acquisition. As far as direction is concerned, stakeholders felt that there should be further investment in capacity building, promoting conservation stewardship on private land, environmental education, urban conservation and applied research.*



*T*ireless efforts by Mark Botha ensured that the relevant legal drafting teams, consultants, portfolio committees and government officials were provided with clear information and argument regarding the need to include fiscal and non-fiscal incentives in the Biodiversity Act, Protected Areas Act and Property Rates Act. Mark Botha has subsequently been appointed as Director of Conservation for BotSoc. In his personal capacity, he was nominated to the Board of CapeNature, and is consequently in a position to support sustainable implementation of the programmes that BotSoc helped to initiate.

Mark was elected as Deputy-Chair of the C.A.P.E. Co-ordination Committee in 2005 and is seen here with Wandile Mzazi, Chief Operating Officer of the Eastern Cape Parks Board.

and enabled its mandate to expand over the whole of the Cape Floristic Region, guided by the strategic priorities of the C.A.P.E. Programme. As a registered trust in South Africa, it is governed by a Board of Trustees, and has specific objectives, aligned to the C.A.P.E. Strategy.

Since its inception, the TMF has sought to catalyse organisations and individuals to address priority research and management interventions in the CFR. It uses a portion of its income to sustain a flow of project funds in terms of its strategy. The management of the TMF is undertaken by WWF-SA which provides financial management services, out-sources investment functions, co-ordinates the review and approval of projects, and administers funded projects. A review of the activities and outputs of the TMF from 1998 until 2005 indicated that the fund had grown to approximately R60 million and that project disbursement had yielded R12.8 million. A total of 75 projects have been supported (Appendix 2 for a complete list of projects current at 31 March 2006, or visit the project database on [www.capeaction.org.za](http://www.capeaction.org.za)).

### **(iii) The role and influence of South African non-governmental organisations**

#### **The Botanical Society of South Africa**

The stakeholder process that generated the C.A.P.E. Strategy had the effect of drawing comment and involvement from a range of non-governmental organisations (NGOs) that had until that point acted primarily as membership and advocacy organisations. Both the Botanical Society (BotSoc) and WESSA have traditionally acted as public watchdogs of development processes while focusing on a number of core conservation projects involving willing partners. Many of these are reported elsewhere, e.g. BotSoc's Cape Flats Flora Conservation Project that laid the foundation for the biodiversity network now adopted by the City of Cape Town as part of its Integrated Metropolitan Environmental Policy (IMEP) (Chapter 2: Making a Plan for Biodiversity on the Cape Flats) and the work that WESSA has done as an implementation partner for CoastCare and Working for Water projects.

This involvement has had the effect of leveraging the implementation capacity of these NGOs in a way not previously experienced in the region. For example, BotSoc established a Cape Conservation Unit with full-time staff including Kristal Maze and Mark Botha, enabling the organisation to seek and use project funding for specific priorities the BotSoc had identified. In a review of the Cape Conservation Unit's strategy, it was noted that its NGO home provided freedom for both advocacy and project implementation, unencumbered by the official mandates of the government departments and parastatals. Having been involved in identifying a number of key interventions relating to land-use planning and conservation stewardship (Chapter 4), BotSoc was able to lobby extensively, based on a sound understanding of the context, for improved land owner incentives in the emerging biodiversity, protected areas and municipal legislation. Having dedicated staff-time allocated to this quest meant that BotSoc could respond with agility to the stop-start nature of the legislation drafting process.

Through its initial project implementation successes, BotSoc was also able to secure follow-up funding to support a pilot study to improve conservation stewardship on private land and to progressively embed this responsibility as a core function of CapeNature. Today, Conservation Stewardship is one of the cross-cutting business units of this parastatal and BotSoc's role has been scaled back to one of strategy advisory support. The success of these interventions provided sufficient justification for BotSoc to invest in programmatic rather than project funding for these positions.

A second example of BotSoc's influence was that their Cape Conservation Unit was able to mobilise a project team including Kristal Maze and Mandy Driver to support conservation planning for the Succulent Karoo Ecosystem Programme (SKEP). The experience and skills gained enabled Mandy Driver to be deployed as the leader of a project to ensure that conservation plans are customised to support the Integrated Development Planning (IDP) processes being conducted in municipalities, and to build capacity of municipal officials to incorporate biodiversity concerns into decision-making. This provided BotSoc with an opportunity to engage with the consultants prepar-





ing the Western Cape Provincial Spatial Development Framework (PSDF), ensuring that biodiversity priorities informed the ultimate product (see First steps towards building capacity below).

### The Wildlife and Environmental Society of Southern Africa



The Wildlife and Environmental Society of Southern Africa (WESSA) has played an extremely important role in identifying and reacting to planning and development processes that negatively impact on biodiversity and the achievement of the C.A.P.E. Strategy. As with BotSoc, its key strategies have involved advocacy and engagement with public participation processes that accompany development proposals. A strength of WESSA has been to mobilise understanding and knowledge through environmental education and through “Friends” groups that take responsibility for particularly important places across the region (Chapter 2 for Friends of Tokai, Die Oog and the Blaauwberg Conservation Area).

More recently, under the leadership of Andy Gubb, WESSA has also become involved in managing projects that address specific threats to biodiversity or which offer opportunities to make conservation gains. For example, WESSA in the Western Cape has:

- taken on contracts to clear invasive alien plants in areas such as the Kommetjie Wetlands;
- managed a CEPF project to mobilise conservation management in the Blaauwberg Conservation Area in conjunction with the City of Cape Town;
- implemented components of the

national CoastCare programme under the auspices of the National Department of Environmental Affairs and Tourism.

WESSA's involvement in these programmes has demanded the development of project management capacity within the organisation, not only to ensure that grant funds are properly accounted for, but also to develop a new cadre of project managers. Through a series of project-based internships, WESSA has provided opportunities for work experience. It has furthermore extended capacity-building and environmental education to a large number of workers on its projects, who have not only learned valuable technical skills that support their eligibility for employment opportunities, but have also introduced them to environmental management principles.

In the Eastern Cape, WESSA emulated BotSoc by establishing a Biodiversity Conservation Unit under the leadership of Warrick Stewart that aims “to promote and make substantive contributions to the conservation of the Cape Floral Kingdom, eastern Succulent Karoo and Maputaland-Pondoland Hotspots, the last-mentioned incorporating the Subtropical Thicket biome, through strategic interventions”. In the CFR, it has adopted a project focus. Its first priorities have been to support the implementation of projects that underpin the C.A.P.E. Strategy. These include support to the St Francis Conservancy, ongoing work in the Nelson Mandela Metropole and, most recently, a project funded by the Development Bank of South Africa (DBSA) in conjunction with SANBI that will build capacity in municipalities to take account of biodiversity priorities (see below). This latter project has afforded an



*Adv Naledi Burwana-Bisiwe is the Head of the Eastern Cape Department of Economic Affairs, Environment and Tourism, the lead agency for environmental management in the Eastern Cape.*



Kristal Maze is seen here with Donne Murray (Cape Town City Councillor) and Ruan Kruger of the Development Bank of South Africa.

## PROFILE

### Kristal Maze

Kristal Maze was the driving force behind BotSoc's Cape Flats Flora Project, the source of many important initiatives in the City of Cape Town. As head of BotSoc's Cape Conservation Unit, she helped develop the role of BotSoc as a catalyst rather than primary implementer of conservation programmes, an approach which has leveraged much greater support and maintained the independence and advocacy role of BotSoc. This has led to its reputation as a “buzzy little NGO” putting pressure on the larger organisations to improve their performance. Kristal is now head of the Bioregional Policy and Programmes Directorate for SANBI and is influencing the roll-out of bioregional programmes countrywide. Under her direction, several C.A.P.E. fynmense are scaling up C.A.P.E. project interventions at a national level. Kristal served as Deputy-Chair of the C.A.P.E. Implementation Committee from 2002–2005.





*As Director of Conservation for WWF-SA, Rob Little has had his finger on the pulse of many aspects of the C.A.P.E. programme. He supervised the development of the C.A.P.E. Strategy under contract to the World Bank, helped establish the Table Mountain Fund, and facilitated the establishment of the C.A.P.E. Co-ordination Unit. More recently, he has advocated a programmatic approach to WWF's work and a new aquatic programme and bioregional conservation programme are being developed currently.*



opportunity for projects in the Western Cape and the Eastern Cape to develop and share experiences in different biodiversity, socio-economic and institutional contexts, and to derive some common principles and approaches.



#### (iv) The role of international NGOs

##### WWF-SA

Through its international Global 200 Ecoregions Programme, WWF International provides an international resource and network to over 60 other ecoregional conservation programmes in various stages of development worldwide. It has arranged a number of meetings where coordinators of these programmes have come together to explore and generalise experience and to develop common methods for conservation planning and monitoring and evaluation. WWF-SA is the South African affiliate of WWF-International and applies its mandate in the Cape Fynbos Ecoregion.

WWF-SA played a unique role in the development of the C.A.P.E. Strategy and in mobilising its implementation. It set up the Table Mountain Fund, managed the GEF project to develop the C.A.P.E. Strategy and supported the initial establishment of the C.A.P.E. Co-ordination Unit. Its approach has generally been to initiate activities where these are most needed, to garner and mobilise resources to kick-start programmes, and to hand these over when they are sufficiently mature to be sustained on their own.

In respect of the C.A.P.E. Programme, this has meant that from an initial role of supporting the development and adoption of the C.A.P.E. Strategy, WWF-SA has retained its interest in the CFR through its management responsibilities to the Table Mountain Fund, and through influencing investment in the region through other funds to which it has access, such as the Green Trust (See Finding funding below). By managing a suite of funds, each with slightly different objectives and portfolios, and by applying a defensible decision-making process, WWF-SA has catalysed many important activities which have been foundational for the wide-scale implementation of the C.A.P.E. Strategy.

WWF-SA has also played a role as a C.A.P.E. signatory organisation in its own

right, contributing to the governance of the programme. It has also sought to invest in its own internal programmatic management capacity; instead of simply managing a portfolio of projects, it has developed some key national programmes that are highly supportive of the C.A.P.E. Programme. For example, under Dr Deon Nel and Aaniyah Omaidien, an aquatic ecosystems group is promoting marine and freshwater conservation programmes, each of which is closely linked to activities in the C.A.P.E. Programme. In respect of the marine function, WWF-SA has anchored the C.A.P.E. Marine Task Team, ensuring that all relevant marine stakeholders influence the direction and priorities of marine conservation activities in C.A.P.E. A long-term function has been its involvement in environmental education, supporting the development and implementation of a range of projects, and more importantly a focal point for conservation educators undergoing professional development.

#### Conservation International—Southern African Hotspots Programme

The C.A.P.E. 2000 Conference was preceded by a study that examined opportunities for alignment with international conservation programmes with a view to seeking support for implementation. One of the most positive responses came from Conservation International (CI) which had, by this time, identified both the CFR and the Succulent Karoo among the 25 priority biodiversity hotspots on earth. CI had also become a founding partner of the Critical Ecosystem Partnership Fund (see 7.7 Finding funding below).

CI invested in a small management unit based at Kirstenbosch in Cape Town to anchor its interests in the region, based primarily on partnering South African implementers to prepare and mobilise portfolios of projects using CEPF funding. In 2001, Sarah Frazee was given the task of preparing the CFR Ecosystem Profile that would catalyse a grant for specific activities in support of the C.A.P.E. Strategy. From 2003–2004, Conservation International supported the implementation of C.A.P.E. through a CEPF-funded set of activities including support to the mega-reserves. It simultaneously forged ahead with work on the Succulent Karoo hotspots programme, which yielded the Succulent Karoo Ecosystem Programme (SKEP). The major role played by CI was to support C.A.P.E. Partners to execute



projects, build capacity and broker the exchange of lessons learned across the programme. In addition, knowledge and access to expertise within CI and its partners helped with early efforts to develop sound projects and to seek project funding.

In the course of CI's involvement, its own substantive contribution was heightened by the formalisation of the unit as CI's Southern African Hotspots Programme. By 2010 CI intends to catalyse a variety of achievements to protect South Africa's unique biodiversity, habitats and ecosystems and provide sustainable economic activities that relieve poverty. The programme aims to provide ongoing support to bioregional programmes, engaging land owners in the creation of ecological corridors, influencing business to support biodiversity and expanding local capacity for conservation. In many complex projects around the world, the large conservation NGOs have tended, despite their own efforts to avoid the situation, to become primary project implementers. The supportive role the CI-SA programme has adopted in the CFR has helped to ensure that South African implementing agencies take and retain ownership of their programme.



#### Fauna and Flora International

One of the oldest conservation NGOs in the world, FFI stepped up its involvement in

the CFR programme during the development of the C.A.P.E. Strategy in 1999. In addition to providing advice to the teams preparing the Strategy, it facilitated the purchase of the Flower Valley farms and

was instrumental in setting up the Flower Valley Conservation Trust (Chapter 5). During 2000, as the C.A.P.E. Strategy was nearing completion, and under the expert guidance of Adriana Dinu-Wright, FFI and SANParks began a process to develop one of the key C.A.P.E. projects, namely the Agulhas Biodiversity Initiative, essentially paving the way for the kind of partnerships that characterise the C.A.P.E. Programme. As a signatory to the C.A.P.E. MoU, FFI undertook a responsibility in C.A.P.E. to steer ABI together with its lead implementing agencies, SANParks, the Western Cape Department of Agriculture and CapeNature. Within ABI, it maintains its support and involvement in the activities of the Flower Valley Conservation Trust, which in turn is piloting important components of the ABI programme. FFI's involvement demonstrates the multi-layered governance, advisory, catalytic and implementation roles that C.A.P.E. partner organisations play in delivering not only an effective programme, but building the kinds of relationships that underpin sustainability.

## 7.4 First steps towards building capacity

The C.A.P.E. Strategy correctly prioritises capacity-building as a pillar of the approach. Indeed, the whole programme can be considered to be one of capacity-building, if one defines this as encompassing the development of an enabling environment and organisational capacity as well as skills. However, the priority remains to ensure that, within capable, mandated organisations, individuals are able to do their work. When asked the question "What capacity is needed?" the C.A.P.E. Partners came up with an unwieldy list, and fur-



*While assisting with the refinement of the C.A.P.E. Strategy in 2000, Adriana Dinu-Wright was instrumental in supporting the development of the Flower Valley Conservation Trust, and, in particular, in providing technical support for ABI itself. Adriana championed the cause of local community empowerment and involvement, inspiring everyone she met with her enthusiasm and energy.*



*Seen here with Ndihlele Khandelane, Sheri Lim has contributed to the activities of the C.A.P.E. Capacity-building task team.*

## PROFILE

### Sarah Frazee

Sarah Frazee's involvement in C.A.P.E. began with a year's study at the University of Cape Town where she undertook research to examine the cost of conserving the CFR's protected areas. Having worked on Conservation International's programmes in West Africa, she was ideally placed to assist CI with the preparation of an Ecosystem Profile for the Cape Floristic Region at the time that the new Critical Ecosystem Partnership Fund was founded.

Sarah helped to establish CI's Southern African Hotspots Programme and is now its Director. Ever enthusiastic, Sarah has been involved in every aspect of the C.A.P.E. Programme, and in particular helped to mobilise the mega-reserve initiatives and forged links between the CFR and the adjacent Succulent Karoo.





The C.A.P.E. Toolbox was introduced as a resource for C.A.P.E. Partners to undertake many of the critical functions of project development and management. It is proposed to supplement the contents with a range of capacity-building materials.

ther work is being undertaken to define the capacity-building needs in a more strategic way. Nevertheless, there were some obvious priorities. These included seizing early opportunities to build capacity among emergent managers in a variety of organisational and project contexts, and using a participatory approach with municipal "clients" when developing methods to introduce biodiversity concerns into land-use plans. The general approach was to leverage existing capacity wherever possible; hence the existing management structure of the TMF offered an opportunity to mobilise small grant funding with CEPF support, and the Putting Plans to Work project was established to examine needs at a municipal level. These two programmes are detailed below.

### (i) Table Mountain Fund Capacity Building Programme

Funded by the CEPF and managed by WWF-SA, the TMF Capacity Building Programme (CBP) was established in 2003 to address the need for transformation in the conservation sector within the CFR. By sponsoring attendance at relevant short and long courses, as well as work experience placements in conservation organisations, the TMF CBP has been building capacity, particularly of black and women managers, in a programme managed by Rodney February.

How do the sponsorships work? Conservation agencies identify candidates and apply to the CBP for funding to attend courses or to work with a mentor

## Proud participants in the TMF Capacity-building programme

*Barry Stoffels completed an Associate In Management (AIM) course at the UCT Graduate School of Business and is now Manager of Administration and Finance at the Table Mountain National Park (TMNP).*

*Lewine Walters completed a B.Tech in Nature Conservation and a placement with the City of Cape Town. She is now based at the Macassar Dunes project site.*

*Zwai Peter, originally the Working for Wetlands Project Manager responsible for the rehabilitation of the Isoetes vlei at Edith Stephens Wetland Park, completed the AIM course in 2003 and is now Communications Manager for Cape Flats Nature.*

*Xola Mkefe, previously Communications Manager at Cape Flats Nature completed a B.Tech in Education Management and is now Park Manager for the West Coast National Park.*

*Joram Mkosana also completed the AIM Course. He was promoted to Manager of Bontebok National Park and has subsequently taken up a post as Manager of Environmental Management with the Nelson Mandela Metropolitan Municipality.*

*Sian Davies completed her B.Tech in Nature Conservation at the end of 2004 with funding from TMF CBP. She has received full funding from Rhodes University to undertake her Masters in Education.*

*Natasha Wilson has just completed her B.Tech in Nature Conservation. She is a nature conservator for CapeNature.*

*Terence Coller received funding for placement as a Conservation Technician with CapeNature. He has recently been appointed in a permanent position as a Community Conservation Officer.*

*Ismail Ebrahim received funding for various short courses as well as placement funding for the Project Co-ordinator of the Custodians of Rare and Endangered Wildflowers (CREW) project. He will soon be promoted to manager of the project.*

*Sue Winter received co-funding for placement with BotSoc for a year. Her post as Conservation Stewardship Manager has been continued by the South African Wine and Brandy Company, to which she is seconded.*



CBP students in lecture.





**W**ith a background in freshwater systems, Rodney February took up the position of manager of the TMF Capacity-Building Programme, which he managed in a close relationship with the Table Mountain Fund's management unit. Rodney has helped to identify and mentor a large group of up-and-coming new conservation managers. Applying his own philosophy of 'layering' investment, Rodney has now joined the WWF Aquatic Unit and is blending his original interests with the wider concerns of freshwater conservation, now countrywide.

in a management capacity. The Project Approval Group reviews applications and awards funding. Following their studies or placements, successful candidates agree to work for a conservation agency in the CFR for the same period as they received support. Already more than 20 students have been placed in C.A.P.E. Partner organisations across the region, with 15 of these in management positions.

#### How are we doing?

A mid-term review of the CBP was conducted in August 2005, and provided the programme with some very valuable insights to provide direction for the remaining project term and beyond. The evaluator, Marlene Laros, noted that the programme had done well by already exceeding its targets in terms of the numbers of people supported and courses sponsored.

She drew attention to a few key areas requiring attention, the main one being the need for a baseline assessment of training and capacity building needs, so that support could be provided in a more strategic manner and progress could be more effectively monitored and evaluated. She noted that, while the project had exceeded its quantitative targets, there were no criteria available to enable the CBP to determine whether or not the

candidates were actually able to do their jobs more effectively after the training intervention or placement. However, a survey of participants indicated that most of them, particularly those who had attended the longer courses, felt better equipped in their positions.

Since its first year of operation, when two general capacity building workshops were for participants, the CBP has tended to interact with students on a one-to-one basis. While this has been helpful, the review recommended that opportunities be provided for students to meet with one another as a group, as there is great value in sharing experiences within a network of peers. It also recommended that the CBP offer a training course for mentors in order to improve the quality of support provided during placements, and develop a general skills profile for managers within C.A.P.E. Partner organisations, to make the skills required more explicit.

#### The way forward

As with many C.A.P.E. projects, a challenge facing the CBP is how its efforts will be sustained beyond the period of CEPF funding. The need to develop management capacity in the conservation sector is unlikely to disappear in the foreseeable future, so funds must continue to be found to provide potential managers with training and work experience opportunities. For as long as there is uncertainty regarding the Sector Education and Training Authority (SETA) system, it will be difficult to rely on accessing funding from this potential source. Private funding sources may need to be tapped for some time to come.

It is likely that, once the CBP comes to an end, this function will become part of the C.A.P.E. Capacity Building Programme, which will probably be based at the C.A.P.E. Co-ordination Unit at SANBI.

#### (ii) Putting Biodiversity Plans to Work

##### New systems – new opportunities

Since 1994, the South African government has been putting sustainable development principles into practice through integrated development planning. The intention has been to encourage integrated planning at all levels, from national to local, in order to ensure that development is ecologically, socially and economically sustainable.



**M**arlene Laros was one of the participants at the C.A.P.E. Strategy workshop in 2000 and was also appointed as a member of the first Board of CapeNature. Since then, as a consultant, she has participated in an extensive set of projects in the Table Mountain National Park, and has conducted several evaluations of ongoing projects, including Working for Water, Ukuzuka and the Table Mountain Fund.



**Z**ohra Parkar-Salie began her career in C.A.P.E. with the Table Mountain Fund, where she provided essential support for the development and management of a suite of 75 projects. Since then, she has taken up a position in WWF's Aquatic Programme. Zohra was honoured with a C.A.P.E. Silver Conservation Award for her considerable efforts in support of effective project management in the CFR.



Table Mountain Fund

## Broadening the definition of Core Conservation Areas

*In terms of the Western Cape Provincial Government's bioregional planning approach (Chapter 2), areas in the province that are designated Core Conservation Areas should be protected from development. In the past, only formally protected nature reserves qualified as Core Areas. The draft Western Cape SDF, however, expanded the Core category to include provincial ecological corridors (including river systems) as well as critically endangered ecosystems. The Putting Biodiversity Plans to Work project contributed to the development of the PSDF and is helping develop SDFs at local municipality level that dovetail with the provincial framework.*

Municipalities, once responsible for administering urban areas only, now stretch "wall to wall" across the landscape. Municipal officials, in addition to planning and developing urban settlements and infrastructure, now also have

to oversee developments in rural areas. To support integrated development planning, municipalities are drawing up Spatial Development Frameworks (SDFs), which show how the land is currently used, identify development opportunities and constraints, and outline desired development patterns.

Drawing up an SDF is a complex process that culminates in the production of bulky reports and maps. The most important outputs are an overview map and guideline document that together summarise and integrate the key features of the framework. Because these are the resources intended to

guide development planning and day-to-day decision-making, it is critical that biodiversity priorities are included on the final map.

Realising the significance of the municipal SDF process, and acknowledging the positive impact that municipal

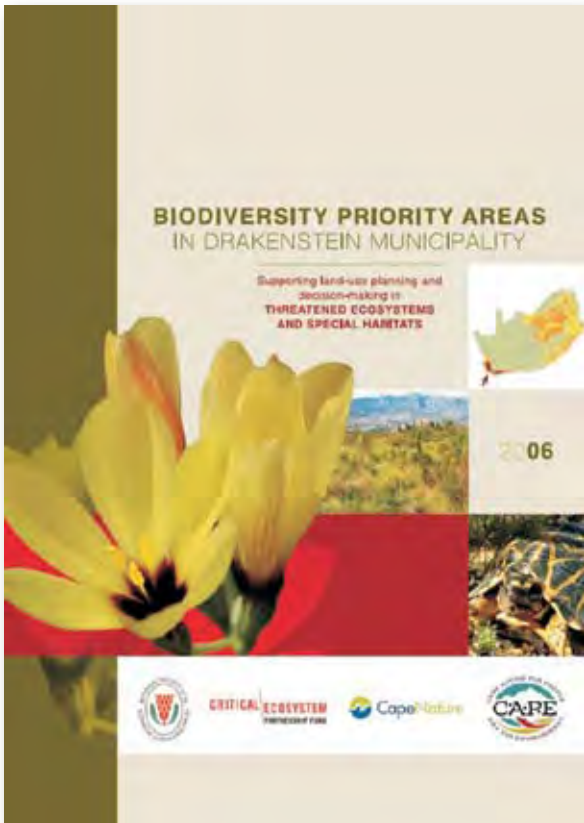


*Mandy Driver emphasizes that: Integrating biodiversity priorities into land-use planning and decision-making at municipal and provincial levels is 10% maps and 90% other stuff!" says Mandy Driver. Mandy joined the conservation sector with a background in business, and has proved to be an extremely effective project manager. Having worked for BotSoc on several projects, she has now taken up a position with SANBI working as Deputy-Director for Biodiversity Monitoring.*

officials can have on biodiversity as a result of wise development planning, the BotSoc's Conservation Unit launched a two-year pilot project (2004-2005), Putting Biodiversity Plans to Work, in four local municipalities in the Western Cape lowlands. This project made the results of research into biodiversity priorities available to municipal officials who are responsible for land-use planning and decision-making. Since early 2004, project co-ordinators Nancy Job and Mandy Driver, supported by Susie Brownlie worked with environmental agencies, private consultants, provincial government and municipal officials in the Overberg district municipality (including Cape Agulhas local municipality) and the Drakenstein and Swartland local municipalities to promote development planning that takes biodiversity into account.

### Maps, guidelines and "other stuff"

Mandy and Nancy prepared a biodiversity priorities summary map for each pilot local municipality. The maps draw on the findings of the Cape Lowlands Renosterveld fine-scale conservation plan and the National Spatial Biodiversity Assessment, and highlight the important biodiversity features in the municipalities. Each biodiversity priorities map forms part of a "biodiversity package" that also includes the GIS layers making up the map, plus guidelines to help people interpret and use the map and GIS information. The materials enable the municipi-



Guidance for municipalities for including biodiversity principles in decision-making has been captured in attractive books for each priority area.





pality to assess land-use applications (e.g. rezoning and development applications) in terms of their potential impacts on threatened ecosystems, special habitats and ecological corridors. They also provide the municipalities with biodiversity information needed to develop their SDFs and other relevant documents such as State of the Environment Reports or Strategic Environmental Assessments.

Although the maps and guidelines are a very visible output of this project, like the proverbial tip of the iceberg, their development represents only one aspect of a much more comprehensive effort – the other stuff! Much of Mandy and Nancy’s time was spent consulting municipal officials, conservation managers and consultants to find out what kind of biodiversity planning information they need and how they will use this information, so that they could refine the maps and guidelines accordingly. They also spent time helping municipal officials to interpret and use the maps and guidelines to develop their SDFs and to inform development decisions in biodiversity priority areas.



By working with officials from the various natural resource management agencies that are active within the pilot municipalities, Nancy played a vital

The Putting Plans to Work project ensured that biodiversity priorities were included in the Provincial Spatial Development Framework.



*Jeffrey Manuel became involved with the C.A.P.E. Programme during the preparatory phase of the GEF project, working as an intern under the mentorship of Mandy Barnett on the Lowlands component. His experience and exposure to the organisations involved in C.A.P.E. resulted in his rapid deployment by BotSoc in a number of priority initiatives.*



*The success of this project is due in large measure to the disposition of Nancy Job, and in particular her commitment to building relationships at a local level. By coming alongside the implementers, listening to their particular needs for information, giving the necessary support and involving them in a broader network of biodiversity practitioners, Nancy helped to turn the bioregional vision into reality at a local level.*



*Charl de Villiers is an experienced journalist and environmental management practitioner who is using his communication skills as a writer and analyst to build capacity, especially among consultants and officials in various capacities, to take account of biodiversity in decision-making for development. "We view biodiversity as a basic informant to socially and economically justifiable development, not an obstacle that stands in its way. Thanks to systematic conservation plans, comprehensive biodiversity guidelines and strong government support for proactive planning and pre-emptive impact assessment, this philosophy has an excellent chance of being realised," Charl says.*

role in fostering sound working relationships between the municipalities and CapeNature, DWAF, Working for Water, the Department of Agriculture and the

provincial environmental affairs department. The biodiversity priorities map for each municipality provides a useful point of reference to enable these organisations to work together for a common purpose. In this way, the project contributed significantly to integrated natural resource management at a local level.

#### Products, processes and people

Working with municipal planners, conservation agencies and consultants to put the results of biodiversity research and planning initiatives into practice at a local level was a rich experience. From designing user-friendly GIS products to influencing provincial and local government planning processes, the project was an exhilarating learning curve. But one of the most profound outcomes of the project was not anticipated at project commencement. Nancy explains: "This project started out being about products, i.e. making outputs of

biodiversity plans more user-friendly, but is really about people—the managers and other officials, the 'implementers'. The project is about the people who use the products—not only the municipal officials but the many agencies that the municipalities draw upon for information about the environment."

#### (iii) Biodiversity in Environmental Assessment

Through its 'Biodiversity in Environmental Assessment Project, BotSoc's Conservation Unit advocates an integrated and precautionary approach to the screening of development applications. This "pre-application biodiversity screening and environmental impact assessment process" draws on the regulations under the National Environmental Management Act (Act No. 107 of 1998) as well as other applicable laws. It also draws on the biodiversity plans, ecosystem guidelines and a robust but basic terms of reference that were devised in this project for the consideration of biodiversity in Environmental Impact Assessment. The approach has been captured in the Fynbos Forum Ecosystem Guidelines for Environmental Assessment in the Western Cape (pub-



The Fynbos Forum Ecosystem Guidelines for Environmental Assessment in the Western Cape have set a new standard for informed decision-making in the region.



lished in 2005). This publication has been made available to all C.A.P.E. Partners and is the basis for training of environmental authorities and practitioners throughout the region.

Since its publication, Charl de Villiers and Jeffrey Manuel of BotSoc's Conservation Unit have initiated a review to test the assumption that comments made on development applications in priority threatened ecosystems have resulted in the improved consideration of biodiversity. The review covers some 60 applications for environmental, mining or agricultural authorisation between October 2004 and December 2005. The review will be used to investigate strategies, with the C.A.P.E. programme and other partners, to effectively overcome obstacles that are preventing the effective 'mainstreaming' and consideration of biodiversity in EIAs and, ultimately, decision making in the region.

The BotSoc review is understood to represent the first known attempt in South Africa to evaluate the extent to which systematic conservation plans and interpretive guidelines have informed environmental reporting and decision-making in one or more global 'biodiversity hotspots'.

## What have we learned?

- *Recent environmental legislation in South Africa has created an enabling framework for the development and implementation of plans to safeguard biodiversity. The Western Cape provincial government's commitment to bioregional planning has strengthened conservation planning efforts.*
- *Research into biodiversity priorities (e.g. the NSBA) and the development of biodiversity plans (e.g. Cape Lowlands Renosterveld fine-scale plan) has enabled conservation planners to contribute significantly to the development of sound provincial and municipal planning frameworks (e.g. SDFs).*
- *Municipalities have a crucial role to play in preventing the loss of natural habitat in priority areas through their SDFs and land-use decision-making processes.*

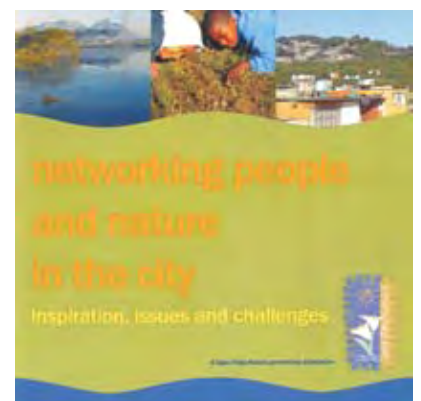
- *Municipal officials are willing to defend biodiversity priorities if given the necessary information and support.*
- *GIS maps are a very useful tool for developing a conservation vision and plans in municipalities; however, they need to be simple to use and interpret (e.g. show recognisable landscape features) and most municipalities initially need support to use them.*
- *It shouldn't be assumed that people understand the significance of biodiversity features; guidelines are needed that explain why biodiversity is important and to recommend ways to conserve it.*
- *Because each municipality is different, the project coordinators found it more effective to work on a one-to-one basis with officials, rather than to hold training workshops for all the municipalities together. This approach may be time-consuming but it proved to be effective.*
- *It is necessary to work with existing structures where possible; this encourages buy-in, enables all parties to learn, and ensures sustainability once the intervention is over.*



## 7.5 Information management

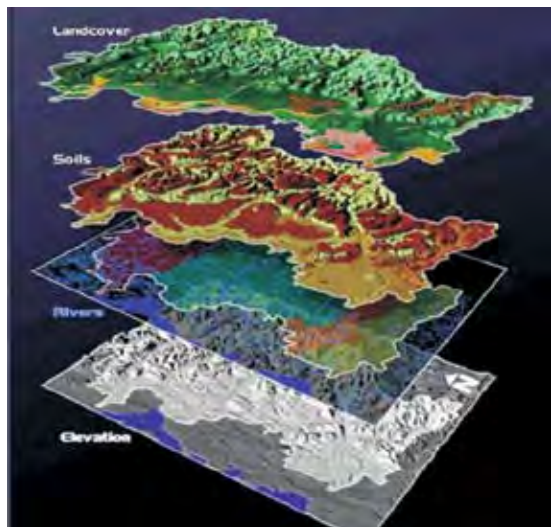
One of the reasons for international support and interest in the C.A.P.E. Programme has been the solid base of science, information, knowledge and capability demonstrated by the implementing agencies. One of the first opportunities offered by the C.A.P.E. Strategy was to mobilise a co-ordinated approach to information management in a project led by CapeNature, which was initially called the Conservation Planning Unit and later BGIS (see below). Its primary purpose was to act as an information warehouse for the conservation planning products of the C.A.P.E. Strategy phase. A key objective of the C.A.P.E. Strategy was to build on this knowledge and information and to use it as a resource for improved decision-making.

In parallel, the technology for ensuring that fine-scale conservation planning is undertaken with rigour and in such a way that it can be fed into decision-making



## What is GIS?

*GIS stands for Geographic Information System. This information management system is essentially a tool that integrates digital maps and information databases to support environmental interpretation, planning and decision-making. Through the use of satellite photographs, global positioning system (GPS) technology and computerised databases, GIS makes it possible to link information to maps, thereby creating spatial information.*



*GIS creates map “layers”, with each layer representing a different category of information (e.g. municipal boundaries, rainfall figures, vegetation, land-use types, population census data, etc). It is a powerful tool for working with environmental information, as it is possible to overlay*

*these layers and see how different elements relate to one another. Being able to display information in the form of maps, and overlay these onto satellite photographs of the landscape, makes it very easy to interpret the information. GIS is therefore a valuable tool for sharing environmental information with the public.*

The representation of ecosystems and their conservation status overlain onto a satellite image.



in municipalities, was enhanced by the SKEP and Putting Plans to Work projects. This has led to a substantive component in the C.A.P.E. Programme to address the priority areas in the lowlands where information at this scale is lacking. Further work is being done on specific components of biodiversity, such as wetlands and marine environments, with at least some products now able to be integrated into the overall Biodiversity Geographic Information System (BGIS).

### (i) The BGIS Unit

The C.A.P.E. Strategy compiled extensive information on every aspect of the legal, institutional, social and economic context of the CFR. It also resulted in information regarding the pattern and processes of biodiversity across the region, and products relating to threats and opportunities for protection. Before the ink on the strategy was dry, a project was being developed to capture this information in a way that would make it accessible to scientists, planners and decision-makers in the future. It was agreed that CapeNature would be the natural host for what became known as the Conservation Planning Unit. The project evolved to the extent that SANBI's new institutional mandate provided a more appropriate home for this initiative, and it now forms part of SANBI BGIS.

BGIS receives spatial information generated by C.A.P.E. Partners and task teams, manages this information and makes it freely available on a website (<http://bgis.sanbi.org>). The BGIS maps and databases provide information on ecosystems, vegetation types, rivers and wetlands, protected areas, habitat transformation, and much more. The website also has links to digital copies of relevant reports, for example the National Spatial Biodiversity Assessment (NSBA), giving people access to a vast amount of biodiversity information at the click of a mouse button.

### Promoting access to biodiversity information

The BGIS unit is responsible for managing spatial biodiversity planning information and making it available on the website. The unit also provides value-added services, which include:

- making data and information accessible by producing it on compact disk and in hard copy map format;



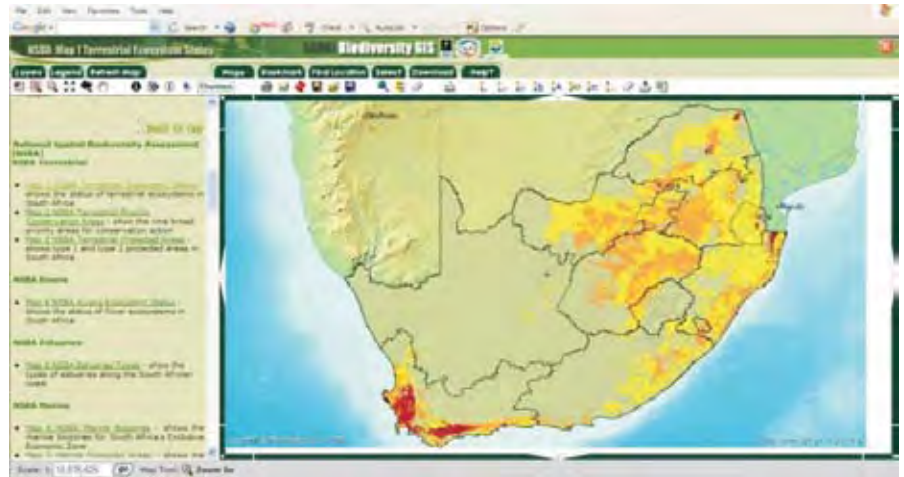


*Selwyn Willoughby, BGIS unit manager, is conscious of the many barriers that can impede access to and sharing of information, and is determined to overcome these obstacles. The first major challenge was trying to get the C.A.P.E. Partners to use one set of standards when submitting information for the website. After nearly two years of negotiating between partners, the unit has managed to set data and metadata standards which allow the seamless flow of data and information between all partners in C.A.P.E.*

- data and information analysis, interpretation and application; and
- specialist advice on information management practices.

The BGIS team also noticed that some users were unable to use the information because they just couldn't understand the scientific jargon and abbreviations used by the researchers who submitted the original information. They have made an effort to use simple language, include illustrations and design the website clearly and logically so that the information is meaningful to the general public. Because many C.A.P.E. Partners cannot afford broad-band internet connections, BGIS has designed the website so that even the GIS maps are available to people with dial-up modems.

The high cost of GIS software packages is another potential barrier to people being able to access biodiversity information. Selwyn explains that they have overcome this problem by enabling certain GIS functions to take place on-line. Even without GIS software, you can access the on-line maps or databases, add information and e-mail these modified files to others, whether or not they have GIS software. To further enhance access to information, the entire website is available as a double CD set, which is available at a



The online GIS facility with interactive GIS functionality

nominal charge from the unit. In all these ways, the BGIS unit is helping to put biodiversity information and GIS tools into the hands of people, to enable sustainable and appropriate development.

#### Guiding appropriate development

One of the original reasons for establishing the BGIS unit was to encourage appropriate development by making biodiversity information available to developers and to local authority land

Planners and developers can check the BGIS website to determine the conservation status of land they are intending to develop. Critically endangered habitats are "red-flagged", indicating that detailed investigation is required to assess the potential impact of development.



use planners and decision-makers. BGIS therefore organises the information on the website according to municipal boundaries as well as ecological regions. A land-use planner, developer or farmer can call up a map of their municipality, identify the administrative boundaries, and use the conservation maps to pinpoint any threatened habitat types.



## Systematic conservation planning

*Land is under intense pressure to be developed, whether for agricultural, industrial, residential or commercial purposes. Although conservationists might want all remaining natural areas to be left undeveloped, this is simply not realistic. Systematic conservation planning is a strategic and pragmatic approach to identifying and conserving biodiversity priorities. The approach sets clear and defensible targets based on sound data for conserving both biodiversity pattern (a representative sample of all species and habitats) and the ecological and evolutionary processes that enable biodiversity to persist. With biodiversity priorities clearly stated, and valid development needs acknowledged, land use planning negotiations can proceed in a constructive manner. The C.A.P.E. Fine-scale Planning project is based on the principles of systematic conservation planning.*



Environmental regulations aim to negate or minimise the impact of any form of development on critically endangered or endangered habitats. The information on the BGIS website can save planners and developers time and money by helping them to choose appropriate sites to develop. Because of the growing resistance from the public to environmentally inappropriate developments, this information can also help developers to avoid potential conflict situations and the bad publicity that ensues.

### Building community through sharing information

Having a central database of spatial biodiversity planning information in the CFR, as well as standardised systems that enable people to interact with this database, creates limitless opportunities for sharing spatial information. While the focus at the moment may be on building up the databases and developing accessible web-based information management systems, the ultimate aim of the BGIS unit is to use this technology to promote on-line communities of practice.

As people start using the BGIS information to address environmental and development issues in the CFR, they will be able to share what they are doing and learning with people across the region via web-based discussion groups. "GIS is essentially a problem-solving tool, not just an information system," says Selwyn. "As people start sharing their ideas and experiences across different sectors, we will start building communities of practice. What really inspires the BGIS unit is being able to help people to work together for sustainable development."

## What have we learned?

- *You can't force organisations to participate in a knowledge network; willingness develops as the benefits of working together become clear. The job requires patience and persistence!*
- *Although it may be time-consuming and costly to align an organisation's information systems to the standards of the knowledge network, this initial investment is insignificant in comparison to being able to access information*

*generated by all partner organisations in a format that can be used immediately.*

- *Making information accessible requires more than technology—the information must be presented in simple language that can be understood by all potential users; good illustrations are also important.*
- *A knowledge network must serve its partners, so in setting up the systems and protocols, it is important to consult partners and find out what they need from the network.*
- *Making information freely available, rather than seeing it as a commodity to be sold, is what enables a knowledge network to thrive. As partners benefit from receiving information freely, they are more likely to make their information available, thus enabling a free flow of information.*
- *GIS is far more than an information management system; it is a tool to enable community-based environmental problem-solving.*

### (ii) Fine-scale biodiversity planning

The original C.A.P.E. Strategy painted in broad brush-strokes a 20-year vision for biodiversity conservation and sustainable development in the CFR. The conservation planning tool used to develop that vision, called C-Plan, defined and worked with broad habitat units at a scale of 1:250 000 to identify areas of conservation concern and to recommend where mega-reserves or conservation corridors should be established.

Now that the C.A.P.E. Strategy is being implemented, it is time to add detail to this picture. The detail comes in the form of fine-scale biodiversity plans (1:10 000) with their associated GIS layers. These critical biodiversity planning tools put research findings into the hands of land-use planners, developers, landowners and resource managers, helping them to make informed decisions about biodiversity priorities.

Conducting a systematic conservation assessment of an area requires specialised



knowledge and skills in the fields of ecology, GIS and conservation planning. GIS data layers need to be developed, including information on biodiversity pattern and process, existing protected areas, levels of habitat transformation and potential causes of habitat loss. In addition, conservation targets must be set. While the IUCN recommends that 10% of the land surface area of a country should be formally conserved, this target is somewhat simplistic in that it tends to overlook the diversity of habitats in a landscape and the fact that some habitats are richer in species diversity than others. While conserving 10% of a particular habitat may be sufficient in some cases, South African researchers have found that as much as 50% of some species-rich habitats may need to be conserved in order to safeguard biodiversity pattern and process.

Fine-scale biodiversity planning produces maps that display information about the conservation status of recognisable biodiversity features, such as particular habitat or vegetation types. Different systems exist, but one that is commonly used colour-codes habitats as critically endangered, endangered, vulnerable or currently not vulnerable, drawing on the results of the National Spatial Biodiversity Assessment. Land-use planners and decision-makers can use these plans and associated guideline documents to ensure that development does not prevent municipalities meeting their conservation targets.

Already a number of fine-scale biodiversity plans have been developed for parts of the CFR where biodiversity is under threat. In the Western Cape, these areas include the Agulhas Plain, the Cape Flats and the Renosterveld Lowlands of the Swartland and Overberg. In the Eastern Cape, the STEP project developed a fine-scale biodiversity plan for the south-east lowlands. Plans are currently being developed as part of the Baviaanskloof, Cederberg, Gouritz and Garden Route Initiatives (Chapter 2). A four-year C.A.P.E. Fine-scale Biodiversity Planning Project, launched in May 2005, is focusing on another five priority areas, namely Nieuwoudtville, the north-west Sandveld, Saldanha peninsula, upper Breede River Valley and the Riversdale coastal plain. By the time all these fine-scale planning projects are complete, 19 of the 25 local municipalities in the Western Cape will have access to fine-scale biodiversity

plans, which will detail at least those areas that the National Spatial Biodiversity Assessment identified as being under threat. These systematic biodiversity plans will guide land use planning and decision-making by municipalities and provincial environmental and agriculture departments, and inform conservation agencies in terms of the selection of priority sites to expand the network of protected areas.

Regional-scale conservation planning led to the development of the C.A.P.E. Strategy, but fine-scale biodiversity planning has become an essential tool in the C.A.P.E. implementation toolbox. Originally piloted by the Botanical Society and ABI, this project is currently being rolled out by CapeNature, with support from BGIS. Its implementation at municipal level is being supported by the Putting Biodiversity Plans to Work project. The roll-out of this initiative clearly illustrates the highly integrated nature of projects within the broader C.A.P.E. Programme.

## What have we learned?

- *In South Africa, information on biodiversity pattern (e.g. vegetation type, species distribution data) is generally available, whereas very little spatial information exists on ecological and evolutionary processes.*
- *Systematic biodiversity planning relies on ground-truthing and local knowledge as well as spatial information.*
- *Spatial information on vegetation or habitat types is more useful than species distribution data when assessing biodiversity pattern.*
- *IUCN conservation guidelines (conserving 10% of land surface area) are inadequate in species-rich environments.*
- *Fine-scale biodiversity plans should be mapped according to bioregions but clipped according to municipal boundaries. This will ensure that a comprehensive decision-making tool is produced at the appropriate level for local government officials to make land-use planning decisions.*



*Kerry te Roller is co-ordinating the preparation of fine-scale conservation plans in critical lowland sites across the CFR. Kerry te Roller is co-ordinating the preparation of fine-scale conservation plans in critical lowland sites across the CFR.*



*Ernst Baard manages CapeNature's Scientific Services division. An expert herpetologist, Ernst has applied his passion for understanding species' distributions to the development of CapeNature's biodiversity information warehouse. His unit provided the home for C.A.P.E.'s Conservation Planning Unit. Ernst is also concerned that conservation managers should get "back to basics"; they should understand the system that they are trying to manage.*



### (iii) Compiling a Wetlands Inventory

Healthy river systems need functioning wetlands. They help to filter the water and reduce flooding; they also provide habitat for numerous plants and animals. However, wetlands in both rural and urban areas continue to be undervalued and abused. They are overgrazed, burned, canalised, bulldozed, used as dump sites and choked by invasive reeds and grasses.

The Western Cape Wetlands Forum, a network representing wetland researchers, conservationists and resource managers, identified the need for a co-ordinated approach to gathering information on the location and condition of wetlands. This information is essential to the effective management and conservation of wetlands in the province. With the support of the Table Mountain Fund, researchers at the University of Cape Town developed a standardised data sheet that wetland researchers in the province can use to survey wetlands. Data collected contribute to the compilation of the Wetland Inventory. Everyone with an interest in wetlands, including local authorities, national and provincial government departments, civil society groups, environmental impact assessment practitioners, South African National Parks, CapeNature, researchers and freshwater specialists, is encouraged to contribute.

Many organisations in South Africa are researching and addressing wetland related issues and a vast amount of information exists to support wetland conservation and rehabilitation. However, until recently, this information was dispersed and relatively inaccessible. The Wetland Inventory team undertook an extensive literature survey and consulted numerous individuals in order to develop the first comprehensive database of information on wetlands in the Western Cape. The first phase of the project was completed at the end of 2005, and the Wetland Inventory (Version 1) database is being made available to all interested parties via the Western Cape Wetlands Forum and BGIS. Both the database and data sheets will enable information sharing and support biodiversity planning initiatives in the region. The challenge lies in ensuring that the database is updated and maintained, thereby ensuring its ongoing value to wetland conservation and management.

### 7.6 Knowledge-networking

The exceptional scientific know-how and capacity that enabled the development of the C.A.P.E. Strategy and C.A.P.E. implementation programme has been emphasized in Chapter 1. But how was this capacity developed in the first place? Although there is a proud academic and institutional tradition in the region, with several world-class universities, research institutes and learned societies, a uniquely loosely structured and powerful organisation, known as the Fynbos Forum (see below), was formed in the early 1980s, and continues to provide the primary knowledge network for the C.A.P.E. Programme.

In addition to the Fynbos Forum, the C.A.P.E. Partners' Conference, a "general assembly" of the C.A.P.E. Implementation Partners is held annually in June. Its purpose is to provide an opportunity for programme implementers and stakeholders to interact, share and learn from one another's experience with implementation, but more importantly to make recommendations that can be considered for adoption by the C.A.P.E. Implementation Committee (Chapter 8).

There are also a number of thematic discussion groups that bring together organisations and people with common interests such as the Western Cape Wetlands Forum and the Environmental Education (EE) Friends group. These informal structures continue to inspire collaboration and exchange and are the basis for a number of new groups that now form the core knowledge networking mechanism for the C.A.P.E. Programme. During the year, C.A.P.E. Partners also convene the C.A.P.E. Protected Areas Forum and the C.A.P.E. Project Developers' Forum, with the explicit purpose of exchanging lessons and building capacity in these knowledge areas. In the course of establishing implementation arrangements for the substantive components of the C.A.P.E. Programme, a number of task teams and steering committees have been formed to bring together key partner organisations. These are described more fully in Chapter 8. Their influence and usefulness extends beyond merely steering project work to providing an interface among agencies and individuals with common interests in either particular spatial domains or knowledge areas. An





emerging challenge is to develop enabling mechanisms to ensure the integrity, quality and persistence of the knowledge and insights achieved. A starting point is to document the experiences and lessons learned from some of the key initiatives.

### (i) The Fynbos Forum



South Africa's Council for Scientific and Industrial Research (CSIR) established the Co-operative Scientific Programmes in 1975, as a means of focusing effort on research of critical national importance.

Its approach was to channel funds to universities and research organisations and to support government research requirements by convening and co-ordinating interdisciplinary and multi-organisational programmes. The CSIR's Fynbos Biome Project established in 1977 was one of these, and it contributed to the International Council for Science's International Geosphere-Biosphere Programme. During its implementation phase, the Fynbos Biome Project convened an Annual Research Symposium, where research findings and priorities were discussed, and where emergent topics and insights for conservation were tabled. Apart from the annual meetings, a bibliography of published and unpublished material was prepared, which was updated continually during the programme's lifespan. At the end of the funded phase of the programme in 1990, the Foundation for

## The EE Friends Group

*Just as GREEN (the Garden Route Environmental Education Network, Chapter 6) has strengthened environmental education processes in the southern Cape, EE Friends has provided an opportunity for environmental educators in South Africa to keep in touch and informed. Established in 2000 by Ally Ashwell of EnviroEds, this network has, since 2002, been ably co-ordinated on a voluntary basis by Mary Murphy of the environmental NGO Poloandfriends.*

*Meetings take place on a quarterly basis in Cape Town. Members of the ever-growing network host the gatherings, and agendas emerge in response to the willingness of participants to share their projects and ideas, as well as developments in environmental education and advocacy. There is no geographical limit to electronic networking, and the data-base lists members from all corners of the world.*

*The informal nature of this network has resulted in a natural ebb and flow of participation, with every meeting being an opportunity to meet new people. Having "no fixed abode" has made meetings a movable feast of visits to a wide range of service providers within the region. As the network grows, its form is likely to evolve; but for now one of its strengths is the fact that the group is living up to its name, and strengthening friendships within the environmental education community.*

Research Development (FRD), having observed the influence of the Fynbos Forum, continued to support the secretariat function. This enabled an annual Fynbos Forum meeting to be convened. Each year, an Annual General Meeting is held at which a Committee is elected through nomination, with the main task being to determine the venue and agenda



## PROFILE

### Ally Ashwell

Ally Ashwell first made her presence felt when WESSA established an environmental education centre at Treasure Beach in Durban. From a landmark project that almost defined environmental education as a place where schoolchildren learned about the environment, Ally has become one of South Africa's foremost practitioners of "learning in action" where people, of all ages and all walks of life, engage with environmental problems in their own lives and learn through developing and applying solutions. With a teaching background, and after helping develop environmental education programmes at Kirstenbosch, Ally found a niche in the participatory development of resource materials for educators and students alike. Some of her most effective work has been done with teachers and conservation staff as she has tried to link the requirements of the new outcomes-based educational curricula with the available resources, but always in the context of issues confronting conservation. More recently, she has developed the education and development unit standards for Further Education and Training and is an accredited assessor for these courses and qualifications. As the principal author of this book, Ally has applied a principled and thoughtful approach to drawing out the lessons from practice of all of our Fynbos Fynmense. The product is a credit to this integrity, experience and simple hard work.





of the next meeting. The Chair of the Fynbos Forum plays an integral role in setting direction, keeping the Forum and its Committee active, and identifying key issues that need to be discussed. Since 1990, the Chairs have been:

- Dr Christo Marais (1990 – 2001)
- Kristal Maze (2002 – 2004)
- Julia Wood (2004 – present)



Early in Christo Marais' tenure, he saw the usefulness of inviting conservation managers and other practitioners to attend the forum to give practical expression to the scientific content. The programme is a fine balance of scientific and management considerations, and the Committee tries to ensure that it meets the needs of both constituencies. This is something of a swinging pendulum, but has been effectively managed, evidenced by the ever-growing interest in the Fynbos Forum meetings.



The Fynbos Forum draws strength from both its informality and the unusual sense of solidarity among its long-standing constituency. A number of key initiatives have grown out of the Forum, some by design and others by chance. In 1993, at a Fynbos Forum workshop entitled 'Managing Fynbos Catchments for Water', the discussions concerned the threats to fynbos posed by invasive alien plants. Dr Guy Preston, who had been promoting responsible use of water as an alternative to the construction of new dams in the region, proposed that alien clearing would both improve catchment management and promote employment and con-



*Christo Marais explains that: "The informality of the Fynbos Forum has been what has kept it going for years". He chaired his last session in 2001. "Now it has a tremendous new youthful energy and there are more planners and managers present than ever before", he enthuses.*

tribute to an improved quality of life for many South Africans. In the spirit of the emerging new South Africa, a resolution to mainstream biodiversity concerns into the reconstruction and development of the country was enthusiastically adopted. From this Fynbos Forum resolution, a roadshow to demonstrate the logic of this approach was launched, and this grew ultimately into the very powerful Working for Water Programme (Chapter 3), which has inspired many other similar-programmes.

Co-incidentally, the same Fynbos Forum concluded that a powerful attempt should be made to take the critical issues of fynbos conservation to the international community. As Working for Water was leaving the starting blocks, the Forum began working on a Strategic Plan for Conservation Priorities in the CFR. With

PROFILE

Guy Preston

A pioneer in the development of water and energy saving measures in South Africa, perhaps even Guy Preston would not have realised what an impact his promotion of "water-saving sanitary hardware" would have on our opinions and lifestyles. Now the Chairman and Co-ordinator of South Africa's premier expanded public works programme, Working for Water, Guy has had the opportunity not only to promote the idea that water-saving measures would result in less expensive water supplies, but also to show that conserving water could be tied to biodiversity conservation, livelihoods promotion as well as institutional and entrepreneurial development. The full story is told elsewhere in this book, but Guy can tell stories of how any effective programme that involves multiple stakeholders must deal with power, influence, persuasion, mobilisation, measurement, reflection, but probably mostly dogged determination and exceptionally hard work (It's even harder work to pin him down, unless you're up at 3 a.m!). Guy's work has resulted in one of the most effective demonstrations of mainstreaming of biodiversity into development processes anywhere in the world, and has influenced a suite of programmes including Ukuvuka, Working on Fire, Working for Wetlands and CoastCare. He is the original champion of C.A.P.E.





the Institute for Plant Conservation at the helm, the Cape Action Plan for the Environment began to take shape, with a view to an application for funding to the Global Environment Facility. The rest, as they say is history...!

Since 2001, the Fynbos Forum has embraced every part of the C.A.P.E. Programme, and is the best networking opportunity for those involved. Each year, progress in the C.A.P.E. Programme is discussed and debated, and a fascinating suite of projects is presented that testifies to a growing body of scientific enquiry and management practice. A deliberate attempt, supported by C.A.P.E. and enthusiastically adopted by Forum members, has been to induct new project implementers, staff and especially students by facilitating their involvement in the annual meeting. This has resulted in a major shift in attendance, with a growing constituency of new recruits presenting papers, learning from their peers and contributing to the growing body of knowledge and experience. Some remark on the absence of the “elder statesmen” who originated the programme, but all are pleased with the vibrancy and innovation of the new constituency.

Ironically, the implementation of the C.A.P.E. Programme has not been able to address one of the key issues raised by the Fynbos Forum, namely the ongoing need for high quality research that will sustain the kind of innovation required by the C.A.P.E. Strategy. An early appeal to the Fynbos Forum to act as a convenor of a fynbos research programme yielded the perspective that if there was no pot of funds, it would be difficult to achieve research co-operation. In addition, the overt conservation goals of the C.A.P.E. Programme and the particular funders who have engaged with the programme have only supported research that directly supports implementation. The Fynbos Forum, with support from C.A.P.E. has invested in a survey to determine research priorities for the CFR. A workshop was held at the 2005 Fynbos Forum and steps are now being taken to ensure that the Research Task Team is constituted and takes leadership for this important aspect of the C.A.P.E. Strategy. The FRD-supported South African Environmental Observatory Node (SAEON) for the Fynbos, which is to be implemented by SANBI in terms of its new mandate, offers a possible means to consolidate and



grow co-operative research programmes in conjunction with the leading universities, research institutes and scientists in C.A.P.E. Partner organisations.

## (ii) The C.A.P.E. Partners' Conference

The C.A.P.E. Strategy was adopted at the C.A.P.E. 2000 Conference. Four years later, the primary grant agreements negotiated through the World Bank and UNDP for the C.A.P.E. Biodiversity Conservation and Sustainable Development Project were signed at the first C.A.P.E. Partners' Conference at Kirstenbosch. At this meeting, attended by the new Minister of Environmental Affairs and Tourism, Mr Marthinus van Schalkwyk, as well as the Western Cape Minister for Environmental Affairs and Development Planning, Ms Tasneem Essop, project implementers were able to demonstrate progress in programme implementation in the first three years.

Presenters highlighted the lessons learned through projects, many of which are documented in this book. An innovation was to open the C.A.P.E. Partners' Conference to all organisational and institutional stakeholders, to capture insights and to present formal recommendations regarding the programme's future to the final plenary. The recommendations that were adopted at the meeting were subsequently formally tabled at the C.A.P.E. Implementation Committee for inclusion in the work programmes of the C.A.P.E. Coordination Unit and the various forums and task teams. Ongoing accountability

The Minister of Environmental Affairs, Marthinus van Schalkwyk and the Country Director of the World Bank in South Africa, Pamela Cox, sign the grant agreements for C.A.P.E. while Brian Huntley (CEO SANBI) and Chippy Olver (Director-General of Environmental Affairs and Tourism) look on.



*Ms Tasneem Essop has been a staunch supporter of environmental reform in the Western Cape and a champion of ensuring that environmental governance underpins social and economic development in the region. Since taking over the Environmental Portfolio, she has provided C.A.P.E. stakeholders with one of the most powerful incentives for their often selfless work, and that is her own personal interest in a better environment and a better future for every fynbos in the region.*



would be assured in this way. The meeting also included an Independent Review Panel, which was invited to comment on programme progress. One of the key findings was that the programme needed to deepen its contact and involvement with the stakeholders of projects, rather than simply the managers.

Consequently, the C.A.P.E. Partners' Conference 2005, working on a theme of "Fynbos Fynmense", sought to highlight the people dimension. An opportunity was provided for project stakeholders to tell their own stories, whether it was school children from the Baviaanskloof, farmers from the Breede River, Rastafarians from the Cape Flats, or rooibos tea growers from the Suid Bokkeveld. The event was also marked by the presentation of C.A.P.E. Conservation Awards by the Western Cape MEC of Environmental Affairs to six of the most worthy projects, following a nomination and evaluation process moderated by the C.A.P.E. Implementation Committee. The awards were of two types. Ordinary recognition certificates were presented to all C.A.P.E. signatory organisations and registered projects, and Gold Awards were presented to those who have made exceptional contributions.

By the end of 2005, the Gold Award Winners are as follows:

- 2004**  
 Chris Burgers (posthumously)  
 Guy Palmer  
 James Jackelman  
 Paul Britton  
 Lee Jones  
 Adriana Dinu-Wright

**2005**

- David Daitz  
 Richard Cowling  
 Zwai Peter  
 Heiveld Rooibos Co-operative  
 Guardians of the Garden Route  
 Christi Kloppers  
 Olinka Mackintosh, Lance Kabot and  
 Laurette Afrikaner

It was agreed to present C.A.P.E. recognition certificates and awards at two occasions during the year, namely the C.A.P.E. Partners' Conference and the Fynbos Forum, with the focus on the former being for signatories and implementation partners, and the latter being for excellence in research, capacity development and exceptional volunteer efforts. Richard Cowling's Gold Award was presented at the 2005 Fynbos Forum in recognition of his exceptional role in the establishment and growth of the Fynbos Forum. Although in its infancy, it is hoped that the C.A.P.E. Conservation Awards will be a simple, yet powerful recognition of the organisations and people that have made exceptional contributions to the conservation of the CFR.

**(ii) Fynbos i-Forum**

A resolution of the Fynbos Forum AGM in 2005 was that C.A.P.E. should try to revitalise the Fynbos Bibliography that had been developed through the Fynbos Biome Project, and make it a central core of the knowledge network that is represented by the Fynbos Forum researchers and managers, and the C.A.P.E. implementation partners. To this end, and in partnership with the Niven Library at UCT's Percy FitzPatrick Institute, a library and information studies intern Nomgcobo Ntsham captured and cleaned up the original literature database and placed it within a web-accessible database. With funding from the CEPF-supported Capacity-Building Programme, a second intern is being employed to develop this database further and to make it a vital resource for the Fynbos Forum and C.A.P.E. constituency. The intention is to grow the Fynbos i-Forum as an electronic learning network that draws together the people, projects, literature, experiences, insights, products and plans of the whole of the C.A.P.E. programme, as a mirror of the live network of the individuals and organisations that make up the Fynbos Forum and the C.A.P.E. implementation partners. The stories in this volume are but one contribution to this Fynbos i-Forum. Reach the Fynbos i-Forum on [www.capeaction.org.za](http://www.capeaction.org.za).





David Daitz presents a Gold Certificate to Colleen Simons representing the Guardians of the Garden Route at the C.A.P.E. Partners' Conference



The C.A.P.E. Partners' Conference is an opportunity for the Eastern Cape and Western Cape Provinces to meet. Here Albert Mfenyana representing the Eastern Cape MEC hands over the new Baviaanskloof publication to MEC Tasneem Essop.

## 7.7 Finding funding

The most significant sources of funding for implementation of C.A.P.E. are the organisations and individuals who through their mandates, constitutions and commitments have taken responsibility for implementation. However, at the time that the C.A.P.E. Strategy was formulated, it was realised that additional support would also be needed, especially from domestic and international donors. Although it was debated hotly at the time, there was a tendency to think that any scaled-up implementation would be contingent on international donor support; this to some extent hid the reality that significant resources were being allocated by the large number of organisations involved in the CFR.

A significant challenge is to ensure that these resources are appropriately applied to the most important components of the strategy and, even more importantly, to ensure that there is no wastage as a result of overlapping mandates or unnecessarily conflicting approaches. Although it is difficult, if not impossible, to answer the question "How much money is needed?", the proposals embodied in the C.A.P.E. Strategy modestly requested at least \$100 million over a 20 year period to supplement South Africa's own resources and to leverage alignment and efficient use of the available funds.

More detailed analysis of the baseline funding available in South Africa revealed that international donor funds would leverage domestic investment in the order of 1:4. Since this co-financing is being tracked throughout the implementation of Phase 1 of the programme,

it will be possible in the future to demonstrate with more confidence this leverage effect. There is no doubt however, that the availability of significant amounts of externally sourced funding has permitted a more strategic and comprehensive approach to implementation, compared to what would have been possible with the opportunistic and uncertain funding that is usually available. See the table on major direct investment by funders on page 232.



Margaret Sandwith of the Percy FitzPatrick Institute at the University of Cape Town is mentoring library interns to develop the Fynbos i-Forum. Nomgcobo Ntsham completed the first phase and is now employed by SANBI in the Harry Molteno Library at Kirstenbosch.

### (i) Global Environment Facility (GEF)



The GEF is an independent financial organization established in 1991. It provides grants to developing countries for projects and programmes

that benefit the global environment and promote sustainable livelihoods in local communities. GEF supports projects related to biodiversity, climate change, international waters, land degradation, the ozone layer and persistent organic pollutants. Its projects are managed through:



The major direct investment by funders for the implementation of the C.A.P.E. Strategy			
Funder	Recipient	Period	Amount (ZAR)
GEF (World Bank)	SANParks	1998-2003	37,000,000
GEF (World Bank)	Table Mountain Fund	1998-2003	30,000,000
GEF (World Bank)	WWF-SA	1998-2003	6,000,000
WWF-US	WWF-SA	2001-2002	450,000
GEF (World Bank)	SANBI	2002-2003	1,380,000
GEF-UNDP	SANParks	2004-2009	19,200,000
CEPF	Various (48 projects)	2003-2007	36,000,000
GEF (World Bank)	SANBI	2004-2009	54,000,000
GEF-UNDP	SANBI	2004-2009	12,000,000
Table Mountain Fund	Various (75 projects)	to date	12,800,000
Green Trust	Various (15 projects)	to date	292,000
Global Conservation Fund	Wilderness Foundation	2004	1,500,000
Roland and Leta Hill Trust	Various (7 projects)	to date	178,382
Malago Fund	WWF-SA	2004-2005	380,000
Mazda Wildlife Fund	Various	to date	5,055,000
Development Bank of SA	Various	to date	1,182,646
Umsobomvu Youth Fund	CapeNature	2005	5,700,00
Business Linkages Challenge Fund	CapeNature/Afriplex	2004-	3,000,000
Development Marketplace	Flower Valley Conservation Trust	2004-2005	930,000
Shell International	Flower Valley Conservation Trust	2005-	1,800,000



- the United Nations Environment Programme
- the United Nations Development Programme
- the World Bank.

Biodiversity Initiative, and the C.A.P.E. Biodiversity Conservation and Sustainable Development Project. For more information, visit [www.thegef.org](http://www.thegef.org).



GEF contributions to the CFR include a capital fund contribution to the Table Mountain Fund, investment in the Cape Peninsula Biodiversity Project which resulted in the formation of the Table Mountain National Park, and the development of the C.A.P.E. Strategy, the Agulhus

The GEF Secretariat and its implementing partners in the World Bank and UNDP have maintained a close dialogue with the C.A.P.E. Programme, and their staff have helped to steer the preparation, appraisal and implementation of the projects in their respective portfolios. Task Managers Dr Francois Falloux, Dr Jan Bojö, Chris Warner and Aziz Bouzaher





Technical support at field supervision missions by the GEF implementing agencies is very helpful. Here Andrew Skowno of the Baviaanskloof Project Management Unit discusses proposals with Slaheddine Ben-Halima and Aziz Bouzaher of the World Bank.

have acted ably for the World Bank under the guidance of the Country Directors Pamela Cox, Fayez Omar, Ritva Reinikka, as have UNDP Staff Nik Sekhran, Eddy Russell and more recently Mohamed Abdisalam and Alexandre Côte under the UNDP Resident Representatives John Ohiorhenuan and Scholastica Kimaryo.

**(ii) The Critical Ecosystem Partnership Fund (CEPF)**



CEPF is a fund designed to better safeguard the world's threatened biodiversity hotspots in developing countries. It is a joint initiative of Conservation International, the Global Environment Facility, the Government of Japan, the John D. and Catherine T. MacArthur Foundation and the World Bank. CEPF aims to dramatically advance conservation of Earth's biodiversity hotspots by providing support to non-governmental organizations, community groups and other civil society partners. A fundamental goal is to ensure that civil society is engaged in biodiversity conservation. In 2002, CEPF approved a contribution of \$6 million dollars over five years to the CFR, allocated in terms of four strategic funding directions, which has catalysed more than 50 civil society projects in the region.

Many of the lessons regarding these projects are reported elsewhere in this book. The CEPF investment in C.A.P.E. has been instrumental in allowing the establishment of the C.A.P.E. Co-ordination Unit as the programme hub, and providing funds that have scaled up initiatives

or which have catalysed new programme pilot activities. In particular, it has assisted with the development of capacity to design, plan and execute projects involving a wide range of stakeholders and has supplemented this with small grants for bursaries, internships and short courses. This has had the impact of widening the scope of involvement in the programme and of reinforcing and further developing skills of implementers. The lessons learned in applying these funds have influenced participatory approaches, including increased dialogue with private sector stakeholders. They have also underscored the developmental nature of projects in building expertise and piloting and scaling up interventions. One of the harder lessons has been the time taken to effectively mobilise projects, especially among under-capacitated organisations, and the need to maintain scrupulous governance oversight over decision-making. The programme managers, and particularly the Grant Manager for the CEPF, Nina Marshall and the CEPF Executive Manager, Jorgen Thomsen have interacted with project executants and CCU staff extensively over the funding period.



At the signing of the preparatory grant agreement for C.A.P.E. at the World Summit on Sustainable Development in 2002, World Bank Country Director Fayeze Omar is assisted by Chris Warner on the left and Brian Huntley and Walter Lusigi on the right. Trevor Sandwith and David Daitz look on.



*Nina Marshall*



*Jorgen Thomsen*

For more information visit [www.cepf.net](http://www.cepf.net) and for a full set of projects supported, see Appendix 2.

Strategic Directions of the CEPF CFR Portfolio	
<p>Strategic Direction 1:</p> <p><b>Support civil society involvement in the establishment of protected areas and management plans in CFR biodiversity corridors</b></p> <ol style="list-style-type: none"> <li>1. Through civil society efforts identify and design innovative mechanisms and strategies for conservation of private, corporate or communal landholdings within biodiversity corridors</li> <li>2. Support private sector and local community participation in the development and implementation of management plans for biodiversity corridors</li> <li>3. Especially within the Gouritz and Cederberg corridors, identify priority landholdings requiring immediate conservation action</li> </ol>	<p>Strategic Direction 2:</p> <p><b>Promote innovative private sector and community involvement in conservation in landscapes surrounding CFR biodiversity corridors</b></p> <ol style="list-style-type: none"> <li>1. Promote civil society efforts to establish and support biodiversity-based businesses among disadvantaged groups, in particular in areas surrounding the Gouritz and Baviaanskloof corridors</li> <li>2. Implement best practices within industries affecting biodiversity in the CFR, e.g. the wine and flower industries</li> </ol>
<p>Strategic Direction 3:</p> <p><b>Support civil society efforts to create an institutional environment that enables effective conservation action</b></p> <ol style="list-style-type: none"> <li>1. Support civil society efforts to consolidate data to support appropriate land use and policy decisions</li> <li>2. Support civil society initiatives to integrate biodiversity concerns into policy and local government procedures in priority municipalities</li> <li>3. Improve coordination among institutions involved in conservation of CFR biodiversity corridors through targeted civil society interventions</li> </ol>	<p>Strategic Direction 4:</p> <p><b>Establish a small grants fund to build capacity among institutions and individuals working on conservation in the CFR</b></p> <ol style="list-style-type: none"> <li>1. Support internships and training programs to raise capacity for conservation, particularly targeting previously disadvantaged groups</li> <li>2. Support initiatives to increase technical capacity of organizations involved in CFR conservation, particularly in relation to the priority geographic areas</li> </ol>



(iii) Table Mountain Fund (TMF)

TMF is a capital trust fund designed to provide a sustainable source of funding to support biodiversity conservation within the CFR. Its vision is that the people of the CFR are inspired to act collectively as custodians of the CFR's natural heritage. In particular it emphasizes that biodiversity conservation is a necessity not a luxury, with conservation an integral part of our economy and able to deliver jobs and social development; the natural treasures of the region should be conserved, accessible and enjoyed by all South Africans. TMF's main objective is the conservation of the biodiversity of the Cape Peninsula and the CFR as a whole, including the adjacent marine systems. Brett Myrdal was the first manager of the TMF, followed by Julia Wood, supported by Zohra Parker-Salie. To date, TMF has supported more than 75 projects and managed many more (Chapter 7.3). For more information visit [www.panda.org.za](http://www.panda.org.za)

(iv) Mazda Wildlife Fund



The Mazda Wildlife Fund was launched in April 1990 and has played a vital and constructive role within the conservation fraternity. The Fund allocates R1–R1.5 million per annum for investment in nature conservation. Mazda views its commitment to preserving the environment as long term. With this in mind it has formed partnerships with leading nature conservation organisations and has created an Advisory Board. Numerous projects that support the conservation of the CFR have been supported, including the C.A.P.E. Co-ordination Unit, BotSoc's lowland conservation and SANBI's Threatened Plant projects. Mr Humphrey le Grice has provided manage-





Vehicles with Mazda logos are providing essential transport for projects all over the Cape in a unique partnership with the private sector. Mazda dealerships support and maintain the vehicles.

ment assistance to the project executants throughout the region.

For more information please visit [www.mazdawildlife.co.za](http://www.mazdawildlife.co.za)

### (v) The Green Trust



The Green Trust was co-founded by Nedbank and WWF-SA in 1990. The trust is funded solely by Nedbank through clients' use of the bank's Green Affinity products, and management of

disbursement is undertaken by WWF-SA. In the CFR, the Green Trust has provided support to 15 projects that address priority research and management needs.

For more information please visit [www.panda.org.za](http://www.panda.org.za)

## Lessons learned from fund-raising

*All conservation programmes in South Africa, and particularly in the CFR, require funding over and above that which is allocated by government to achieve legal and institutional mandates. It is an explicit goal of the C.A.P.E. Programme to seek and obtain funding via international and domestic funders, not only to raise the profile of the CFR and the threats that it faces, but also to develop a more secure platform for continued investment in programmes that address ongoing threats and that will unlock opportunities. Although fund-raising is complex and time-consuming, there is no doubt that the engagement of funders with the C.A.P.E. Programme has added intellectual value. It has not only raised the bar in terms of the Programme's aspirations, but has introduced a measure of realism in terms of the kinds of outputs that can be expected.*

*The C.A.P.E. Strategy envisaged programmatic funding, i.e. funding that would comprehensively support all aspects of the Strategy, as compared with funding for individual projects. All the funders in the current portfolio have committed to the programmatic model, although grant agreements and implementation protocols tend to complicate implementation. The major funders agreed that supervision missions would be carried out concurrently and, where possible, that joint reports covering all funders' requirements would be prepared by the Programme executants. Funding has had the advantage/disadvantage of quickly exposing the weaknesses and constraints of project planning and management, and it is clear by the end of the current funding cycle that institutional capacity for project management, reporting and financial control across the programme partners will be greatly enhanced.*

*Although the continual quest for funds can occasion delays and frustration among programme implementers anxious to get on with the work, the availability of funding and the careful scrutiny of funders have the necessary and beneficial impact of creating greater solidarity and commitment among the C.A.P.E. Partners.*

## PROFILE

### Brett Myrdal

Brett Myrdal has stamped the C.A.P.E. programme with his indelible touch bringing a lifelong commitment to the transformation of South Africa to the conservation sector. Brett is a role-model for many, since he brings skills from community housing and project management to the delivery of people-centric conservation and development. People sometimes say that it is easier to learn how to be a conservationist than to be an effective project manager, and the skill that is most in demand in conservation is to be able to effectively plan, mobilise and manage resources and people. Brett brings an unusually charismatic and capable drive to the teams that he leads, and has been able to inspire both the experienced managers as well as the new entrants to do their best. As the first manager of the Table Mountain Fund, Brett set the bar high, and ensured that the fund was used in a catalytic way to leverage much greater effort and investment than it provided. Having been intimately involved in the conservation programmes in the Table Mountain National Park, he was a natural choice to take over the management of the park and to begin the process of reconciliation between the park and its major constituents, the people who had been removed during the years of apartheid. Ever a collaborator, Brett ensures that the Park is part of the whole effort and has designs and linkages planned that will surprise many once they come to fruition. In particular, Brett believes in the essential linkage between people and nature, between the fynbos and its fynmense.









*Although the C.A.P.E. 2000 Strategy did not originally make provision for a co-ordinating unit, it soon became apparent that effective communication and programme management would not be possible without a dedicated unit to give effect to decisions made by the C.A.P.E. Partners.*

*This chapter describes how implementation of the C.A.P.E. 2000 Strategy is being co-ordinated, managed and monitored through both committee structures and the “lean and mean” C.A.P.E. Co-ordinating Unit based at SANBI in Cape Town. This independent unit, which reports to the C.A.P.E. Committee, provides a range of services to C.A.P.E. committees, task teams and partner organisations, from co-ordinating meetings and forums, to administering donor funding, to developing systems to monitor and evaluate projects and achievement of strategic goals.*

# CHAPTER 8

## Co-ordinating C.A.P.E.



### 8.1 The basis for coordination



As discussed in Chapter 1, the C.A.P.E. Strategy was developed in 2000 by way of an extensive stakeholder engagement process that, though consensus, gave rise to a vision, strategy and action plan for conserving biodiversity in the region while delivering socio-economic benefits to local stakeholders.

The C.A.P.E. Strategy identified poor institutional co-operation and coordination, non-alignment of resources and inadequate communication as challenges contributing to the decline of biodiversity in the

Cape Floristic Region (CFR). In response, the C.A.P.E. Programme has invested in several mechanisms to coordinate implementation of the strategy, both horizontally (across sectors) and vertically (between spheres of government and at different scales).

Gwen Mahlangu, Brian Huntley and Valli Moosa are celebrating the signing of the MoU. Valli Moosa is now President of the World Conservation Union (IUCN), Gwen Mahlangu is Deputy-Speaker of Parliament.

This co-ordination of the C.A.P.E. Programme happens at several levels, creating a decentralized system that facilitates the participation of organizations and institutions from across the CFR, and the collaboration between sectors at various levels of implementation. This has allowed for context-specific co-ordination at the site level. It has provided a communication and brokering mechanism among implementation agencies, catalysed innovative collaboration between government, non-governmental organisations and the private sector, and fostered new partnerships between conservation, planning, agricultural and development agencies.

#### (i) The C.A.P.E. Memorandum of Understanding

In the absence of national laws governing the implementation of bioregional conservation programmes, the C.A.P.E. Memorandum of Understanding (C.A.P.E. MoU) was introduced to secure the co-operation and participation of implementing agencies for the C.A.P.E. Strategy. The C.A.P.E. MoU is an informal mechanism that was entered into by political and implementation partners to give effect to their

commitment to co-operate in implementing the provisions of the strategy, and to ensure the alignment of the C.A.P.E. Partners. The MoU gives legitimacy and authority to the programme and provides a mechanism to broker agreements about the use of and impact on the natural resource base. It clearly sets out the objectives of the programme and the agreed institutional behaviours that would support them. By involving key national, provincial and local stakeholders from across several sectors, it provides a mechanism for facilitating vertical and horizontal integration of implementing agency activities. The C.A.P.E. MoU now has 23 signatories. As discussed in Chapter 7, there is an opportunity now under the Biodiversity Act, to formalise this arrangement. Whether this would be supported by the signatory partners is not known.

### (ii) Implementation mechanisms

Taking direction from the C.A.P.E. MoU, the C.A.P.E. Coordination Committee (CCC) and C.A.P.E. Implementation Committee (CIC) play oversight roles at the level of the programme. The CCC includes representatives of the principal ministries that signed the MoU, and ensures joint national and provincial policy oversight. The CIC facilitates the day to day management of the programme and ensures co-operation among the C.A.P.E. Partners. For the major geographical and thematic components of the programme, Steering Committees across the region mirror this responsibility at the local level. The oversight and steering committees are supported by co-ordination and project management units. The C.A.P.E. Co-ordination Unit (CCU) supports programme co-ordination centrally, and a number of Project Management Units support co-ordination at the level of the programme's landscape initiatives (Chapter 2). The programme is further supported by a number of thematic task teams that support innovation and institutional co-ordination across the region.

The C.A.P.E. Co-ordination Committee (CCC) was established as a high level oversight committee for the programme, comprising its national partners including the Department of Environmental Affairs and Tourism (DEAT), Department of Water Affairs and forestry (DWAF) and the respective provincial Ministries for the Environment in each of the Western Cape and Eastern Cape provinces. It has

## C.A.P.E. Implementing Agencies (signatories to the C.A.P.E. MoU)

*Birdlife South Africa*

*Botanical Society of South Africa*

*City of Cape Town*

*Conservation International*

*Development Bank of South Africa*

*Fauna and Flora International*

*Open Africa*

*South African National Biodiversity Institute*

*South African National Parks*

*Table Mountain Fund*

*The Department of Agriculture*

*The Department of Environmental Affairs and Tourism*

*The Department of Water Affairs and Forestry*

*The Eastern Cape Department of Agriculture and Land Affairs*

*The Eastern Cape Department of Economic Affairs, Environment and Tourism*

*The Western Cape Department of Economic Affairs, Agriculture and Tourism*

*The Western Cape Department of Environmental Affairs and Development Planning*

*The Wilderness Foundation*

*Western Cape Nature Conservation Board (CapeNature)*

*Wildlife and Environment Society of Southern Africa*

*World Wide Fund for Nature (South Africa)*

*Nelson Mandela Metropolitan Municipality*

*Eastern Cape Parks Board*

met less frequently than the CIC due to the demanding schedules of its members. The recent promulgation of the National Environmental Management: Biodiversity Act has prompted a reassessment of the role of the CCC. One suggestion is that it could play the role of a national co-ordination structure for all bioregional programmes, rather than focusing solely on the C.A.P.E. Programme. This discussion is ongoing.

The C.A.P.E. Implementation Committee (CIC) comprises representatives of the signatories of the C.A.P.E. Memorandum of Understanding (MoU). The CIC has met every quarter since May 2001 with representation from all sectors involved in implementing the C.A.P.E. Strategy. Its primary functions are to assess implementation progress in light of the MoU and subsequent agreements, and to discuss emerging issues. It plays an important role in the governance of the programme, including oversight of the



*Dipolelo Elford was elected as Chair of the C.A.P.E. Implementation Committee in 2005. She is Chief Director in the Western Cape Dept of Environmental Affairs and Development Planning, and so highly influential in the way in which environmental governance and decision-making takes place. Under her leadership, the province has pushed forward with its law reform programme.*





*Trevor Sandwith was appointed as C.A.P.E. Co-ordinator in 2001 after having led the Institutional Component of the C.A.P.E. Strategy process. Prior to this he was Head: Planning for KZN Wildlife and is a conservation biologist and strategy consultant by profession. Trevor is also Deputy-Chair of the IUCN World Commission on Protected Areas and has specialized in the governance and implementation of transboundary conservation programmes.*

activities of the C.A.P.E. Co-ordination Unit, and the facilitation of a co-ordinated and co-operative approach to implementation by the C.A.P.E. partnership. It also provides a mechanism to agree on priorities for funding, to seek alignment and to facilitate and broker partnership arrangements.

The elected Chair and Deputy-Chair positions have included:

- David Daitz and Kristal Maze (2000 – 2005)
- Dipolelo Elford and Mark Botha (2006 to present)

### (iii) The C.A.P.E. Co-ordination Unit

The C.A.P.E. MoU led to the then National Botanical Institute (NBI) becoming the programme management agency for C.A.P.E. This was a fortuitous arrangement with the NBI's transition to becoming the national agency responsible for both biodiversity and bioregional planning, and hence the mandated home of the C.A.P.E. Programme. Now housed together with several other conservation

agencies within SANBI's Centre for Biodiversity Conservation in Cape Town, the C.A.P.E. Co-ordination Unit (CCU) comprises a small core of staff responsible for its functions which are:

- to perform only those essential functions that would otherwise not be performed by other partner agencies;
- to facilitate coordination of activities across the CFR and co-operation between C.A.P.E. partner organisations;
- to catalyse new areas of work; and
- to act as a secretariat for the CIC and CCC.

Three staff members support the programme technically: Trevor Sandwith (C.A.P.E. Coordinator), Mandy Barnett (C.A.P.E. Programme Developer) and Azisa Parker (C.A.P.E. Project Developer). Samantha Court (C.A.P.E. Financial Manager) supports the financial management of the programme, and a secretary/receptionist provides office support.

With support from the CEPF-funded Table Mountain Fund Capacity Building Pro-

PROFILE

## David Daitz

David Daitz was appointed as the Park Manager/ Project Manager for the Cape Peninsula National Park before the park was a reality, and was given the brief that he should do whatever was necessary to make this park a reality. Today we have the Table Mountain National Park, a component of the Cape Floristic Region World Heritage Site, as a tribute to this perseverance and aptitude. When the time came to launch the new Western Cape Nature Conservation Board, David was appointed as its only staff member and given the responsibility of developing this new institution from scratch. Today we have a new nature conservation parastatal that has fundamentally changed the approach and status of conservation in the Western Cape.

When the C.A.P.E. Strategy was being prepared, it was David who accepted leadership of the Interim C.A.P.E. Co-ordination Committee, and who assisted in negotiating the agreements that led to a ministerial mandate for the C.A.P.E. Programme. He was then unanimously elected as the first Chairman of the C.A.P.E. Implementation Committee, where he has energized the relationship among 20 organisations that have a significant role to play in the implementation of the C.A.P.E. programme. He was also responsible for ensuring that his own organization, CapeNature was aligned to and indeed adopted the C.A.P.E. Strategy in its entirety.

With his forthright no-nonsense attitude, he sometimes pushed hard to make these things happen, and this is the nature of being a pioneer. What sets David apart is that he has never abandoned his previous commitments but has built on them, accepting his responsibility without fear or favour, and doing everything in pursuit of the conservation of the CFR's globally significant biodiversity, but also passionately committed to the people of the region and the people in conservation. It is David who fashioned the ideas that led to the positioning of the C.A.P.E. Programme's purpose to stimulate an economy based on conservation: the biodiversity economy, and to make nature conservation a real force for socio-economic development in the region.



gramme, and DeNovo Communications Pty (Ltd), two interns complete the team. Monique Damons and Fumanekile Wisani are all employed on contracts as part of the programme's strategy to build capacity for conservation management in the CFR.

The CCU's activities are supported by the Eastern Cape Bioregional Programmes Coordination Unit, which is also housed within SANBI and based in Port Elizabeth. This unit is headed by Mandy Cadman and is supported by a small team which is tasked with the co-ordination of the C.A.P.E., SKEP, STEP, Wild Coast and Grasslands programmes in the Eastern Cape. When the programme was initiated, it was not clear what functions would have to be performed, and the size and diversity of the CCU has grown with the growing responsibilities of the CCU. Many functions emerged over the life of the programme and have proved essential for setting direction and maintaining the momentum of the C.A.P.E. Programme.

The unit's ability to respond to the needs of partners, to give effect to the convening power of the C.A.P.E. Programme and to support the building of capacity in partner institutions adds value to the programme. Significant effort has been needed to support these functions, and this has been an interesting emerging lesson: it takes time to build a culture of co-operation, and the CCU must be responsive to the needs of C.A.P.E. Partners if the enthusiasm for and commitment to the programme is to be sustained.

Concern has been raised about the number of meetings and workshops that are held, and efforts are being made towards



*Mandy Barnett joined the CCU in 2003, with a PhD in Behavioural Ecology and a background as a consultant in environmental management and corporate sustainability. Her experience in stakeholder engagement and conflict resolution processes, and orientation to participatory planning have been invaluable tools in her work as C.A.P.E. Programme Developer, where relationship building has emerged as a key element of the work. Mandy first consulted to the C.A.P.E. Programme in 2002 during project preparation.*

finding a balance. Current initiatives are focusing on increasing the staff complement of the CCU, looking at rationalising its functions, and experimenting with formats for our meetings and workshops.

*A principle of the C.A.P.E. Programme is not to build new institutions to address the problems of the region: one of its primary roles is to work with existing institutions to build their capacity to be more effective, and to raise awareness among local actors so that participation in and support for the programme is increased.*

In the Eastern Cape, however, because of the intersection of a number of bioregions that involve many Eastern Cape organi-



*Azisa Parker joined the programme in March 2005 to support its communication and project development functions. With a background in social development, Azisa brings skills of social work and community engagement to the programme. Her experience of working with rural communities and managing a small grants fund has provided her with the necessary skills to support the implementation of the CEPF portfolio for the CFR.*



A vibrant forum.

PROFILE

Glenda Kayster reflects:

Glenda Kayster, the Human Resources Manager of CapeNature reflects: "David Daitz's brutal honesty with himself and with others, in my opinion, is his single-most outstanding character trait, as well as his Achilles' heel. In today's highly competitive workplaces, where outsmarting one another is the name of the game, such honesty is both refreshing and a rare find. I feel hugely privileged to be part of an amazing high performance team. It is difficult to describe the magic, the warmth, the energy and mental stimulation that exist within the team. David built a team, which comprises of high calibre professionals where collegial respect is real and where difference is valued. He conducts himself in such a way that he builds the confidence of those around him – which is not a trivial matter considering our country's history. His annual Whale Trail walk with the most promising young up and coming employees typifies this point. CapeNature is richer for having him on board."







*Mandy Cadman is the programme co-ordinator for the Eastern Cape's bioregional programmes. With a responsibility that far outweighs the resources available, Mandy's key role has been to negotiate buy-in from government departments and municipalities for specific project interventions in the region.*



One of the CCU's main responsibilities is to convene meetings of implementers to address strategic issues. It provides a neutral meeting space and facilitates dialogue and consensus decision-making.



zations, it was considered necessary to establish an Eastern Cape "C.A.P.E." Hub. Dr Mandy Cadman was appointed as Eastern Cape Bioregional Programmes Co-ordinator. Her first responsibility was to seek greater commitment to C.A.P.E. from Eastern Cape-based organizations and she successfully negotiated the establishment of the Eastern Cape Implementation Committee, which also co-ordinates activities in other adjacent bioregions. Secondly, with support from Michelle Myles and Tracey Cummings, she is assisting with project development and capacity-building for C.A.P.E. priorities in the eastern portion of the CFR.

## 8.2 Services of the CCU and other co-ordination mechanisms

### (i) Programme management

Clear governance and co-ordinated implementation are dependent on effective communication between C.A.P.E. partners and implementers, and a primary function of the CCU is to convene formal mechanisms through which regular communication between partners can take place. In this role, the CCU co-ordinates a managed network of implementers: it acts as a secretariat for the CCC and CIC, supports quarterly meeting of all task team leaders and attends various meetings, steering committees and workshops with a view to promoting alignment, co-operation and co-ordination among C.A.P.E. Partners

The CCU also works with implementing agencies to develop work programmes and terms of reference for new positions or pieces of work, manages a project monitoring, reporting and financial management system and guides procurement so that it meets donor requirements.

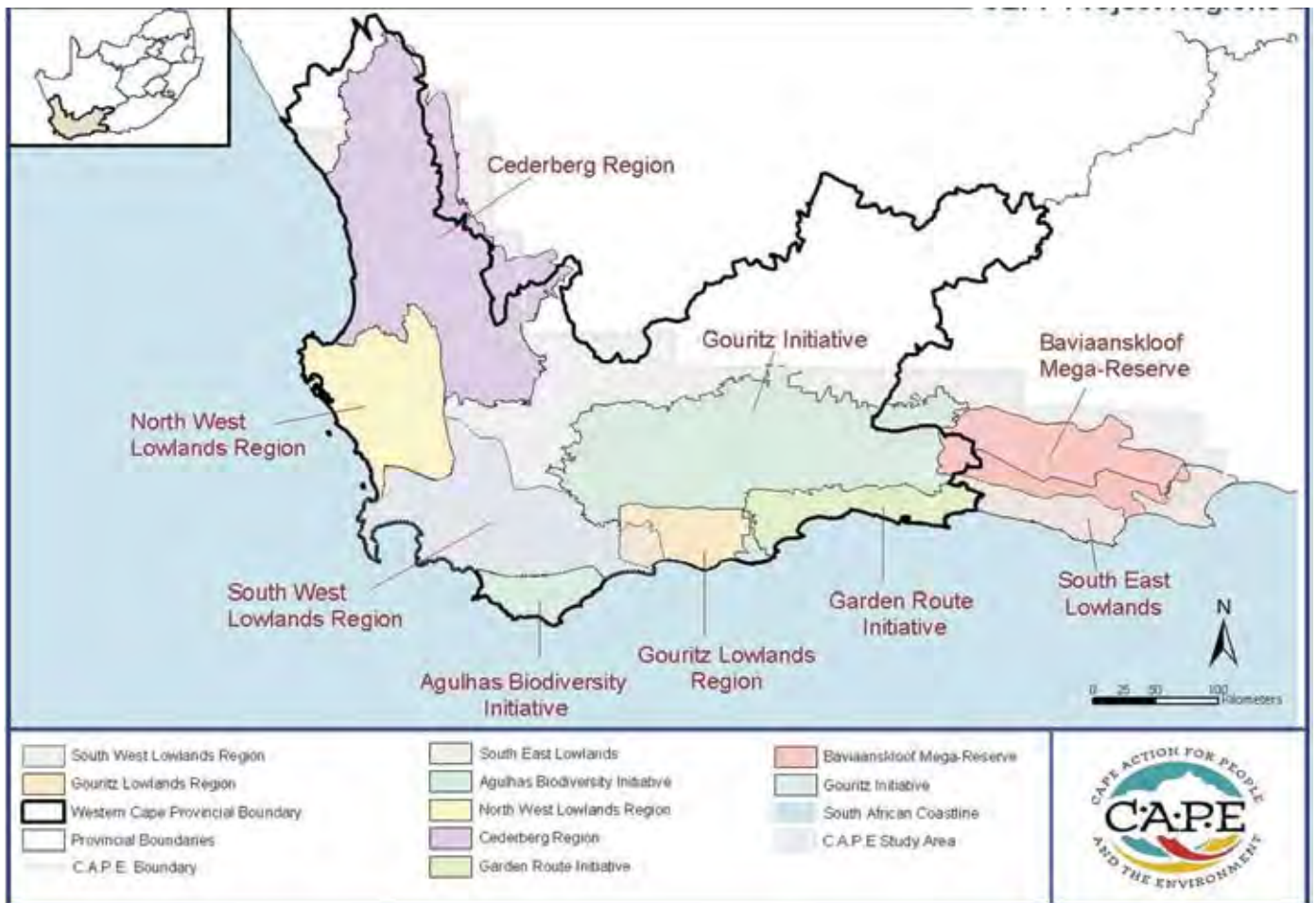
### (ii) Sub-regional co-ordination and implementation

The co-ordination of implementation spatially and across thematic areas of the programme is achieved through Project Management Units (PMUs) and C.A.P.E. Implementation Task Teams. These units and task teams facilitate ongoing networking between CFR institutions and individuals and are a powerful force behind the co-ordinated implementation of the programme.

Sub-regional Project Management Units operate in the larger spatial initiatives of the programme to co-ordinate and support local efforts (Chapter 2). These include the Greater Cederberg Biodiversity Corridor, Agulhas Biodiversity Initiative, Baviaanskloof Mega-Reserve, Garden Route Initiative and Gouritz Initiative PMUs. Strategies that are adopted are developed in response to the unique characteristics of each landscape initiative, and implementation is guided by steering committees that comprise representative regional stakeholders including local government, NGOs and civil society representatives with an interest and stake in the outputs. These steering committees ensure effective governance and integration at the sub-regional scale.

Taking guidance from their steering structures, the PMUs support stewardship activities, project development and stakeholder engagement processes, and work closely to support local actors to fulfil their commitments to the programme. The main function of these units is to co-ordinate and support local implementation, and to build lasting capacity in local actors to ensure that the efforts of the programmes are sustainable.

The C.A.P.E. Implementation Task Teams function to coordinate themed activities across the region. These task teams operate in different ways: some are co-ordinated by individuals who were specifically appointed by institutions for this purpose; others are led by champions from within C.A.P.E. partner institutions who see the value and importance of this



function. Importantly, the leadership of the programme is shared across institutions. This sharing of responsibility is essential to the success of a programme that is based on partnerships and an acknowledgement that success will only be achieved with sustained support from all actors.

The pathway of implementation has not been predictable, and a characteristic of the programme has been its flexibility and ability to scale up (or down) in response to opportunities and challenges. Leadership has been an important factor, and across the programme, champions have been, and are emerging to advance particular agendas. These champions can be found across the CFR, in NGOs and institutions, leading local initiatives that are advancing new approaches.

Co-ordination is further supported through quarterly meetings of all task team leaders and PMU co-ordinators. These meetings are known as Task Team Roundtables and facilitate sharing of lessons, reporting on progress and the identification of emerging issues that require a co-ordinated response. To date, leader-

ship of the Task Teams and PMUs has been indicated overleaf.

### (iii) Cultivating relationships

One of the most powerful contributions of the programme has been its role in introducing implementers at various levels of the programme to one another, and creating a non-threatening space for dialogue and innovation. Many of the innovations of the programme are devised by individuals who, through mutual respect and understanding of one another's perspectives, are able to devise win-win situations in previous areas of poor co-operation. A good example illustrating this point is the case of the Bredasdorp Multipurpose Centre that has been developed as a result of co-operation between people and organisations in the Overberg (Chapter 2).

### (iv) Co-ordinating investment

An interesting, and perhaps obvious, emerging property of the programme is that impact is likely to be greater and more sustainable where investment focuses on priorities and is co-ordinated, and where projects are designed to

Co-ordination takes place across the geographical extent of the programmes, with governance and management structures in each sub-regional location.



Conference discussion.



Leadership of the Task Teams and PMUs		
Task Team	Agency	Task Team Leader
Institutional Strengthening	SANBI	Trevor Sandwith
Catchment Management	CapeNature	Wille Enright
Capacity Building	SANBI	Glenda Kayster/Trevor Sandwith
Biodiversity GIS	CapeNature	Selwyn Willoughby
Conservation Education	SANBI/ GFEESC	Heila Lotz-Sisitka
C.A.P.E. Coordination Unit	SANBI	Trevor Sandwith
Monitoring and Evaluation	SANBI	Mandy Barnett
Eastern Cape Coordination Unit	SANBI	Mandy Cadman
Baviaanskloof Megareserve	WF	Matthew Norval
Greater Cederberg Biodiversity Corridor	CapeNature	Jaco Venter
Garden Route Initiative	SANP	Andrew Brown
Kogelberg Biosphere Reserve	CapeNature	Gonald Present
Agulhas Biodiversity Initiative	SANParks	Tertius Carinus
Gouritz Initiative	CapeNature	Albert Ackhurst/Jan Vlok/ Ivan Donian
Marine	WWF/ MCM	Deon Nel, Belamani Semoli/Alan Boyd
West Coast Biosphere Reserve	SANParks	Gary de Kock
Conservation Planning	CapeNature	Ernst Baard
Land Use Planning	SANBI/ DEA&DP	Mandy Driver/ Dennis Laidler
Conservation Stewardship	CapeNature	Chris Martens
Resource Economics	SANBI	Mandy Barnett
Urban Biodiversity	SANBI	George Davis
Fire Management	CapeNature	Zane Erasmus
Invasive Aliens	CapeNature	Fanie Bekker/ Louise Stafford/ Dean Impson
Estuaries	CapeNature	Kas Hamman
Wetlands	SANBI/ DWAF	Mandy Noffke/ Naomi Fourie



complement and reinforce one another. The co-ordination structures of the programme assist in securing financial and institutional effort, focusing it on priorities, and then reinforcing this investment with further complementary investments. This is attractive to local and international partners, and both large and small funders, as it ensures that investments are bolstered by strong institutional support and committed co-financing, and that they form part of integrated strategies with high stakeholder support and improved chances of sustainability.

This approach has seen integrated investment support the exploration, piloting and scaling up of novel approaches to conservation, and has facilitated the development of innovative partnerships and new collaborations between previously competing actors.

The CCU plays a coordination role for the CEPF's CFR portfolio, supporting project development and a peer review process. Over time, and as CEPF has shifted its emphasis to local coordination and governance, the unit has played an increasing role in guiding CEPF investment in the region. This role has been particularly useful, both to the C.A.P.E. Programme and to CEPF. This responsibility has not come without its challenges, however, and the unit has grappled with the sometimes conflicting roles of building partnerships and co-operation, and adjudicating investments.

The CCU is one of several locally-based co-ordination units that support CEPF investments globally. It was the first co-ordination unit to be established, and is the most cost-effective of all. This efficient use of resources is partly a result of the unit playing a co-ordination role across many dimensions of the programme, which results in economies of scale.

### (v) Support for learning networks: the C.A.P.E. Protected Areas Forum

In addition to the C.A.P.E. Partners Conference and Fynbos i-Forum (Chapter 7), the CCU supports the C.A.P.E. Protected Areas Forum (PAF). This bi-annual meeting of co-ordinators and staff of project management units and task teams promotes collaboration across landscape initiatives and between institutions. The PAF has proved to be a valuable vehicle for looking at cross-institutional issues

## Multiple agency contributions to initiating and scaling up projects.

*The following are examples of projects where different funders have made significant contributions, either sequentially or in a complementary manner according to their mandates. In each case, local implementing agencies have provided co-financing and continuity for implementation.*

*Biodiversity and Wine Initiative: BotSoc+ CI + CEPF + Mazda Wildlife Fund + SA Wine and Brandy + Green Trust*

*Conservation Stewardship: BotSoc + TMF + CapeNature + CEPF + GEF + Malago Foundation*

*Baviaanskloof Megareserve: Wilderness Foundation + TMF+ Eastern Cape Development Corporation+ CEPF + Global Conservation Fund + GEF*

that are material to the objectives of the C.A.P.E. Strategy. Focal areas to date have included the implementation of management systems for protected areas, including the CFR's World Heritage Sites, the roll-out of stewardship programmes, and the development of tourism strategies across the region.

### (vi) Programme and project development

A recommendation of the 2005 C.A.P.E. Partners' Conference was that partners, and particularly smaller organisations, should be supported to develop their capacity to develop and implement projects and to secure funding. In response to this, the CCU has initiated the C.A.P.E. Project Developers' Forum. This is an annual forum where people who are involved in project development activities can share their approaches, ideas and challenges and build a supportive community of project developers and funders. The need comes from the fairly significant focus on project development across the bioregion, and the levels of capacity of people who are tasked with this responsibility. This forum had its first meeting in March 2006, with good participation from across the CFR.

The CCU has also appointed consultants to develop a series of simple tools, in the form of a project development series, to guide project identification, planning, implementation and monitoring and eval-



Mandy Barnett facilitates a discussion.



C.A.P.E. includes many learning networks where partners gather to discuss and resolve issues of concern and build up technical know-how as well as network of expertise and support. Here Owen Henderson arranges ideas generated by participants.





uation. The approach will have a strong emphasis on participatory planning, and will include guidelines for “trainers” so that the technology can be rolled out widely across the programme. It is being developed in consultation with various funders, including WWF-SA, TMF, DBSA and CEPF. In its efforts to support capacity-building for bioregional programmes throughout South Africa, the tools that are being developed will be relevant to all the bioregional programmes in the country.

**(vii) Communication**

Since the start of C.A.P.E. Programme implementation, a communication strategy has guided the programme. This included the development of a programme brand with policies and guidelines for production of communication messages and materials that were associated with the programme. These guidelines have been used to support the

development of a collection of brochures and publications that publicise the activities of C.A.P.E. partners, and provide them with an “umbrella” brand within which the individual partners continue to operate as independent entities.

the communication programme, the CCU plays an important role in coordinating media briefings around events that are material to the programme, and in supporting C.A.P.E. partners to do the same.

**(viii) Advocacy**

The CIC and CCU also play important advocacy roles on behalf of the partnership, co-ordinating responses to policy and law reform processes, and creating links between site-based initiatives and the political structures that are needed to support them. A recent ministerial visit to the Sandveld area is an example of this approach, where the convening power of C.A.P.E. resulted in a high-level delegation to address mounting concern about land-uses in the area.

The Sandveld area, 160 km north of Cape Town, is the most threatened of all areas in the GCBC. Agriculture is the dominant employer in the broader GCBC, and the main economic activities in the area are potato farming, rooibos tea cultivation, fishing and tourism. In the Sandveld, there are a number of economic and resource utilisation factors that appear to be compromising the sustainability of the dominant potato and rooibos tea farming sectors.



C.A.P.E. has enabled partners to associate within an overall C.A.P.E. Partnership brand—this is an example of a C.A.P.E. Brochure that links a programme with the overall partnership.

The C.A.P.E. Website [www.capeaction.org.za](http://www.capeaction.org.za) is set to become the portal of the C.A.P.E. Fynbos i-Forum. A bi-monthly electronic newsletter (C.A.P.E. e-News) is sent to over 2000 stakeholders, informing them of news, innovations, upcoming or past events, consulting and jobs.

The C.A.P.E. website is a cornerstone of the programme’s communication strategy. In addition to background and contextual information about the programme, the website lists all implementation partners and their contact details. It includes a complete database of projects that receive funding from CEPF, TMF or other

donors, and a complete database of C.A.P.E. stakeholders. It also contains useful information about employment and consulting opportunities, a library with relevant documents and an archive of C.A.P.E. e-News stories. Although not a high profile of

**8.3 Measuring progress**

**(i) Towards an overarching system for monitoring and evaluation**

Several monitoring and evaluation (M&E) mechanisms are already in place for measuring progress towards some of the stated objectives of the C.A.P.E. Programme.

These include:

- The Fynbos Forum, which has become an important annual “State of the C.A.P.E.” review mechanism;
- The annual C.A.P.E. Partners’ Conference, which ensures that the emergent insights and lessons learned from implementation are translated into recommendations for the further adaptation and roll-out of the programme under the supervision of the CIC;
- Project level M&E systems for various projects, including the programme’s GEF projects;





Minister Tasneem Essop accompanied departmental officials on a visit to the West Coast Sandveld, where it was agreed that an action plan was urgently required. Here children from the Cederberg ensure that the minister knows about their priorities.

*Through the C.A.P.E. partnership, the Sandveld Task Team was able to host a Ministerial visit to the area, the aim of which was to expose the Ministries of Environment and Development Planning and Agriculture to the natural resource utilization issues of the area, and to agree on a course of action that will support the interests of local stakeholders and the broader community.*

- An M&E system for the CEPF investment.

To complement these somewhat fragmented systems, and to support the overall ongoing appraisal of the implementation of the C.A.P.E. strategy, the programme is currently investing in the development of an integrated M&E system. This system will measure the progress of the strategy towards its 2020 objectives, and will integrate its biodiversity and socio-economic objectives.

Clients of the emerging C.A.P.E. M&E system include political leaders, partner agencies, donors and project implementers. It will link to national and international monitoring and reporting frameworks, and will provide a feedback mechanism to implementers, allowing for adaptive management and the refinement of activities in response to emerging properties of the programme. Importantly, it will provide a barometer of the progress of partnership and its impact. The first evaluation of the programme using this system is planned for June 2007.

### (ii) Impact

The C.A.P.E. Programme has an explicit purpose of conserving biodiversity and sustaining benefits to society. It is too early to judge conclusively the success of the partnership in reversing the decline of

the CFR's biodiversity, or in contributing to its socio-economic objectives, but early signs seem to suggest that the partnership is delivering on some of its intentions:

- Local co-ordination mechanisms that were established by the programme are becoming valuable governance and communication mechanisms for a range of activities in their planning domains.
- The programme has catalysed the involvement of a broader range and greater number of stakeholders than ever before. It has resulted in new partnerships that bridge the gaps between government, civil society and the private sector. This is building a community of diverse project implementers across the region, with layered and complementary investments in priority areas.
- Biome-wide co-ordination mechanisms have triggered policy and institutional responses: CapeNature has adapted its strategy so that it is completely aligned with the C.A.P.E. Programme; DEA&DP is investing in an "Environmental Economy" programme; policies that take account of the critical biodiversity of the region have been developed to control resort development; and new legislation has been promulgated that responds to the need for a policy framework to safe-



Minister Essop provided a cake to celebrate the launch of the Provincial Spatial Development Framework.







A wide range of stakeholders is involved in meetings like the C.A.P.E. Partners' Conference.

guard biodiversity within the context of the socio-economic priorities of the country.

- Across the programme and the CFR, and outside the formal meetings and workshops, there are signs that a new culture of co-operation is emerging. This is evident in the work of the Sandveld task team; the “one stop shop” that is being piloted on the Agulhas Plain; the co-ordinated application of area-wide farm planning; and progress with the province’s Cultivation MoU.

Further, the C.A.P.E. Programme is pioneering approaches to co-ordination that are being adopted and adapted by initiatives with similar co-ordination objectives:

- Approaches to conservation planning that were initiated in C.A.P.E. have been improved upon, and applied in other South African bioregional programmes;
- The Eastern Cape Implementing Committee (ECIC) was able to develop an MoU similar to that of the C.A.P.E. MoU, drawing largely on the institutional willingness that had been created through the development of the C.A.P.E. MoU;
- Several approaches that were initiated by the C.A.P.E. Programme

have been adopted by CEPF in other global hotspots. This includes support for locally based co-ordination units in all hotspots that are receiving CEPF support, and support for regional meetings along the lines of the C.A.P.E. Partners' Conference as a means of bringing all implementation partners together. For example, the SKEP programme, which is also supported by CEPF, held its first meeting in May 2006.

Key success factors include:

- A common vision and implementation strategy that is agreed to by institutions whose co-operation is required, and that is consistent with national biodiversity and development priorities: i.e. one inclusive, integrated plan that is supported by all actors;
- The preparation of a clear programme of action, with dedicated roles and responsibilities among C.A.P.E. Partners;
- An implementation plan that focuses on threats and challenges, but is also responsive to emerging opportunities;
- The identification and proactive development of important policies and legislation that resonate with social priorities and reforms;
- The engagement of implementing agencies at all levels in a non-threat-

ening co-ordination mechanism that allows for peer review, analysis and discussion, as well as the celebration of successful initiatives and an honest appraisal of less successful ones;

- The identification of institutional and community champions, who are prepared to undertake leadership roles and to work across institutional boundaries in a spirit of co-operation;
- The use of catalytic funding, which leverages additional co-financing and in-kind support and commitment, and the co-ordination of investment to priorities;
- Fair and effective systems of governance and accountability that are decentralized to the sub-regional levels;
- A combination of top-down and bottom-up approaches that allow for alignment with the C.A.P.E. Strategy as well as with stakeholder needs;
- An implementation programme that targets the enabling environment while supporting sub-regional and site-level initiatives, and that is flexible and responsive to opportunities and challenges.



*Theo Tolmay brings his experience as a town planner to bear on one of the most influential portfolios in the Western Cape provincial administration. As Head of the Dept of Environmental Affairs and Developmental Planning, the planning and decision-making processes of the province fall squarely in his court. Involved in the C.A.P.E. programme from the start, Theo has ensured that the Provincial Spatial Development Framework has been put in place along with many other important forward planning and decision-making policy and regulatory instruments. Under his leadership and that of his colleagues Rudi Ellis, Dipolelo Elfjord, Chris Rabie, Dawie Kruger, Mark Gordon and Tony Barnes have promoted not only a sustainable development agenda for the province, but the means to make it work in practice.*



It was possible to achieve the signing of the Eastern Cape Bioregional Programmes MoU in 2005 drawing together all of the influential partners in the Eastern Cape.

The C.A.P.E. Co-ordination Unit consists of (front left to right) Trevor Sandwith (Co-ordinator), Monique Damons (Project intern), and Samantha Court (Financial Manager) as well as (back left to right) Fumanekile Wisani (communications intern), Mandy Barnett (Programme Developer) and Asiza Parker (Project Developer).











*The C.A.P.E. Programme is an interplay of organisations and individuals with the imperatives of a strategy that sets goals and invites participation. One of the strengths of a co-ordinated programme is that there is an opportunity to reflect on progress, experiences, successes and failures and to share the insights of these lessons across and beyond the partnership. This is one of the purposes of this book, which is essentially a collection of stories captured from the people and projects that make up the C.A.P.E. Programme. In this Chapter, some of the most important insights, lessons and perspectives are highlighted. It is not comprehensive and nor is it authoritative. At worst, it should be regarded as an opportunity for criticism. At best, it should be regarded as a series of talking points, that the C.A.P.E. Implementation Partners will notice, respond to, incorporate into their thinking for the road ahead. As the C.A.P.E. Programme moves towards more formal reviews of progress, it will provide a checklist of issues that projects have generated that will stimulate discussion and adaptation. The perspectives raised have been organised in terms of the three overall objectives of the C.A.P.E. Strategy outlined in Chapter 1. Each C.A.P.E. Partners' Conference has similarly derived lessons that have been couched as recommendations for the future implementation of the programme. A summary of these recommendations should be read in conjunction with the following perspectives (Appendix 3).*

## CHAPTER 9 Looking ahead

*What we do in conservation achieves our conservation targets  
but how we do it achieves our social and economic goals.*

—Trevor Sandwith, C.A.P.E. Coordinator

A summary of the C.A.P.E. 2000 Strategy	
Themes	Strategic Components
1. Conserving biodiversity in priority areas.	<ul style="list-style-type: none"> <li><input type="checkbox"/> Strengthening on-and off-reserve conservation</li> <li><input type="checkbox"/> Supporting bioregional planning</li> </ul>
2. Using resources sustainably.	<ul style="list-style-type: none"> <li><input type="checkbox"/> Conserving biodiversity and natural resources in catchments</li> <li><input type="checkbox"/> Improving the sustainability of harvesting</li> <li><input type="checkbox"/> Promoting sustainable nature-based tourism</li> </ul>
3. Strengthening institutions and governance.	<ul style="list-style-type: none"> <li><input type="checkbox"/> Strengthening institutions</li> <li><input type="checkbox"/> Enhancing cooperative governance</li> <li><input type="checkbox"/> Promoting community involvement</li> </ul>

A summary of the C.A.P.E. 2000 Strategy	
Themes	Strategic Components
1. Conserving biodiversity in priority areas.	<ul style="list-style-type: none"> <li>□ Strengthening on-and off-reserve conservation</li> <li>□ Supporting bioregional planning</li> </ul>

## 9.1 Conserving biodiversity in priority areas

### What have we learned about protected areas?

#### Learning about conservation planning

- Systematic conservation planning requires the conservation of both a representative sample of species and their habitats (biodiversity pattern), as well as ecological and evolutionary processes. In species-rich regions, reservation targets may far exceed the minimum of 10% recommended by the IUCN.
- Conservation planning incorporates both the establishment of protected areas as well as the sustainable management of biodiversity in the production landscape.
- Both broad-scale (1:250 000) and fine-scale (1:50 000 or finer) planning are required in order to inform land-use planning and decision-making.
- Geographic information systems (GIS) and fine-scale maps are essential tools for effective land-use planning by municipalities, and need to be able to be delimited at municipal boundaries.
- Most land-use planners and decision-makers in local authorities require capacity-building and support to use these technologies and interpret spatial products effectively.
- Every conservation plan must be backed up with an operational framework for implementation. Implementing agencies and interested stakeholders should be involved in the conservation planning process in a way that addresses their needs and interests.

#### Learning about conservation management

- Managing landscape-level conservation projects, such as mega-reserves and biodiversity corridors, is complex and challenging. Adaptive management enables the management unit to keep focusing on their objectives while remaining responsive to opportunities.
- South Africa has impressive environmental legislation and regulations, but in order to put policy into practice this must be backed up by education and enforcement.
- In some cases, laws and regulations provide disincentives for individuals and organisations to act in environmentally responsible ways.
- Government agencies must invest in more effective extension services (e.g. conservation stewardship, agriculture and LandCare officers, and municipal environmental officers). Extension work is complex, both technically and socially, and should be the responsibility of skilled, experienced people, and not delegated to junior staff members.
- When addressing issues like illegal poaching, it is necessary to take a holistic view of the problem; provide educational programmes, invest in the creation of alternative livelihoods to provide employment and address poverty, and strictly enforce regulations.
- While a great deal of work has been done to remove invasive alien plants in the fynbos biome, more attention needs to be paid to ecological restoration.
- Protected areas in the Cape Floristic Region have yet to develop flagship responsible tourism operations that truly enhance the financial sustainability of these protected areas and benefit surrounding communities. One problem is that the current regulatory environment constrains opportunities for public-private partnerships.



## What have we learned about conservation stewardship?

### Learning about stewardship

- Many land owners are keen to conserve biodiversity on their properties, as demonstrated by the LandCare and Stewardship projects; however they need information and advice to spark their interest and support their efforts.
- Land-use decisions must be pragmatic; farmers will not move away from agriculture in order to embrace ecotourism, but will consider diversification if it results in tangible economic benefits.
- LandCare and Conservation Stewardship have many goals in common, providing opportunities for nature conservation and agriculture departments to work together and support each other.
- In order to encourage land owners to participate in the Conservation Stewardship programme, a range of options rather than “either / or” choices are necessary.
- Researchers, extension officers and conservation managers need to communicate effectively (and humbly) with land owners. Equal learning partnerships contribute to respectful, effective communication.
- Programmes like LandCare and Conservation Stewardship can both strengthen and benefit from frameworks and programmes like spatial development frameworks and integrated development plans that are striving for sustainable development.
- Social and professional networks are extremely influential. Ideas like conservation farming and sustainable agriculture are more likely to be adopted in an area once they have been approved by influential peers.

A summary of the C.A.P.E. 2000 Strategy	
Themes	Strategic Components
2. Using resources sustainably.	<ul style="list-style-type: none"> <li>□ Conserving biodiversity and natural resources in catchments</li> <li>□ Improving the sustainability of harvesting</li> <li>□ Promoting sustainable nature-based tourism</li> </ul>

## 9.2 Using resources sustainably

### What have we learned about catchment management?

#### Learning about poverty relief projects

- Poverty relief projects require implementing agencies to invest considerable time and resources in project management and administration. This responsibility should leverage existing capacity and resources and should not compromise the ability of staff to carry out their core functions.
- Organisations involved in poverty relief projects in an area should ensure that they offer similar conditions of employment (e.g. different daily rates or services); organisations that offer higher wages or more perks undermine projects that cannot afford to do so.
- Poverty relief projects require ongoing monitoring and evaluation on a variety of levels, from ensuring that the programme benefits the most needy members of the community, to demonstrating that operational targets are being met.
- Poverty relief projects may help organisations to achieve certain labour-intensive projects, but they generally do not contribute to stable employment in neighbouring communities.
- Poverty relief programmes provide a temporary lifeline for the most needy and vulnerable people in our communities. Agencies that disburse poverty relief funds must ensure that they have the necessary capacity and commitment in order that the needs of the poor are not compromised; administrative processes must enable and not undermine the implementation of poverty relief programmes.

- Where possible, conservation agencies should become engaged in poverty relief programmes that leverage their conservation-specific skills and capacities, and where opportunities for advancement of entrants can be identified.

## What have we learned about the biodiversity economy?

### Learning about biodiversity-based businesses

- Biodiversity business partnerships should not be entered into lightly. It is important that the different stakeholders should both understand and value the principle of sustainability and its social, ecological and economic goals.
- In general, the conservation sector lacks people with business skills who can engage effectively with commerce and industry.
- Working with industry structures is both more efficient and more effective than trying to work with individual businesses.
- Most industries have sustainability programmes (e.g. ISO 14 001; green labelling), which provide opportunities for conservation initiatives to engage with them.
- There is a need to be realistic in terms of the financial benefits that biodiversity can generate, and avoid trying to achieve too many goals through one project (e.g. conservation, income-generation, BEE, social upliftment, capacity development, etc.).

A summary of the C.A.P.E. 2000 Strategy	
Themes	Strategic Components
3. Strengthening institutions and governance.	<ul style="list-style-type: none"> <li>□ Strengthening institutions</li> <li>□ Enhancing cooperative governance</li> <li>□ Promoting community involvement</li> </ul>

## 9.3 Strengthening institutions and governance

### What have we learned about strengthening institutions?

#### Learning about planning and developing activities

- Each project or component of the programme must adopt a clear strategy and goals to provide direction and enable monitoring and evaluation, while at the same time remaining open to emergent outcomes and adaptation to what is learned.
- In a context of rapid change and limited resources, agility and flexibility in implementation is essential.
- It is better to set realistic, achievable goals than to make impressive-sounding promises that cannot be kept. Pilot activities should be recognised and specific plans for taking to scale should be identified.
- As large projects often take a long time to negotiate and get started, it is important to identify smaller, short-term activities to maintain interest among stakeholders, and to couple planning with implementation. A small grants fund is an important mechanism in this regard.
- While projects from other places can inspire and teach us a great deal, they cannot simply be transferred to a different context; considerable adaptation may be required for projects to work in different ecological and social settings.
- There is no shortage of innovative projects in the region. The challenge is for short-term catalytic projects to develop exit strategies that institutionalise the innovations so that they can be sustained. Steps should be taken immediately to secure institutional commitment to maintaining relevant short-term interventions and maintain impetus (e.g. stewardship).



- Integrating activities of different tiers and sectors of government can strengthen implementation (e.g. LandCare's Area-wide Planning together with conservation planning can strengthen the local IDP process).
- Co-ordination mechanisms have enabled implementing agencies to participate in non-threatening processes of peer review.
- Reporting to funders through the CCU has created an opportunity to reflect on and analyse lessons learned and to capture and disseminate insights widely within and between programmes.

### Learning about partnerships

- Most of the C.A.P.E. Partners recognise that effective partnerships are vital to the success and sustainability of their activities. However, it is important to admit that, unless there are clear mutual benefits, there is no real partnership, and it is unlikely to be sustained when other priorities materialise or the partnership is put under pressure.
- Partnerships are very easy to form but if they are to be sustained it is necessary to define roles and responsibilities clearly and to continue working at the relationship. A lack of clarity of purpose and responsibility can eventually destroy a partnership.
- Partnerships require that individual organisations defer to the interests of the collective and value co-operation over competition.
- Within C.A.P.E., many projects require the co-operation of a number of organisations. Individuals tasked with responsibilities must be accountable so that these multi-stakeholder processes are not undermined. Calling organisations to account should be in a non-confrontational process, often brokered by a third party.
- It is advisable to work in partnership with existing organisations and networks, rather than to try to establish new structures that will be difficult to sustain.
- Broadening participation not only generates numerous ideas and opportunities, but also enhances co-operation and ownership. Partners must be involved from as early as possible and participate in shaping the project or programme and therefore taking responsibility for it.
- Partnership projects (e.g. conservancies, community development projects) can be complicated. They take time to establish and require wise facilitation; rushing the process can undermine it entirely.
- The C.A.P.E. Programme has strengthened partnerships in the region, and enabled the sharing of information and expertise to the benefit of organisations and the environment. In some cases, where processes have been stalled for years, the neutral presence of the C.A.P.E. Programme has enabled consensus on a way forward.

### Learning about capacity-building

- The success and sustainability of initiatives relies on the existence of significant capacity at a local level, including technical and administrative / managerial skills. In general, C.A.P.E. has found that capacity to initiate and plan new projects is limited; the CCU is therefore focusing on building project development skills.
- Within a context where skills are limited, effective project staff are quickly promoted into more senior positions. Succession planning and capacity-building are required in order to maintain operational capacity while enabling more experienced people to move into leadership positions. Programme partners must invest in mentorship and succession planning.
- Targeted support for capacity-building has proved to be extremely powerful, especially when individuals, organisations and relevant capacity-development processes are well-matched. The investment though has been insufficient and must be scaled up.
- Short courses are no substitute for longer term, in-depth education and training opportunities and internships; however, internship programmes are very demanding and should not be entered into lightly.
- High levels of bureaucracy and low levels of efficiency have undermined the potential of the SETAs to enable environmental agencies to offer accredited training, even though there is a high demand for these programmes.

- Within the C.A.P.E. Programme, a sizeable web of biodiversity-related employment opportunities has developed, enhancing mobility within the sector. Ways must be found to ensure stable employment and career development, without undermining programme effectiveness through “job-hopping”.

### Learning about funding and financial sustainability

- C.A.P.E. provides a focal point to enable funders and funding agencies to disburse funds for biodiversity conservation and sustainable livelihood development more strategically and appropriately. Encouraging even closer collaboration between agencies can help to streamline decision-making, use resources more wisely and make the funding process more efficient.
- The C.A.P.E. Co-ordination Unit can help to engender confidence among potential donors regarding the risks of investment, and even shield implementing agencies from very laborious project development procedures where relationships and experience with fund-raisers by the CCU can be brought to bear.
- C.A.P.E. has identified priority areas, such as the biodiversity corridors, within which a number of projects are taking place. Focusing funding in areas where there is a “critical mass” of activities makes investment in projects less risky.
- Much of the funding allocated through the C.A.P.E. Programme has had a catalytic effect, serving to leverage additional co-financing and in-kind support and commitment for activities.
- While donor funding can enable special projects, there is no substitute for core funding. Without adequate staffing and core funding, fulfilling the reporting requirements of donors can put strain on an organisation. In addition, delays in receiving funding for projects can put severe strain on organisations.
- Funders can be highly effective if they view their role as a project partner rather than simply as donors. Projects can benefit from the skills and insights of funders.
- One of the shortcomings of the C.A.P.E. funding strategy has been inadequate small-grant funding. This has made it difficult for new partners to enter the programme, with the result that some parts of the original strategy have not yet been addressed. Ideally, a funding agency like the Table Mountain Fund should fulfil this function, increasing the total value of grants provided each year through growth in the capital fund.

### Learning about knowledge networking

- Informal, open networks such as the Fynbos Forum, the Protected Areas Forum and EE Friends, have served to encourage participation, make information accessible and stimulate innovation in the region. Programme partners should identify the factors leading to this success for application in the broadening of networks.
- Willingness to participate in a knowledge network develops as the benefits of working together become clear.
- Aligning an organisation’s information systems to the standards of the knowledge network enables access to and use of information generated by all partner organisations.
- Making information accessible requires both technology and presentation of the information in a readable, user-friendly format, where possible supported by contact with experts in the partnership.
- Making information freely available, rather than seeing it as a commodity to be sold, is what enables a knowledge network to thrive. As partners benefit from receiving information freely, they are more likely to make their information available, thus enabling a free flow of information.

## What have we learned about promoting community involvement?

### Learning about community participation

- Regional community-based projects involving volunteers (e.g. biodiversity monitoring, alien clearing) are most effective when a committed co-ordinator or project management team works with a network of champions, each of whom takes responsibility for a local cluster.
- It is important to recognise what motivates volunteers and to provide these incentives (e.g. opportunities to learn; regular feedback; recognition).
- Working in a biologically diverse region makes community-based biodiversity monitoring potentially



difficult. Training and user-friendly materials and protocols are essential if monitors are to collect useful data.

- Good communication between citizen groups and the relevant conservation authorities is vital, and project managers should ensure that systems are in place to facilitate this contact.
- Both real and virtual networks are contributing greatly to information sharing, co-operation, capacity-building and innovation in the region.
- Most of the C.A.P.E. projects have been inspired and enabled by true champions - the “fynmense” whose vision, passion and commitment catalyse action in the region. The challenge is to ensure that these initiatives are sustained, and this generally means securing an institutional home for projects, innovations and the “champions”.

### Learning about environmental education processes

- The new curriculum provides numerous opportunities for learning about and taking action to address biodiversity issues. Many conservation agencies, having decided that environmental education was not “core business” have lost capacity in this field and are no longer able to engage effectively with teachers and learners.
- Many teachers lack knowledge of their local environments and the skills and confidence to involve learners in active environmental learning (even though this is now required by the curriculum). Conservation agencies have an important role to play in helping to build the capacity and confidence of educators in this regard.
- The high levels of biodiversity in the Cape Floristic Region call for the development of site-specific resource materials that will enable people to engage with their local environments.
- The biodiversity sector offers many opportunities for “learning through doing”, which is a more positive and effective educational approach than the more conventional “message transfer” approaches, which tend to leave people feeling anxious and disempowered.
- Environmental education, which develops both environmental literacy and action competence, is an essential part of the overall strategy to conserve biodiversity and develop sustainable livelihoods in the Cape Floristic Region. However, disinvestment in the field by a number of conservation agencies has resulted in a decline in capacity, particularly outside major cities and towns. It is incumbent on the C.A.P.E. signatory organisations to reinvest in their environmental education capacity in order to strengthen this element of the C.A.P.E. Strategy.
- Current biodiversity research and conservation management practices need to inform environmental education processes more closely in order for environmental educators to make a meaningful contribution to biodiversity conservation in the Cape Floristic Region.

## What have we learned about enhancing co-operative governance?

### Learning about programme coordination

- Developing the C.A.P.E. Strategy through a solid stakeholder process laid a firm foundation for what followed. The C.A.P.E. MoU and the C.A.P.E. Conference in 2000 promoted buy-in and ownership by partners that has enabled implementation ever since.
- The C.A.P.E. Strategy remains the founding document of the C.A.P.E. Programme and signatories are very reluctant to amend it. Although the means to achieving the goals may change, the goals themselves remain as a powerful statement of intent of the C.A.P.E. Partners.
- The C.A.P.E. Strategy and Action Plan were developed prior to the drafting of the National Environmental Management: Biodiversity Act. The programme may have outgrown its interim governance arrangements and now needs to integrate these arrangements into the current legal frameworks.
- Initially, one of the C.A.P.E. partner organisations was going to act as the lead agency; this did not transpire and in fact no provision had been made in the strategy or budgets for an independent co-ordination function. The C.A.P.E. Coordination Unit (CCU) has proved to be the most cost-effective such unit funded by the CEPF in its global portfolio.
- Although hosted by SANBI and in accordance with its governance framework, the CCU operates inde-

pendently, reporting to the C.A.P.E. Implementing Committee on matters of programme policy and priority. The unit is not encumbered by allegiances and can act as an “honest broker” among the partners without fear of favour. Being accountable to all C.A.P.E. Partners has also resulted in a heightened the sense of responsibility.

- Demands of programme co-ordination and mobilising involvement by stakeholders leave the CCU little time for substantive technical work that the C.A.P.E. Programme requires, or for getting involved in the details of partner projects. The choice is either to scale back the functions of the CCU, employ more staff, or seek support from partner organisations.
- The CCU has had to strike a balance between ensuring that projects contribute to the overall goals of the C.A.P.E. Programme, while not stifling innovation by trying to control projects too tightly.
- With its limited resources, the CCU has elected to focus most attention on supporting the immediate C.A.P.E. Programme stakeholders, rather than spending precious resources on a broad-scale public awareness campaign. This choice has been informed by the desire to build a sound reputation based on solid delivery.

## 9.4 Concluding remarks

These observations and insights are part of the developing understanding of the way in which the implementation of C.A.P.E. is progressing. Together with the insights and recommendations of the C.A.P.E. Partners’ Conference, it is proposed that this knowledge be nurtured in the growing learning network that is C.A.P.E. In particular, it is intended that it form the core of the Fynbos i-forum.

Your comments and involvement are welcome, in any of the following ways:

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# Acknowledgements

Our grateful thanks are due to all of those who provided information, text or photographs for this book. In particular, we would like to thank all of the partner organisations of C.A.P.E. whose stories are reflected here, who provided information and insights and who reviewed Chapter and Section drafts. Specific contributions are listed below. We apologise for errors and omissions and invite further input and comment, which should be addressed to [info@capeaction.org.za](mailto:info@capeaction.org.za).

We would also like to thank Penny Waterkeyn who designed the collages and chapter title pages, Linette Ferreira who provided the pen and ink drawings, Emsie du Plessis and Louisa Liebenberg who provided critical comment on layout, Jan Verboom for the photography of the beaded flowers and Margaret Sandwith for proof-reading and assistance with image selection.

In particular our grateful thanks are due to Sandra Turck who undertook the design and layout and who has created an attractive, engaging and readable product. Elizma Fouché undertook the layout of the Appendices.

Samantha Court and Monique Damons provided support from the C.A.P.E. Co-ordination Unit.

The work was made possible by the generous contributions of C.A.P.E. Programme Partners, as well as grant funding from the Critical Ecosystem Partnership Fund, Global Environmental Facility through the World Bank and United Nations Development Programme, Table Mountain Fund, Green Trust and Mazda Wildlife Fund. The World Bank contributed generously to the publication and printing costs.

The support of Professor Brian Huntley, Kristal Maze and the staff of the South African National Biodiversity Institute is gratefully acknowledged.

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- 2.8 Garden Route Initiative: Andrew Brown, Pam Booth, Joan Berning, Elbie Burger, Colleen Simons, Angela Conway, Yvette van Wijk
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- 5.2 Making agriculture more sustainable
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- 5.3 A focus on flowers
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- 5.4 Towards sustainable tourism
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## Chapter 7: Strengthening Institutions

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- 7.2 Establishing C.A.P.E.: Trevor Sandwith
- 7.3 A focus on C.A.P.E. Partners: Trevor Sandwith
- 7.4 First steps towards building capacity
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Grateful thanks are due to the many participants in the programme that supplied photographs for use in this book. These include the following contributors. We apologise if photos supplied by programme partners have not been properly acknowledged, and request you to bring any omissions to our attention.

Ally Ashwell; Amida Johns; Amrei van Hase; Bettina Koelle; BGIS; Biodiversity and Wine Initiative; Blaauwberg Conservation Area; Brian Reeves; Bruce Sutherland; Cameron McMaster; CapeNature; Caroline Nicou; Charl du Plessis; Cherry Giljam; City of Cape Town; Clement Cupido; Clifford Dorse; Colin Attwood; Colin Patterson-Jones; Craig Spencer; CREW; Dalton Gibbs; David Rogers; Dean Impson; Dept of Environmental Affairs and Tourism; Donella Young; Eureka Rosenberg; Flower Valley Conservation Trust; Francis Steyn; Friends of Die Oog; Friends of Rondebosch Common; Friends of Tokai; Fumanekile Wisani; Gabbi Jonker; Gavin Oliver; Geoff Spiby; Gerhard van Deventer; Goldfields Environment Education Centre; Green Futures; Grootbos Nature Reserve; Guardians of the Garden Route; Ismael Ebrahim; Jaco Venter; Jan Vlok; Jay Cowan; Jenni Trethowan/Baboon Monitors; Joanne Eastmann; Joanne Jackson; John Donaldson; Juan Pablo Moreiras; Julie Carlisle; Karen Kirkman; KEAG; Kirsten Zsilavec; Kobie Hanekom; Lambert Smith; LandCare; Lesley Richardson; Mandy Noffke; Mark Wing; Marylou Newdigate; Mike Powell; Nancy Job; Nature's Valley Trust; Noel Oetlé; Overstrand District Municipality; Patrick Dowling; Peter Chadwick; Peter Pickford; Richard Cowling; River Health Programme; Rodney February; Rondevlei Nature Reserve; Rozelle Theron; Rupert Koopman; S. Wils; SANBI; Sean Privett; STEP; Sue Matthews; Sue Winter; Table Mountain National Park; Toni Belcher; Trevor Farr; Trevor Sandwith; Ukuvuka; Vergelegen; Wally Peterson; Warrick Stewart; WESSA; West Coast Tourism; Wilderness Foundation; William Stafford; Working for Water; Working on Fire; Xola Mkefe; Yvette van Wijk.



