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# Partnership for Biodiversity and Sustainable Development

Supporting South Africa's Cape Action for People and the Environment (CAPE) Program in the Cape Floristic Region



# INTRODUCTION

**W**ithin South Africa's borders lie some of the world's most diverse natural landscapes, rich mosaics of plant and animal biological diversity. South Africa is recognized as megadiverse<sup>1</sup>, one of a group of 17 countries that, together, support more than 70% of the earth's biological diversity on less than 10% of its global surface. It is recognized as one of the world's biologically wealthiest countries. Together, South Africa's rich natural assets and heritage 'leave ordinary behind'<sup>2</sup>.

The Cape Floristic Region (CFR), falling largely into South Africa's Western Cape Province, speaks to the unique nature of the country's natural diversity. Stretching from the Cederberg mountainous areas in the north-west, south around the Western Cape coast and east up to the Nelson Mandela metropolitan area, the CFR represents less than 0.5% of the area of the African continent but is home to nearly 20% of its flora and contains nearly 3% of the world's plant species, making it one of the richest plant zones in the world based on density, diversity and endemism<sup>3</sup>.

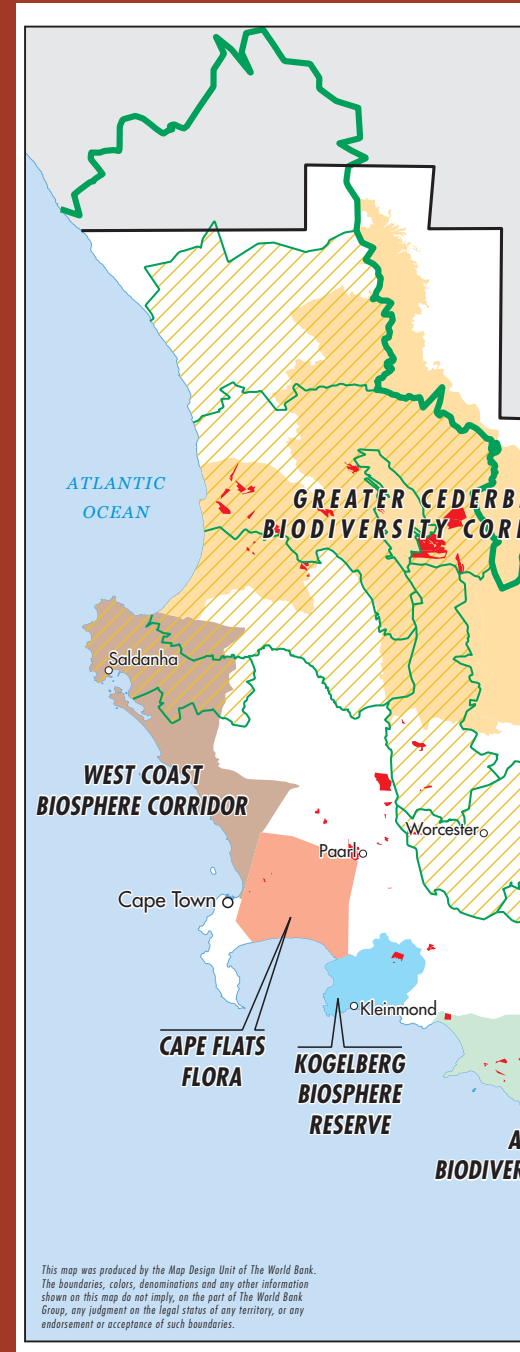
The Cape Floristic Region's natural environment harbors exceptional species diversity across a wealth of different habitats, each with its own landscape, soil composition and climatic conditions, from high mountains

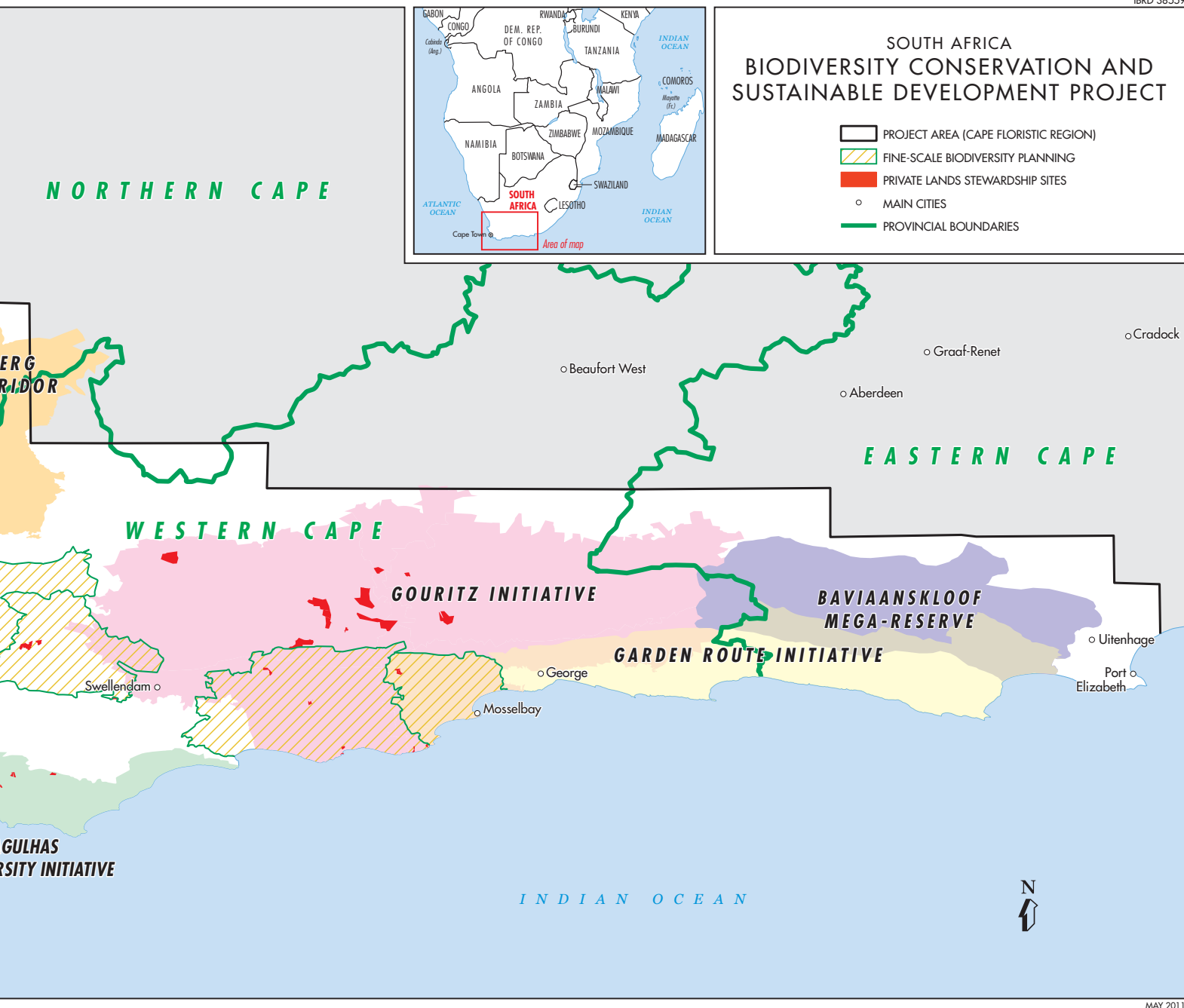
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1. The concept of "megadiversity" is based on the total number of species in a country and the degree of endemism at the species level and at higher taxonomic levels. Worldwide, 17 countries are recognized as megadiverse: Australia, Brazil, China, Colombia, Democratic Republic of Congo, Ecuador, India, Indonesia, Madagascar, Malaysia, Mexico, Papua New Guinea, Peru, the Philippines, South Africa, the United States and Venezuela.

2. South Africa tourism slogan; <http://www.southafrica.net/sat/content/en/us/us-home>.

3. A species is said to be endemic when it is found only in one place or specific region. The rate of endemism indicates that certain world regions are unique for their fauna and flora and represent particularly valuable conservation areas. <http://www.unesco.org/mab/doc/ekocd/chapter10.html>.





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South Africa's CAPE Program Area encompasses the Cape Floristic Region, which contains the Earth's highest plant species density.





The CAPE Program promotes improved management of biologically rich river estuaries.

and semi-arid ecosystems, through moist east coast forests, unique wetland and river systems, down to aquatic communities along the coastal zone. As its name suggests, flora features prominently in the region. The CFR is recognized as the smallest and richest of the world's

six floral kingdoms<sup>4</sup>, housing over 9,600 species of plants, 70% of which are unique and specific to the CFR alone, and approximately 1/6 of which have been identified as threatened. It is also the only floral kingdom to

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4. Floral kingdoms are botanically recognized as regions of the world characterized by distinct groups of plants not found in the other areas.





be completely contained within one country. Together, this all serves to make the CFR far from ordinary.

In addition, the unique biodiversity of the Cape Floristic Region provides for a multitude of essential ecological services and livelihood opportunities. With over 80 percent of the region under private ownership, any solution for the protection of this rich biodiversity would need to include local communities, especially the landowners and land users. The Cape Action for People and the Environment (CAPE) program provides significant opportunities for meaningful engagement with civil society for the protection of the CFR.

Like so many other of the world's areas of magnificent natural diversity and beauty, the rich biodiversity of the CFR has, over time, come under threat, particularly the natural vegetation of the region's lowlands. This has been due to increasing pressure from conversion of natural

habitats to permanent agriculture and livestock farming, rapid urban development, inadequate fire management practices, over-exploitation of terrestrial and marine resources, and ecosystem-damaging incursions by invasive alien species. By the late 1990s, important habitats within the CFR had been significantly reduced. As a result, the CFR was added to the list of the world's most threatened biodiversity hotspots.

## CONSERVING THE CAPE FLORISTIC REGION

### *Designing an Appropriate Conservation Strategy*

Despite the government of South Africa's interest in meeting the commitments of the international environmental conventions to which it is party, the relative emphasis on conservation of the natural environment at all levels of government in the 1990s, including dedicated funding, was low; greater emphasis was given to redressing past inequalities and committing resources for national socio-economic development priorities. Nevertheless, recognition of the global significance of the CFR's biodiversity spurred the Government to identify a means by which to urgently arrest the varied pressures on the region. This decision coincided with a broad national effort to more effectively manage the country's diverse and unique biological resources through adoption of sound ecosystem management and sustainable development approaches. The Govern-



The Cape Floristic Region is renowned for its exceptional concentration of unique plant species, found nowhere else.

ment therefore, approached the Global Environment Facility (GEF)<sup>5</sup> to solicit funding support.

The Cape Peninsula Biodiversity Conservation Project, funded by the GEF and implemented through the World Bank, allowed for the first steps to address the conservation needs of the region to be taken. One component of the project, implemented from 1998–2000, targeted the development of a long-term strategy to conserve biodiversity in the Cape Floristic Region and the preparation of a related action plan focused on the strategic priorities identified. The CAPE 2000 Strategy that resulted, also known as the Cape Action Plan for the Environment, was designed to protect the rich biological heritage of the CFR. It identified the key ecological patterns and processes in need of conservation, as well as the principal threats and root causes of biodiversity loss in the region. In support of the region's socio-economic development needs, the strategy also identified means by which to promote conservation as an engine for growth by mainstreaming biodiversity considerations into the region's production sectors.

The process of formulating the CAPE 2000 Strategy involved extensive consultation and participation, including systematic identification of all stakeholders in the CFR who could influence biodiversity conservation or be affected by it. Interested parties, including a range

of South African agencies, were involved in the analytic process that underpinned the CAPE 2000 Strategy's development. The main goal was to build a sense of ownership for the strategy and thereby lay the foundations for the long-term sustainability of the program.

Ultimately, a spatial plan that identified the CFR's priority areas for conservation intervention was produced, with an associated series of systemic program activities that were to be undertaken in three phases over a 20 year period. The overall goal espoused in the CAPE Strategy stated that, "by the year 2020, the natural environment and biodiversity of the Cape Floristic Region 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 recognized internationally"<sup>6</sup>

### *Objective 2020: Conserving the Cape Floristic Region into the Future*

This first GEF investment in the Cape instituted good participatory practices and the establishment of a regional ecosystem management framework that underlay the development of the comprehensive action plan. The processes that enabled its preparation and adoption further served to inform a variety of subsequent investments in the Cape that sought to address specific

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5. The Global Environment Facility (GEF) is an independent funding mechanism that, since 1991, has brought together governments, international institutions, nongovernmental organizations and the private sector, to provide important grant financing to developing countries for projects across a variety of environmental areas, including biodiversity, with the aim of benefitting the global environment, as well as promoting sustainable livelihoods.

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6. GEF Project Document.





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

long-term conservation needs outlined in the Strategy<sup>7</sup>. The Biodiversity Conservation and Sustainable Development (BCSD) Project was one such important investment. Funded by the GEF, with significant co-financing provided by the South African Government and stakeholders from the region, the BCSD project was jointly supported by the World Bank and the United Nations

Development Program (UNDP). Implemented over a six year period, and completed in 2010, it was designed to support the first phase of the CAPE strategy. As part of a broader GEF program package in the region, the Agulhas Biodiversity Initiative was supported by UNDP over the same period—a multi-stakeholder landscape initiative seeking to minimize the loss of threatened natural habitat on the Agulhas Plain.

7. Both the Critical Ecosystems Partnership Fund (CEPF) and the Table Mountain Fund (TMF), which have received funding from the GEF, amongst other donors, have supported civil society activities to complement government-sponsored initiatives in support of the CAPE Program. CEPF funding also provided important support for preparation of the follow-on Biodiversity Conservation and Sustainable Development Project.

## CAPE STRATEGY, PHASE I: THE BIODIVERSITY CONSERVATION AND SUSTAINABLE DEVELOPMENT (BCSD) PROJECT

### *Design*

The basis of the BCSD Project's design was to encourage conservation and sustainable use of threatened habitats and endemic species within the CFR's diverse and vulnerable ecosystems, as well as to ensure that biodiversity conservation was mainstreamed into the socio-economic fiber of the region. Overall, its global environment objective was derived directly from the overall CAPE Program goal: to ensure that the conservation of the CFR, and its adjacent marine environment, was secured by 2020 by laying a sound foundation for future replication and scale-up of successful Project outcomes throughout the CFR, in line with the CAPE Strategy's 2020 vision.

The BCSD Project proposed to foster biodiversity conservation based on an ecosystem approach that promoted improved land management, sustainable use and local community benefits. This approach was also geared to curb, and eventually modify, inappropriate land use decisions that perpetuated the conversion and fragmentation of natural ecosystems. Enhanced conservation management would help realize growth and development opportunities and buffer key threats to the biodiversity of the CFR through expansion of traditional protected areas; through land use re-designation and establishment of biodiversity mega-reserves in Cederberg to the northwest, Gouritz and Garden Route along the CFR's southern coast, and Baviaanskloof to the east;



The CAPE Program has led to a sizable expansion of protected natural habitats within the Baviaanskloof Mega-Reserve in Eastern Cape Province.

and through expansion of private land conservation, or stewardship, agreements.

Across the broader production landscape, the BCSD Project would lay the groundwork to mainstream conservation into a biodiversity economy through education and by developing partnerships with local communities, landowners and the private sector to encourage support for, and uptake of, innovative biodiversity-friendly business initiatives. Integration of biodiversity considerations within the public and private spheres would involve incorporating conservation within land use planning systems, adapting watershed catchment and fire management activities to align them with biodiversity conservation objectives, and promoting biodiversity-friendly production systems including, amongst others, vineyards with intact natural habitat



corridors, sustainable production of wild and cultivated rooibos tea, sustainable harvesting of cut wildflowers, and production of badger-friendly honey and leopard-friendly lamb (see back cover).

### *Structure*

Composed of six discrete components, the BCSD Project brokered a broad approach to its conservation objectives by working with multiple institutions and partners in an effort to impact relevant policies, programs and practices to protect biodiversity across the breadth of the Cape Floristic Region, both within its formal protected areas and the broader production landscape. The United Nations Development Program oversaw implementation of the project's institutional strengthening and conservation education components, while the World Bank provided oversight management for the project's coordination, management and monitoring component, as well as the protected areas, biodiversity economy and conservation stewardship, and watershed management components.

The Project received a total of US \$11 million from the GEF, US \$2 million of which was implemented through UNDP and US \$9 million through the World Bank. GEF funding was complemented by important counterpart funding from a variety of national government agencies, the bulk from realignment of regular government program budgets to target the Project's priority areas, and co-funding from other organizations, including NGOs. This included not only co-funding of biodiversity conservation priorities, but significant co-funding that addressed South Africa's main development objectives, including poverty reduction and job creation.

The South African National Biodiversity Institute (SANBI) was selected as the agency that would house and lead the project from its already established CAPE Coordination Unit (CCU). The CCU supported the strategic alignment and layering of key funding streams into the region, including management of the BCSD project's complex design through partnership with three sub-executing agencies, each responsible for management of site-based interventions in different project zones: Cape Nature (Cederberg and Kogelberg), the Eastern Cape Parks Board (Baviaanskloof), and South African National Parks (SANParks) (Garden Route)<sup>8</sup>. The project benefited from the strong coordination and facilitation role played by the SANBI CCU, and from a common CAPE vision shared amongst the various executing partners.

## FACTORS FOR SUCCESS

### *Partnership for Institutional Sustainability*

#### *The Foundations of Effective Conservation Management*

Given the highly ambitious program laid out in the CAPE Biodiversity Conservation and Sustainable Development project, an integral aspect of its design involved

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8. The project was designed in cooperation with the National Botanical Institute (NBI) who, early on in project implementation, became the South African National Biodiversity Institute (SANBI) with expanded national responsibility for safeguarding South Africa's biodiversity. Cape Nature (CN) was formed through restructuring of the Western Cape Nature Conservation Board (WCNCB). In the Eastern Cape part of the CFR, responsibility for site specific activities for the Baviaanskloof mega-reserve was initially undertaken by an NGO, the Wilderness Foundation (WF), a role that was transferred in 2007 to the newly-formed Eastern Cape Parks Board (ECPB), with ongoing technical support provided by the WF.

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## Partnership in Action

Partnership with the Critical Ecosystem Partnership Fund (CEPF), a global program that since 2000 has provided grants to NGOs and private sector organizations to help protect the world's biodiversity hotspots, enhanced synergies between the BCSD Project's aims and CEPF projects in the area through consolidation of land stewardship, biodiversity and business, and learning initiatives. It also provided crucial planning support for the Gouritz Initiative biodiversity corridor along the Cape's southern coast.

The Table Mountain Fund (TMF) contributed to capacity-building by supporting the establishment of land stewardship positions in conservation-oriented government agencies, and played a key role in supporting civil society organizations in diversifying sources of funding to secure ongoing future work in support of the CAPE strategy.

WWF-South Africa was engaged to provide support for the marine sub-component of the Garden Route Initiative as well as the Kogelberg Biosphere Reserve, an area of terrestrial and coastal eco-system that has been internationally recognized within the framework of the United Nations Education, Scientific, and Cultural Organisation's (UNESCO's) Man and Biosphere Programme. WWF-South Africa's engagement allowed for the launch of a participatory planning exercise to zone the Kogelberg marine protected area (MPA), and to test the principles of co-management in the Kogelberg and Garden Route marine reserves, with the strong engagement of local fishermen.

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encouraging committed collaboration and building strong institutional support from the outset. Three of the project's components were geared specifically to these goals: strengthening the capacity of institutions and stakeholders for strategic planning and effective conservation management; enhancing inter-agency cooperation; and aligning executing agency and stakeholder efforts to conserve the CFR through partnerships. The process of reaching these outcomes was to be managed through a coordinated portfolio management process, involving program coordination, financial management, monitoring of results, and communication and promotion of project-related information.

The CAPE Coordination Unit (CCU) established in SANBI was highly effective in coordinating the myriad project components and activities across the CFR, assuming responsibility for project planning, facilitating

relationship-building between key implementation partners, procurement, financial management, monitoring and evaluation, as well as communicating results.

The CCU's role was crucial in launching the process that established the foundations necessary to mainstream biodiversity considerations into broader planning and programs by strengthening institutional capacity and forming partnerships between conservation agencies and other sectors in the CFR, including planning agencies, local governments, communities, and the private sector. The CCU also facilitated beneficial collaborative partnerships with the Critical Ecosystem Partnership Fund (CEPF), the Table Mountain Fund (TMF) and the World Wildlife Fund (WWF) South Africa, which led to support being provided for targeted civil society, private sector and local community interventions in support of the project's objectives and the broader CAPE Strategy.



Clearly, involvement in steering the project's implementation was broad, which created a solid sense of ownership in the CAPE Strategy amongst the varied range of stakeholders. This principle of partnership driving strategic planning and the adoption of good practices, generated by the project, will continue to influence the next phase of implementation of the CAPE Strategy. At project completion, the CCU's performance was rated highly satisfactory by the World Bank. SANBI will maintain the role of the CCU in the CFR through its bioregional approach to mainstreaming biodiversity considerations. SANBI plays a coordinating and convening role in two other bioregions of South Africa—the Succulent Karoo and the Grasslands biome.

The successful management structure of the project was also crucial in promoting the use of targeted adaptive management to react to unforeseen constraints, new opportunities and changing conditions during implementation. This allowed for re-orientation of activities, as well as re-allocation of funds, where implementation delays were in evidence and more readily achievable outcomes had been identified. An important use of adaptive management was associated with the project's planned freshwater, estuarine and marine conservation activities. Delays under this component, caused by institutional capacity and budgetary constraints, were evaluated at project mid-term to be insurmountable, given the project's time frame. This offered the CCU and project partners the opportunity to slightly restructure activities to better support delivery of outcomes in this and other project areas of intervention. This approach included establishing new institutional arrangements, such as engaging WWF–South Africa to support a re-

structured focus on marine protected area conservation (see Partnership in Action box).

#### *Advances in Policy and Financial Management*

From a policy perspective, the BCSD Project has enabled far-reaching policy interventions that are expected to have long-term positive impacts on the mainstreaming of biodiversity conservation in development planning and actions within the CFR, as well as in other provinces in the country. In particular, the project supported tracking of management effectiveness throughout the national protected areas system and bio-regional planning as a basis for spatial development planning. This informed the development of the Western Cape Provincial Spatial Development Framework, as well as contributing environmental assessment and guidelines for biodiversity offsets within the context of South Africa's National Environmental Management Act. In terms of tracking management effectiveness, the project modified and strengthened the GEF Protected Areas Management Effectiveness Tracking Tool (PAMETT) so that it would better capture progress on specific national biodiversity threats and status. This has now been rolled out by South Africa's Department of Environmental Affairs as the South African Management Effectiveness Tracking Tool (SA-METT) across all of the country's national parks and provincial nature reserves. The SA-METT has also been adopted for use in metropolitan protected areas under the jurisdiction of the City of Cape Town. Data on management effectiveness collected using SA-METT informs the Government's reporting on its protected areas program of work under the Convention on Biological Diversity.



Urban sprawl in the City of Cape Town has left small fragments of highly threatened biodiversity on the Cape Flats. One of these fragments is the Edith Stephens Wetland Park, which lies between two major highways but is nonetheless an oasis for people as well as nature.

## Conserving Biodiversity for Climate Resilience

Various biodiversity hotspots around the world are especially vulnerable to climate change, including ecosystems within the CFR and the Succulent Karoo. Climate change also poses a threat to achieving poverty reduction and development goals. Natural forests, grasslands, freshwater, and marine and other natural ecosystems provide a range of services, often not recognized in national economic accounts but vital to human welfare: regulating water flows and water quality, flood control, pollination, decontamination, carbon sequestration, soil conservation, and nutrient and hydrological cycling. Enhanced protection and management of these habitats can provide cost-effective, proven, and sustainable solutions, to lessen the harmful impacts of climate change and help vulnerable communities to adapt.

The scaling up and rolling out of innovations made through the BCSD Project at a national level in South Africa has been a notable success of the project. This has included work on models and tax incentives for conservation stewardship, on business and biodiversity initiatives and on fine-scale biodiversity planning. The experience of the CAPE partnership was a crucial input in developing South Africa's National Biodiversity Strategy and Action Plan and setting implementation priorities for the National Biodiversity Framework; it also strengthened the process of developing national policy and legislation for biodiversity and protected areas.

With a view to the future financial sustainability of the CAPE 2020 vision, the project helped develop a series of financial strategies for some of the executing agencies involved in its implementation. Those developed for Cape Nature and the Eastern Cape Parks Board have

been used successfully to justify increased agency budgets which correspond with expanded roles and responsibilities. Project-funded business plans associated with the management of fire, non-native invasive species and watershed catchments have helped leverage resources from national programs, such as Working for Water and Working on Fire, for work on high-priority biodiversity sites in both the Western Cape and Eastern Cape provinces. Ultimately, it is somewhat difficult to determine discrete results and outcomes of project interventions versus other activities undertaken in support of the CAPE strategy. However, this strategic blending of project funding with that provided through co-funding (from both government and non-government sources) is itself a form of mainstreaming that is likely to carry project results forward for replication in



future public budget programming and institutional processes.

#### *The Tools to Build and Grow*

The project also demonstrated the value that access to targeted management tools, such as fine-scale spatial planning, and approaches, such as working in partnership, plays in raising the relevance of biodiversity considerations within rural, peri-urban and urban spheres. At project completion, 31 out of 34 municipalities within the CFR were using fine-scale mapping to mainstream biodiversity into their municipal planning and development objectives. This will be a key area of ongoing intervention in future phases of the CAPE Program.

Another important area of intervention that relied on strengthened institutional capacity and cooperation involved the work done by the project with private landowners and communities through land stewardship arrangements. The expansion of protected areas through acquisition of privately owned lands can be an

expensive and time-consuming endeavor. Land stewardship arrangements provide a cost-effective means by which to engage landowners to commit to the conservation and management of biodiversity on their own lands. The project developed best practice guidelines for conservation stewardship programs with private landowners and communities and established a number of agreements under the auspices of Cape Nature.

During the project's tenure, the partnership committed to implementing the conservation strategy in the CFR grew from 18 to 23 signatory partner organizations, and built significant public interest in the CAPE Program. This was evident with a 90% increase in the number of recipients of the program's monthly e-newsletter—now numbering nearly 4,000.

The project was also instrumental in building the capacity of individuals and programs to strengthen institutions involved in biodiversity conservation through education:



- Three capacity-building programs, focused on stewardship, biodiversity conservation mentoring and environmental education, trained over 170 individuals. As spin-offs from the mentoring course, Cape Nature and the City of Cape Town went on to set up their own mentoring programs. SANBI and the Wildlife Society of South Africa (WESSA) entered into partnership to expand the offering of the environmental educators' course, and the stewardship course is now being offered nationally by the Nelson Mandela Metropolitan University.
- A series of Project Developers' Forums, Landscape Initiative knowledge exchanges, and five Partners' Conferences were organized during project implementation. These provide useful opportunities for exchanging lessons and experiences from different site interventions, thereby encouraging cross-pollination with the diverse perspectives of government agencies, NGOs and local communities.
- A free, online information management system, the Biodiversity GIS (B-GIS) was developed and is being maintained by SANBI using regular budget funds. B-GIS has published 26 biodiversity planning products on its site and now boasts nearly 3,000 registered users, ranging from environmental consultants to municipal planners. The South African State Electricity Corporation (ESKOM), for example, is exploring how B-GIS may contribute to its planning for expanded power generation and transmission.
- Rhodes University has produced a vast body of educational materials generated by the project's

results which, in turn, have served to inform the development of workbooks for an Eco-Schools program and a Teacher's Handbook. These materials will be used by a teachers' network that spans the countries of the Southern African Development Community (SADC). The university also maintains a biodiversity hub that blends its work on teacher and community engagement with the networking, training and capacity building initiatives overseen by SANBI.

- Lastly, sub-regional networks for conservation education have been set up in the western, southern and eastern Cape provinces, with associated plans developed for their ongoing institutional sustainability in the post-project period.

## PARTNERSHIP LEADING TO ECOLOGICAL SUSTAINABILITY

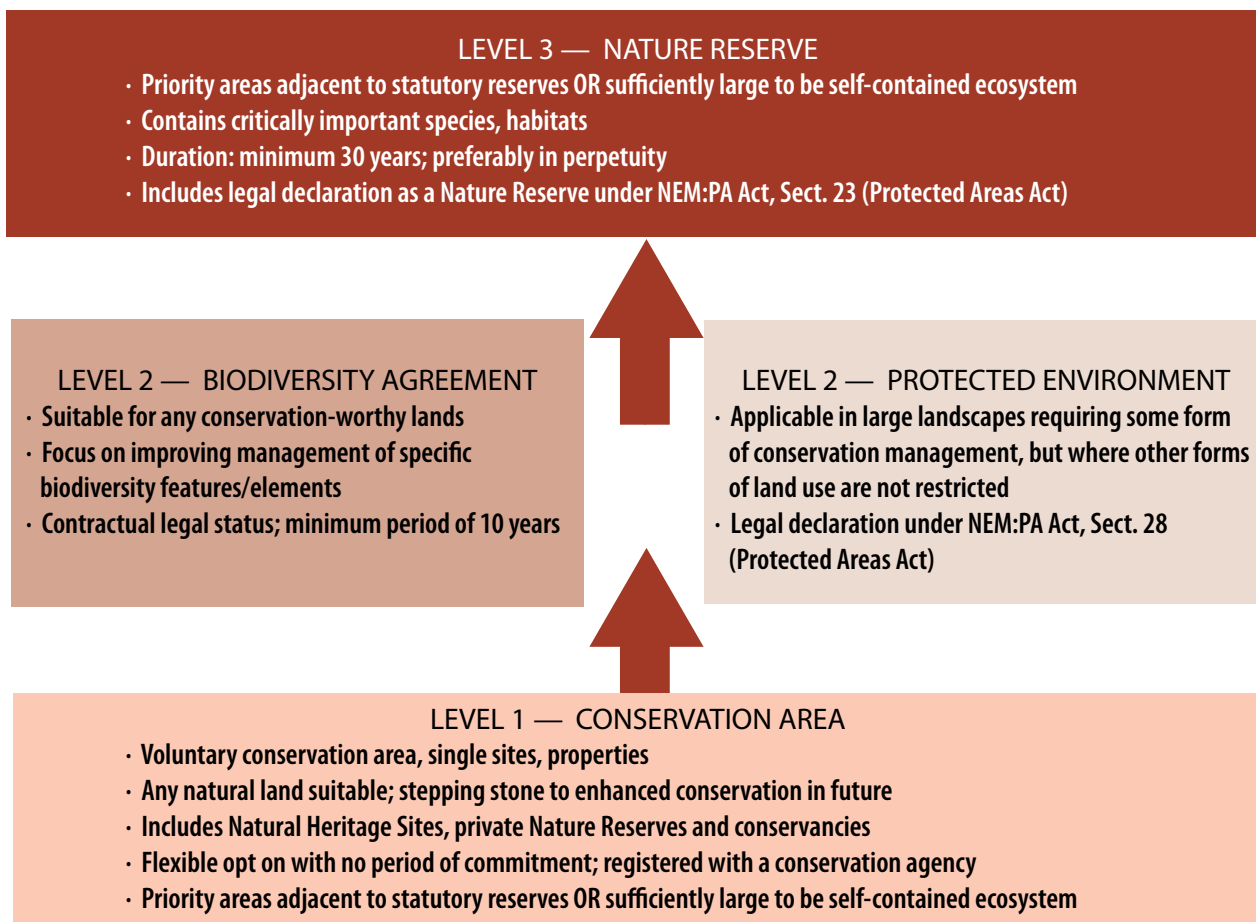
### *Expanding the CFR's Protected Areas Network*

Nearly 40% of the GEF funds approved for the project were allocated to the expansion of protected areas in the CFR and the establishment of freshwater, estuarine and marine protected areas. The project was successful overall in its goal, growing the area of terrestrial habitats of high biodiversity value under conservation management by expanding the CFR's traditional protected areas through establishment of three large protected area complexes, or mega-reserves, linked by connecting biological corridors running from the mountains, through the lowland habitats, to the sea.



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## Options for Stewardship Commitment



*Source:* Cape Nature brochure, “Conservation in Landowners’ Hands.”

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Under the project, the total land area under formal conservation agreements doubled to over 1.9 million hectares (ha), covering the Cederberg, Kogelberg, South West Lowlands, Garden Route and Baviaanskloof, as well as the Gouritz, where funding was provided through the CEPF. Within these areas of project intervention, endangered and critically endangered ecosystems under conservation increased by 282% to over 61,000 ha.

Major advances in conservation stewardship of private lands, where much of the CFR’s most threatened biodi-

versity is located, were achieved thanks to the development of the biodiversity stewardship model. To date, this resulted in the signature of 65 stewardship contracts between Cape Nature and land owners, of which 31 are Contract Nature Reserves, 16 are Biodiversity Agreements and 18 are Conservation Areas. The highest tier of stewardship agreement, the Contract Nature Reserve, is backed by supportive tax policies, which the BCSD Project also helped to influence.

While the project design had also included establishment of new marine, estuarine and freshwater reserves, it became clear mid-way through the project's implementation that this goal was overly ambitious. Limited capacity and budget cuts in key partner institutions posed important challenges to achieving targets and had led to ongoing delays in implementation. As previously mentioned, the project's effective and collaborative management structure allowed for rapid adaptive management solutions to be formulated, leading to realignment of activities in areas where they would best serve project goals. This resulted in a more narrow focus being applied to improving participatory planning for marine clusters adjacent to the Kogelberg and Garden Route. WWF–South Africa was engaged to lead participatory planning in the Kogelberg marine protected area zone and to pilot co-management principles in the Kogelberg and Garden Route marine reserves. Lessons learned during the design of the framework for participatory integrated coastal zone management planning now serve to inform, as a minimum requirement, the development of other marine protected areas along South Africa's coastline.

### *Experiences from the Mega-Reserves*

The project supported site-based interventions in three key mega-reserves: Greater Cederberg Corridor, in the north west of the Region, with management support provided by Cape Nature; Garden Route, along the southern coast of the CFR, in partnership with SAN-Parks; and Baviaanskloof to the east, in cooperation with the Eastern Cape Parks Board, with management

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## Why Build Biological Corridors?

Protected areas, and the unprotected habitats that lie between them, are often fragmented and isolated, making it difficult to sustain wider viable ecosystem processes. By linking conservation efforts across larger geographic areas through networks of protected areas and interspersed landscape management systems, called biodiversity corridors, larger ecosystem processes can be more easily managed and monitored, thereby facilitating the existence and conservation of higher levels of biodiversity.

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and technical support provided by the NGO Wilderness Foundation.

The *Greater Cederberg Biodiversity Corridor* (GCBC) stretches 1.8 million ha, from the mountains to the sea. Its lowland areas are under severe threat due to conversion to agricultural production, namely potatoes and cultivated rooibos tea. A multi-stakeholder steering committee, composed of government agencies, including Cape Nature and the Western Cape Department of Agriculture's Land Care program, landowners, communities and NGOs, formed the governance structure for the GCBC. This structure also promoted partnerships that helped to catalyze support for key activities, including identification of priority biodiversity conservation areas through local government supported surveys, consolidation of key stewardship sites within the corridor, adoption of best practice guidelines for potato and rooibos production, and enhancing livelihoods in the GCBC through establishment of a biodiversity economy.





Under the Cape Program's Stewardship initiative, eight Zeekoevlei residents now share responsibility for conserving 15 percent of the world population of Cape Flats conebush (*Leucadendron levisanus*).

The latter is being supported with community-led initiatives such as donkey cart tourism, along with the clearing of non-native species and wetland rehabilitation underwritten by the Working for Water and Working for Wetlands programs.

The mega-reserve incorporates two major corridors—Sandveld and Cederberg—of continuous natural habitat made up of land under various forms of management: national and provincial protected areas, private reserves and stewardship arrangements. Within the Cederberg domain, over 600,000 ha, a third of its total area, is now under conservation, governed by environmental management plans. This includes over 250,000 ha of

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## Cape Nature Conservation Launched Greater Cederberg Biodiversity Corridor

In 2004, Cape Nature, through the Cape Action for People and the Environment (CAPE) partnership, launched the Greater Cederberg Biodiversity Corridor (GCBC). This corridor crosses the Cape Floristic Region hotspot in South Africa and extends into the South African portion of the Succulent Karoo hotspot.

*"This groundbreaking initiative developed from a conservation ethic that uniquely recognizes the lived-in, worked-in nature of an extended landscape,"* said the project coordinator for the corridor initiative. This biodiversity corridor was a first for South Africa. It incorporates a variety of land uses, and places emphasis on both the natural and cultural resources of the Cederberg area.

[www.cepf.net/news/top\\_stories/Pages/aug122004\\_capenature\\_cederberglaunch.aspx](http://www.cepf.net/news/top_stories/Pages/aug122004_capenature_cederberglaunch.aspx)

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national parks and provincial reserves, and over 60,000 ha under contractual stewardship agreements. An additional 280,000 ha or more fall under voluntary conservation agreements, 100,000 ha of which are biodiversity and business properties that have received support from the CEPF.

The BCSD Project also provided resources to strengthen the *Kogelberg Biodiversity Reserve*. The Kogelberg was the first Biosphere Reserve to be declared in southern Africa and forms part of UNESCO's world-wide network of Biosphere Reserves. The Kogelberg is one of the most florally diverse areas of the CFR, home to nearly 1,900

recorded plant species, many unique to the area, and important protected water catchments. The project initiated stewardship agreements with a number of priority landowners in the area, which allowed important threatened habitats to be brought under protection.

Work undertaken in the Kogelberg's marine zone was outsourced to WWF–South Africa who, working with BCSD project proponents, developed a participatory marine management plan for Betty's Bay. While some progress has been achieved in the Kogelberg's marine zone, including focused environmental education efforts, overall project results with respect to marine protection have demonstrated that the conservation of aquatic biodiversity remains a challenge in the CFR and that further attention to the marine environment is merited in future.

The Garden Route, which runs along the CFR's southern coastal zone, possesses a rich diversity of natural habitats of high biodiversity value, stretching from the Tsitsikamma Mountains, across important estuaries, down to its coast's fragile marine areas. Its lands are under increasing pressure from agricultural production, over-fishing, the spread of non-native species, urbanization and tourism. The latter activities are threatening areas of the most critically endangered biodiversity and scenic landscapes through development for tourism and high-value residential housing.

Implementation of the project's *Garden Route Initiative* (GRI) was overseen by SANParks. Strategic work carried out under the GRI included application of systematic fine-scale biodiversity planning, consolidation of protected areas, particularly in key lowland and marine

habitats, promoting biodiversity stewardship with landowners, and growing employment opportunities within a biodiversity economy through training and by encouraging entrepreneurial interest in sustainable natural resource use and management, as well as sustainable tourism.

The GRI successfully expanded its system of protected areas, primarily through incorporation of lands retired from plantation forestry. It also expanded the scope of the renowned Garden Route National Park through consolidation of the Tsitsikamma, Wilderness and Knysna Lake sections with various mountain catchments and areas of native forest and fynbos (a native shrub-based ecosystem found only in the CFR). Here again, partnerships played a strong role in achieving project outcomes, bringing together conservation agencies with private landowners, NGOs and sectoral associations to promote the use of planning tools. This resulted in valuable fine-scale mapping of critical biodiversity areas, which has subsequently been adopted by SANParks' Planning Unit for replication around the Greater Addo Elephant National Park in the neighboring Eastern Cape Province, in the preparation of targeted invasive species maps, and in the development of integrated fire management plans in concert with Fire Protection Associations in the region and beyond.

The *Baviaanskloof Mega-Reserve*, which lies on the eastern edge of the Cape Floristic Region, is a conservation landscape of protected areas and agricultural lands spread over more than 400,000 ha. The Baviaanskloof is recognized for its natural beauty, cultural heritage and biological diversity, housing representative species



from each of South Africa's seven biomes<sup>9</sup>. The vision behind the Baviaanskloof Mega-Reserve was based on the principle of "keeping people on the land in living landscapes"<sup>10</sup>. Much of the land within the mega-reserve is marginal and not suited to crop production, leaving its inhabitants reliant on livestock farming and tourism to earn a living.

Wilderness Foundation (WF), an NGO, launched the BCSD project's site intervention activities in the Baviaanskloof, handing over management responsibility in 2007

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9. 'Biome' is a scientific term used to describe areas on the earth with similar climate, plants, and animals. They are large geographical areas populated by distinctive plant and animal groups and ecosystems, adapted to that particular climate and environment.

10. Cape Action for People and the Environment (CAPE); <http://www.capeaction.org.za/>

to the newly formed Eastern Cape Parks Board (now Eastern Cape Parks and Tourism Agency, ECPTA) while maintaining a role through provision of technical and administrative support. WF promoted a broad natural landscape vision for the Baviaanskloof that included strictly protected land under public management and private lands under conservation stewardship contracts brought together under the umbrella of common management planning and land use zoning standards. Early on, WF was successful in leveraging supporting resources from the CEPF to encourage small-scale civil society business initiatives to support the social and economic development of local communities. The result has included sustainable bee-keeping, training of nature guides and the introduction of biodiversity-friendly citrus production practices in the Gamtoos Valley region of the Baviaanskloof. In addition, local NGOs, including WF and Living Lands, working with local farmers, pro-

The sustainable harvesting of wildflowers, such as these protea bunches in the Flower Valley (Western Cape) destined for export, provides a powerful economic incentive for landowners to maintain the native fynbos vegetation.



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



moted the planting of spekboom, a thicket biome species with high carbon sequestration value, as a means to restore overgrazed landscapes. Participants in the effort hope to gain revenue through payment for ecosystem services in future, especially through voluntary carbon markets. Government funding, provided by the Working for Water Program, supported the restoration efforts, given Baviaanskloof's importance as a water catchment for the Nelson Mandela Metropolitan Area.

Ongoing support from local landowners has been expressed for land stewardship in Baviaanskloof, and the ECPTA continues to work on the establishment of conservation arrangements that would allow for valley slopes to be built into the mega-reserve as wildlife corridors in future.

In parallel with the BCSD, another landscape initiative was supported on the Agulhas Plain, funded by the Global Environment Facility through UNDP from 2005 to 2010. The Agulhas Biodiversity Initiative supported the establishment of a multi-stakeholder partnership that integrates and coordinates efforts to minimise the further loss of threatened natural habitats on the Agulhas Plain. The area of approximately 270 000 hectares near the southernmost point of Africa is a mosaic of agricultural land separated by stretches of rare and endemic coastal lowland fynbos and wetlands.

ABI builds on a partnership between South African National Parks (SANParks) and Fauna and Flora International, and brings together conservation agencies, local authorities, government departments, conservancies and landowners, non-governmental organizations and donors who are "working together to secure a healthy

natural environment to provide benefits for all forever within the Overberg". The initiative has continued beyond the life of the UNDP-managed project and is currently coordinated by a Steering Committee overseen by staff from the Flower Valley Conservation Trust. It is supporting partners cooperating strategically to make sure that benefits flow to the local economy, through activities such as responsible nature-based tourism and the sustainable harvesting of the natural vegetation.

At the start of ABI only 14% of the Agulhas Plain was conserved under legally binding arrangements. Through agreements with landowners and the expansion of the Agulhas National Park, this figure now stands at 37% (102,000 hectares), with at least 40% of this area privately owned. The project has provided the framework for an innovative model of biodiversity stewardship in which 23 landowners, assisted by SANParks and with financial support from the German Government, have applied collectively for Protected Environment status. These landowners continue to work portions of their land, while setting aside valuable wetlands and fynbos for conservation, and restoring ecosystems to support adaptation to climate change.

## PARTNERSHIP FOR A BIODIVERSITY ECONOMY

### *Mainstreaming Biodiversity in the Production Landscape and Sectors*

Natural resource economists have estimated the total economic value of the Cape Floristic Region's biodiversity—including its flora and fauna, landscape scenery and ecosystem services, such as water purification, erosion control and carbon sequestration—to be



well over 10 billion Rand per year. The fynbos flower industry alone generates significant revenue each year from exports and local sales. Tourism in the Western Cape's scenic landscapes is increasingly linked with sustainable natural landscape management, with interest growing rapidly in tourism packages that showcase healthy natural ecosystems and abundant wildlife.

The BCSD Project, together with the Agulhas Biodiversity Initiative, promoted conservation as an engine for sustainable development and economic growth through promotion of market-based mechanisms such as payment for environmental services and support for small-scale conservation-related enterprise opportunities like bee-keeping, leopard-friendly lamb production and local tourism routes and trails that improve livelihoods and social conditions for local communities. Protection of species in fragmented landscapes increased during project implementation, thanks to public-private partnership conservation initiatives within the production landscapes. Important policy reforms, intended to support the biodiversity economy, include new fiscal incentive mechanisms under the Revenue Laws Amendment Act passed in December 2008: a municipal rates rebate and a national tax deduction, available to eligible landowners who engage in biodiversity conservation stewardship.

*Over the life of the BCSD project, in excess of 181,000 person-days/year of employment have resulted from jobs associated with biodiversity conservation and protection activities.*

The introduction of best practice income-generating activities that rely on the sustainable extraction and use of existing, native resources are demonstrating that they can effectively substitute for expanding cultivation, and thus help diversify agricultural production and other farm management techniques to provide better habitat for biodiversity on farms themselves. The project helped encourage a shift to biodiversity-friendly agricultural production and reduced water use in the CFR's potato and rooibos tea industries. Such initiatives

are closely linked to, and complement, government-led initiatives in the Region—Working for Water and Working for Wetlands—that seek to remove water-demanding non-native plant species and restore hydrological functioning, thereby maintaining

biodiversity and important water sources while creating new employment opportunities.

Importantly, biodiversity considerations were successfully integrated by the Western Cape's provincial planning authority into provincial land use planning policy, and were streamlined into the spatial development frameworks of 15 of the CFR's 18 local municipalities.

All these actions speak volumes for the long-term sustainability of project outcomes and the potential for the biodiversity economy to contribute positively to the achievement of the CAPE Strategy's 2020 vision.

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## Biodiversity and Business in the Cape Floristic Region

Various initiatives under the CAPE Strategy, supported by the BCSD project and funded through the CEPF, encouraged more sustainable management of natural resources and mainstreaming of biodiversity in the CFR's landscape by promoting biodiversity-friendly production systems in a variety of sectors including tea production, wild flower harvesting and wine production.

### *Tea for Two*

Rooibos tea, made from the native rooibos plant, has a growing market both locally and globally thanks to the healthy antioxidants it contains and its lack of caffeine. As a result of its increasing popularity, farmers in the CFR began to convert large tracts of natural habitats to grow the plant commercially.

In the Greater Cederberg Biodiversity Corridor (GCBC) the Rooibos Biodiversity Initiative generated a sustainable production strategy for the industry. Rooibos grows naturally only in the Cederberg and Bokkeveld regions of South Africa's Western and Northern Cape. In line with the CAPE Strategy, small-scale farmers in the region saw a business opportunity and formed a cooperative to harvest wild rooibos sustainably. Through financial support provided by the CEPF, members of the cooperative worked with scientists to increase their yield of wild rooibos by mapping the distribution and taxonomy of wild sub-species on 44 sites, exploring which varieties were longer-lived and more drought- and fire-resistant, and by monitoring the effect of their harvesting practices. Biodiversity conservation is factored into the production process in and around the land cultivated with wild rooibos, using buffer strips of natural vegetation between fields to reduce soil erosion. The cooperative now supplies a niche market of global consumers who pay a premium for organic, fairly traded products.

### *To Your Health!: The Biodiversity and Wine Initiative*

South Africa is the world's eighth largest producer of wine, with approximately 90% of its production occurring within the CFR. During the 1990s, the land under vineyards increased by 15%. Viticulture expansion, while economically profitable, was threatening critical plant habitats. With only 9% of lowland endemic vegetation remaining, conservation became a concern.

The Biodiversity and Wine Initiative (BWI), a partnership between the wine industry and the conservation sector resulted. Together, they developed and promoted adoption of biodiversity guidelines for the industry, including the need for natural area set-asides on vineyard lands. The initiative also promoted changes in farming practices that enhance the suitability of vineyards and surrounding natural habitat for biodiversity. Wine producers and landowners who establish a contract nature reserve are eligible to qualify for significant property rate rebates. By 2010, wine growers owners participating in the BWI had committed over 126,000 ha of natural habitat to conservation—this exceeds the vineyard cultivation footprint in the CFR of 102,000 ha. Wines of South Africa, the official marketing arm of the industry, began to promote the BWI approach in its marketing of South African wines. Furthermore, South African wine and brandy producers began expanding the BWI into wine producing areas in other threatened lowland habitats such as the Succulent Karoo Hotspot, particularly in the Olifants River and Breede River valleys.

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## LESSONS LEARNED

The Biodiversity Conservation and Sustainable Development project has been assessed as having established a solid foundation for the long-term conservation and sustainable use of the Cape Floristic Region and its adjacent marine environment, as laid out in the CAPE Strategy. This has been achieved by making effective use of funding to put in place policies and pilot programs that emphasize the value of conservation of locally and globally important biodiversity and the important linkages between healthy ecosystems and socio-economic development. This has, in turn, laid a secure foundation for further implementation of the CAPE Program's over-arching 20-year conservation and development strategy. Its next phase, targeting consolidation of results and replication of successful models, will be resourced primarily through regular Government program budgets, with additional support from donors where possible.

The governance experience that was gained in managing this complex and multi-layered project, whose goals are embedded in a long-term strategic vision, bodes well for the future sustainability of both the project's outcomes and the overall ongoing management of the CAPE Strategy. The high level of involvement of stakeholders and the partnerships this participatory approach engendered between local, provincial and national government organizations, as well as with and between NGOs, civil society, communities and private landowners, provided a voice for all interested parties. The highly effective coordination and facilitation role played by the project's coordination unit provided a forum through which those voices could be heard. Such

a participatory approach is recognized as best practice in biodiversity conservation and ecosystem management efforts.

The BCSD Project was successful in its bid to expand the area of terrestrial habitats of high biodiversity conservation value under sustainable management through expansion of traditional protected areas, establishment of three mega-reserves, and the creation of connecting biological corridors. Under the project, the total land area under formal conservation agreements doubled to over 1.9 million ha, with a significant portion covering highly threatened ecosystems. The BCSD Project's achievements were successfully complemented by the CEPF-supported Gouritz Initiative, as well as the GEF-UNDP-funded Agulhas Biodiversity Initiative.

In cooperation with interested stakeholders, the project supported the development of a new conservation stewardship model for the CFR. The resulting landscape conservation stewardship programs, undertaken with land owners, private sector interests and local communities, have generated best practice guidelines. These guidelines are being adopted in the neighboring Eastern Cape Province, and have also been promoted nationally. The National Department of Environment Affairs sees biodiversity stewardship as the primary mechanism for securing its national conservation targets put forward through the National Protected Areas Expansion Strategy.

The BCSD Project succeeded in demonstrating that mainstreaming biodiversity conservation can be a valuable engine for socio-economic development by generating biodiversity-friendly business opportunities





Mike Powell

The CAPE Program promotes the clearing of non-native invasive vegetation through public works programs, thereby generating much-needed employment that also enhances biodiversity conservation.



for both the private and public sectors. Project-related interventions effectively engaged the private sector and have improved prospects for local and disadvantaged communities in the region, many of whom now benefit from income-generation activities based on biodiversity conservation, as well as from Government funds associated with extended public works programs such as Working for Water and Working for Wetlands, that created employment opportunities leveraged by the project's efforts.

Strategic mobilization of complementary funding through project partners such as the CEPF and TMF contributed importantly to increasing public awareness in the value of small-scale biodiversity-friendly and ecotourism income-generating opportunities. This has served to promote strong ongoing support for the CAPE Strategy at the local level.

## REFERENCES

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*Cover image:* Sustainable wildflower harvesting from conserved fynbos vegetation in the Flower Valley, Western Cape. (Photo courtesy of SANBI.)

*Back cover image:* The Cape Program's "Leopard-friendly Lamb" initiative encourages farmers to use non-lethal means (such as trained dogs) to keep now-rare Cape Leopards from harming their sheep. (Photo courtesy of Cape Leopard Trust.)



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#### ABOUT THE WORLD BANK

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#### ABOUT UNDP

The United Nations Development Program (UNDP) is the UN's global development network, advocating for change and connecting countries to knowledge, experience, and resources to help people build a better life. The UNDP is on the ground in more than 165 countries, working with them on their own solutions to global and national development challenges. [www.undp.org/biodiversity](http://www.undp.org/biodiversity)



#### ABOUT THE GLOBAL ENVIRONMENT FACILITY

The GEF unites 182 countries in partnership with international institutions, NGOs and the private sector to address global environmental issues while supporting national sustainable development initiatives. Today the GEF is the largest funder of projects to improve the global environment. An independent financial organization, the GEF provides grants for projects related to biodiversity, climate change, international waters, land degradation, the ozone layer, and persistent organic pollutants. Since 1991 the GEF has invested \$9 billion in grants and leveraged another \$40 billion in cofinancing for more than 2600 projects in 165 countries. [www.thegef.org](http://www.thegef.org)



#### ABOUT SANBI

The South African National Biodiversity Institute (SANBI) is a public entity with special responsibility for biodiversity matters, established in 2004 through the signing into force of the National Environmental Management: Biodiversity Act. SANBI is responsible for exploring, revealing, celebrating and championing biodiversity for the benefit and enjoyment of all of South Africa's people.



#### ABOUT SOUTH AFRICAN NATIONAL PARKS

South African National Parks (SANParks) is the leading conservation authority in all national parks in South Africa, responsible for 3,751,113 hectares of protected land in 20 national parks. SANParks manages a system of parks which represents the indigenous fauna, flora, landscapes, and associated cultural heritage assets of the country for the sustainable use and benefit of all. SANParks' vision is to be the pride and joy of all South Africans and of the world. The focus for SANParks in the first decade of democracy has been to make national parks more accessible to tourists in order to ensure conservation remains a viable contributor to social and economic development in rural areas. [www.sanparks.org](http://www.sanparks.org)



#### ABOUT CAPE NATURE

CapeNature is a public entity with the responsibility for biodiversity conservation in the Western Cape. It is governed by the Western Cape Nature Conservation Board Act 15 of 1998 and mandated to promote and ensure nature conservation, render services and provide facilities for research and training.



#### ABOUT ECPTA

Eastern Cape Parks and Tourism Agency is a public entity established in terms of the Eastern Cape Parks and Tourism Agency Act, No. 2 of 2010. ECPTA aims to develop and manage protected areas and to promote and facilitate the development of tourism in the Eastern Cape Province.



#### ABOUT THE WILDERNESS FOUNDATION

The Wilderness Foundation is a non-governmental organisation that protects and sustains African wilderness and wild lands through holistic and integrated conservation, social and education programmes. The organisation has been a pioneer in using wilderness as a positive force for social change in South Africa, having taken over one hundred thousand political, business and community leaders, as well as historically disadvantaged youth, through programmes that allow participants to experience wild nature.



#### ABOUT THE DEPARTMENT OF ENVIRONMENTAL AFFAIRS, SOUTH AFRICA

The Department of Environmental Affairs (DEA) is one of the departments of the South African government under the Ministry of Water and Environmental Affairs. It is responsible for protecting, conserving and improving the South African environment and natural resources. The DEA's mission is to create a prosperous and equitable society that lives in harmony with our environment. [www.environment.gov.za](http://www.environment.gov.za)



