

Maputaland-Pondoland-Albany Ecosystem Profile Summary



About CEPF

Established in 2000, the Critical Ecosystem Partnership Fund (CEPF) is a global leader in enabling civil society to participate in and influence the conservation of some of the world's most critical ecosystems. CEPF is a joint initiative of l'Agence Française de Développement (AFD), Conservation International, the Global Environment Facility (GEF), the Government of Japan, the John D. and Catherine T. MacArthur Foundation and the World Bank. CEPF is unique among funding mechanisms in that it focuses on high-priority biological areas rather than political boundaries and examines conservation threats on a landscape scale. From this perspective, CEPF seeks to identify and support a regional, rather than a national, approach to achieving conservation outcomes and engages a wide range of public and private institutions to address conservation needs through coordinated regional efforts.

Introduction

The Maputaland-Pondoland-Albany biodiversity hotspot—which stretches across 275,000 square kilometers through parts of Mozambique, Swaziland and South Africa—is one of 34 biodiversity hotspots identified around the globe as Earth’s most biologically rich yet threatened areas.

Its status as a hotspot, as well as the unique biological, economic and cultural importance of the region, led the Critical Ecosystem Partnership Fund (CEPF) to create a conservation strategy for the entire hotspot. The strategy, known as the Maputaland-Pondoland-Albany Biodiversity Hotspot Ecosystem Profile, guides CEPF’s highly targeted investment in the region—\$6.65 million, to be disbursed via grants to civil society, including nongovernmental organizations, researchers, community associations and private businesses. But the profile, which was developed through the input of 75 organizations based in or working in the region, is much more than CEPF’s strategy. It offers a blueprint for future conservation efforts in the Maputaland-Pondoland-Albany Hotspot and cooperation within the donor community.



Streptocarpus on rock in Kilgobbin Forest, KwaZulu Natal, South Africa.
© Nikki Brighton

Development of the Ecosystem Profile

CEPF uses a process of developing “ecosystem profiles” to identify and articulate an investment strategy for each region to be funded. Each profile reflects a rapid assessment of biological priorities and the underlying causes of biodiversity loss within particular ecosystems.

The Conservation International Southern African Hotspots Programme (based in Cape Town, South Africa) and the South African National Biodiversity Institute led the development of CEPF’s ecosystem profile for the Maputaland-Pondoland-Albany Hotspot via broad stakeholder consultation between July 2009 to April 2010. The profiling team comprised several experts in conservation biology, spatial planning, economics, policy and governance. All worked collaboratively to develop the profile, with input and participation from more than 150 individuals from civil society, government and donor organizations.

The ecosystem profile presents an overview of the hotspot, including its biological importance in a global and regional context, potential climate change impacts, major threats to biodiversity and root causes of biodiversity loss, socioeconomic context and current conservation investments. It provides a suite of measurable conservation outcomes, identifies funding gaps and opportunities for investment, and thus determines the niche where CEPF investment can provide the greatest incremental value.

It also contains a five-year investment strategy for CEPF in the region. This investment strategy comprises a series of strategic funding opportunities, called strategic directions, broken down into a number of investment priorities outlining the types of activities that will be eligible for CEPF funding. The ecosystem profile does not include specific project concepts. Civil society groups will develop these for their applications to CEPF for grant funding.



Grey crowned cranes (*Balearica regulorum*), Karkloof Conservation Centre, KwaZulu-Natal, South Africa.
© Matthew Drew

Biological Importance of Maputaland-Pondoland-Albany

The Maputaland-Pondoland-Albany biodiversity hotspot is one of the most extraordinary places on Earth, remarkable for both its high level of biological diversity and the life-sustaining systems it maintains for millions of people. Characterized by a vegetation type called subtropical thicket, which is unique to the region, the hotspot expands east to west from the Indian Ocean coast to the Great Escarpment and is the meeting point of six different biomes. Several factors contribute to the region's biodiversity, including the rugged topography, underlying geology, and a climate that ranges from hot and humid in the north (with temperatures around 30°C and humidity of 90 percent in the summer) to parts of South Africa along the escarpment that see topographically induced rainfall and frost in the winter. The result is a region suitable for a wide range of vegetation types and one that is the second richest floristic region in Africa for its size. An estimated 8,100 plant species occur within the region, of which at least 1,900 are endemic, or unique, to the region.

The mammal fauna of the hotspot includes more than 200 species. Of these, eight are endemic and five, such as the black rhino, are Critically Endangered. The hotspot is also home to 631 species of birds, including 14 endemics and 25 globally threatened southern African bird species. There are 225 species of reptiles found in the hotspot, of which 63 species are endemic, including at least seven species of dwarf chameleon. A total of 73 frog species occur in the basin, including 24 endemics. Of the 73 species of freshwater fish in the hotspot, 20 are endemic.

Sometimes overlooked, the region's seascape is equally diverse and important. Defined by the Agulhas and Natal marine bioregions, it supports endemic seaweeds, intertidal and subtidal invertebrates, and fish. The region is also the center of distribution for a number of over-exploited line fish. Mozambique is noted for having the highest latitude coral reefs, with more than 400 species identified, and also for containing 137 species of sharks, rays and skates, including the whale shark, the largest fish in the world. Other species in Mozambique's coastal waters include dugongs (large marine mammals similar to manatees) and loggerhead and leatherback turtles.

The name of the hotspot itself is derived from the three main centers of endemism, each known in their own right for their special and unique ecosystems. In the north, the largest of the three, Maputaland, is typified by lush riverine and estuary habitats, diverse savannah and foothill grasslands, and highly specialized and threatened dune forests. South of the Umtavuna River, roughly correlating with the provincial boundary between KwaZulu-Natal and the Eastern Cape, Pondoland emerges with river valleys, waterfalls and pools that provide habitats for freshwater and marine fish spawning. Further south, Albany is typified by subtropical thicket habitats dominated by spekboom, a small shrub that has adapted to the high browsing pressure of elephants and other herbivores.

This biological diversity and associated ecosystems support the roughly 18.4 million people living in the hotspot. Fresh water generated in the highlands serves the major coastal cities of Maputo, Durban and Port Elizabeth; indigenous insects and flora underly agricultural productivity; and healthy seas are a critical part of the economies of the Eastern Cape, KwaZulu-Natal and southern Mozambique.



Natal bottlebrush (*Greyia sutherlandii*)
© Nikki Brighton

Conservation Outcomes

The Maputaland-Pondoland-Albany Biodiversity Hotspot Ecosystem Profile reflects CEPF's commitment to and emphasis on using conservation outcomes—targets against which the success of investments can be measured—as the scientific underpinning for determining geographic and thematic focus for investment. Conservation outcomes are the full set of quantitative conservation targets in a hotspot that need to be achieved in order to prevent biodiversity loss. They can be defined at three scales—species, site and landscape—that interlock geographically through the presence of species in sites and the presence of sites in landscapes. They are also logically connected. If species are to be conserved, the sites in which they live must be protected and the landscapes or seascapes must continue to sustain ecological services such as provision of fresh water and shelter from floods and storms, on which the sites and the species depend. Defining conservation outcomes is a bottom-up process, with a definition of species-level targets first, from which the definition of site-level targets is developed. The process requires detailed knowledge of the conservation status of individual species. The Maputaland-Pondoland-Albany profile identifies 615 globally threatened species, as defined by the IUCN Red List (2008).

Recognizing that most species are best conserved through the protection of sites at which they occur, the profile's creators next pinpointed key biodiversity areas—sites important for the conservation of globally threatened species, restricted-range species, biome-restricted species assemblages or congregatory species—as targets for achieving site-level conservation outcomes. A total of 72 key biodiversity areas are identified in the profile, covering more than 6.4 million hectares, or approximately 24 percent of the land area of the hotspot. Of the total, 51 key biodiversity areas are less than 100,000 hectares in size, and most fall outside the formally protected area network, highlighting the issue of habitat fragmentation. In addition, 12 biodiversity conservation corridors were identified containing 63 of the key biodiversity areas. These corridors are essential for protecting the processes and linkages required to support threatened species, particularly in terms of long-term adaptation to climate change. The corridors are key to ensuring resilience of ecosystems so they can continue to provide essential services to natural and human communities, and they are considered most important for achieving long-term conservation results.

^[1] Congregatory species are those for which, in at least one phase of their life cycle, a significant portion of world population gathers in one place.



Leopard resting in a tree in the Wild Coast, Eastern Cape, South Africa. © Laurence Kruger

Threats

Despite the considerable, yet unevenly distributed, investments in conservation in Maputaland-Pondoland-Albany, many immediate and long-term threats to biodiversity persist, primarily habitat loss and degradation from agriculture, timber production, mining and urban development. These make the entire region and its biodiversity more susceptible to negative impacts from anticipated climatic changes.

Underlying these direct threats are economic development models that do not account for the costs of environmental loss and degradation; lack of institutional capacity and knowledge; poor governance; limited land tenure security; and the dependence of local communities on natural resources. Improved management of the hotspot's landscapes and seascapes is essential for sustainable growth and development in the region. Government and nongovernmental capacity must be increased if conservation is to succeed in this hotspot in the long term.

Human-caused climate change is directly affecting the hotspot. Research suggests that climate change will lead to increases in rainfall and average temperatures across the region, with the greatest anticipated changes toward the inland escarpment regions near Lesotho during the summer and autumn months. The increases in temperatures will result in more evaporation; thus, despite increases in precipitation, some areas will become drier, river flows will decrease, and water temperatures will increase. Further, sea level is expected to rise by 0.9 meters by 2100.

These predicted warming and drying trends have important implications for the conservation of the region's biodiversity. The prioritization of key biodiversity areas includes identifying those areas that are most important for climate change resilience. Beyond intact and connected landscapes, it is also important to protect landscapes of high topographical diversity, gorges and steep valleys, and south-facing slopes. These provide areas of refuge from the expected temperature and moisture impacts of climate change.



The Pondoland landscape in South Africa's Eastern Cape is home to an immense diversity of endemic plants, but is threatened by poor grazing practices and mining. © Keith Lawrence

Current Investments

CEPF analyzes existing conservation investments from national governments, bilateral and multilateral donors, the private sector and foundations in order to ensure its own priorities complement the funding that is already present. Funding varies by the type of donor, across the three countries, as well as within South Africa and between the provinces of KwaZulu-Natal and the Eastern Cape.

National government investment in conservation in Mozambique and Swaziland is relatively low, although in Mozambique, the Maputo Special Reserve is well funded, particularly in contrast to the Licuati Forest. The Swaziland National Trust provides \$550,000 annually for protected areas, primarily for infrastructure and staff. In comparison, South Africa provides an annual budget of roughly \$19 million to the three national parks and one World Heritage Site within the hotspot, and KwaZulu-Natal's provincial reserves have an annual budget of \$34 million. The Eastern Cape has an annual budget of \$11 million for its reserves, but this is insufficient given that many of the reserves have only the most basic of infrastructure. South Africa also provides significant funding via its large-scale government employment programs, such as Working for Water, Working for Wetlands and Working for Fire.

The Global Environment Facility (GEF), implementing through the World Bank and the United Nations Development Program, is the single largest funder of conservation projects in the hotspot. As of 2010, the GEF had more than \$74 million committed for, among others, tourism infrastructure and financial sustainability of Mozambique's protected area system; the Eastern Cape's provincial reserve system; the St. Lucia Wetland; and the South Africa National Biodiversity Institute. In Mozambique, the Danish, Dutch, German, Finnish and French governments and the European Union have all been active, although primarily in transfrontier parks or those with high tourism potential. The result is an investment gap in areas that have high biodiversity value but receive little funding because their tourism potential is seen to be low, such as the Licuati Forest Reserve.

South Africa has significant investment from dozens of private foundations and corporations, as well as bilateral donors. Swaziland, with the smallest land area, has the smallest amount of external investment—a \$2 million GEF-funded effort to restore the Utushu River. Within this context, CEPF has designed a niche for its funds.



Group in Haga Haga, South Africa, performs a song. Community groups are among the types of civil society organizations that can play a critical role in conserving the ecosystems of Maputaland-Pondoland-Albany. © Amy Spriggs

CEPF Niche and Investment Strategy

CEPF's niche in the Maputaland-Pondoland-Albany Hotspot will be to support civil society in applying innovative approaches to conservation in low-capacity protected areas, key biodiversity areas and priority corridors, thereby enabling changes in policy and building resilience in the region's ecosystems and economy to sustain biodiversity in the long term. Based on CEPF's experience in other hotspots in South Africa, Madagascar and Eastern Africa, support will be given for both innovative approaches and proven techniques. Also, given the power of the South African economy, there will be ample scope for partnerships and leveraging of other resources.

CEPF investments in the Maputaland-Pondoland-Albany Hotspot will focus on 22 of the highest-priority key biodiversity areas and two biodiversity conservation corridors. These sites and corridors, located in all three countries, have the greatest environmental relevance, face the greatest threats, receive the least amount of funding, and present the best opportunities for success.

Currently, there is limited funding in the region to engage civil society organizations and enable them to play a vital role in conservation. Many key biodiversity areas are not formally protected and are inhabited by people who rely on the land for water and other natural resources. Civil society in the hotspot is positioned to take the lead in sustainable conservation within these sites, and it can effectively stimulate partnership between governments and the corporate sector toward conservation of biodiversity.



Snake, Wild Coast, Eastern Cape, South Africa.
© Laurence Kruger

CEPF Strategic Directions and Investment Priorities

1

STRATEGIC DIRECTION

Strengthen protection and management in undercapacitated and emerging protected areas in three priority key biodiversity areas.

INVESTMENT PRIORITIES

- Support public-private partnerships and civil society initiatives to enable effective management of marine protected areas in the Ponto d'Ouro Partial Marine Reserve in Mozambique and adjacent to the Mkambati and Dwesa-Cwebe reserves in the Pondoland North Coast Key Biodiversity Area in South Africa.
- Promote innovative approaches to strengthen protection and management in the Licuati Forests and Eastern Swazi Lebombo Key Biodiversity Area in Mozambique and Swaziland.

2

STRATEGIC DIRECTION

Expand conservation areas and improve land use in 19 key biodiversity areas through innovative approaches.

INVESTMENT PRIORITIES

- Develop and implement innovative approaches to expand private and communal protected areas, particularly for habitats underrepresented in the current protected area network.
- Integrate conservation practice into land-reform agreements to expand conservation management and sustain livelihood opportunities.

The ecosystem profiling process resulted in defining five strategic directions. Through these five strategic directions, CEPF will give special attention to three low-capacity key biodiversity areas in Mozambique, Swaziland and South Africa's Eastern Cape, and will also support the strengthening of civil society, particularly in the first two countries. At the same time, CEPF will address 19 other priority areas, focusing on stewardship, elements of land-reform agreements, and livelihood promotion. Corridors, because of their size, present opportunities for innovation around payment for ecosystem services, basin-level management, leveraging of government-sponsored labor schemes, and generating financing via carbon markets.

3

STRATEGIC DIRECTION

Maintain and restore ecosystem function and integrity in the Highland Grasslands and Pondoland corridors.

INVESTMENT PRIORITIES

- Develop and implement innovative projects that expand conservation management and benefit people in threatened catchment, freshwater and estuarine ecosystems.
- Improve implementation of environmental regulations to maintain functional ecosystem corridors, particularly rivers and coastal zones.
- Support community stewardship initiatives that will catalyze sustainable financing from local carbon markets.
- Improve effectiveness of government-sponsored large-scale natural resource management programs in the corridors by improving knowledge and support for implementation.

4

STRATEGIC DIRECTION

Create an enabling environment to improve conservation and management of Maputaland-Pondoland-Albany priority sites.

INVESTMENT PRIORITIES

- Expand and strengthen civil society by supporting training and further educational opportunities for the staff of civil society organizations in Mozambique and Swaziland.
- Establish and strengthen institutional arrangements that will increase and coordinate civil society participation and facilitate lessons sharing to promote linkages that ensure effective conservation action at a broad scale.

5

STRATEGIC DIRECTION

Provide strategic leadership and effective coordination of CEPF investment through a regional implementation team.

INVESTMENT PRIORITIES

- Build a broad constituency of civil society groups working across institutional and political boundaries towards achieving the shared conservation goals described in the ecosystem profile.

CEPF Investments

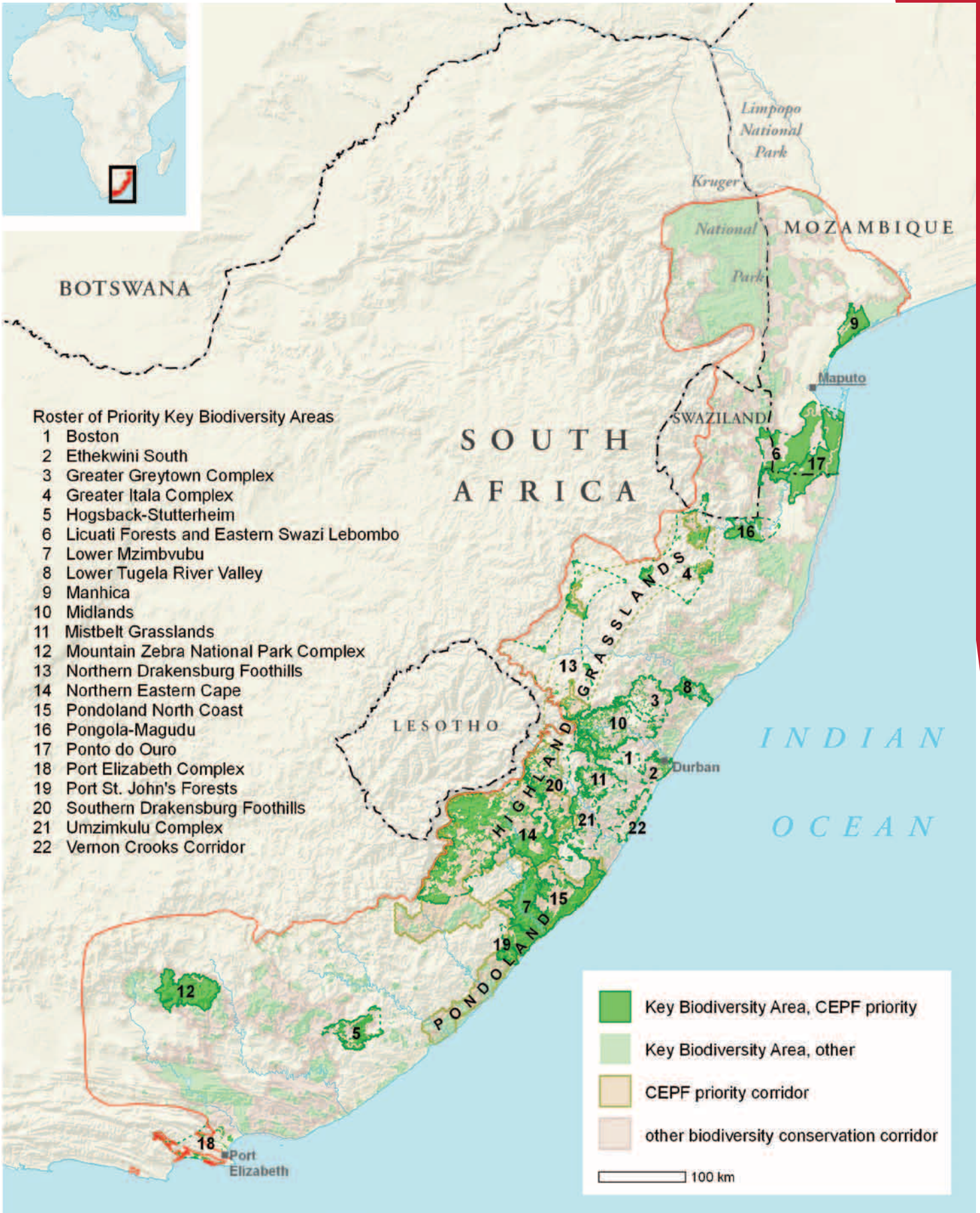
The CEPF investment will focus on 22 of the highest-priority key biodiversity areas and two biodiversity conservation corridors—the Highland Grasslands, which extends along the Drakensberg Foothills from Swaziland through the Eastern Cape, and the forest-grassland mosaic corridor in Pondoland in the Eastern Cape.

Both corridors have extraordinary conservation value and together provide an excellent opportunity for the CEPF investment to demonstrate innovative and replicable approaches to conservation at the landscape scale. With the corridors being adjacent to one another, conservation efforts focused along rivers and restoration activities to enable reconnection of fragmented habitat will increase flora and fauna resilience to climate change.

The top 25 percent of key biodiversity area priorities, or 18 of the 72 total priority sites identified, were selected for CEPF investment based on combined environmental value, threat and opportunity. Also selected as priorities for investment are three key biodiversity areas in Mozambique and Swaziland (Manhica, Ponto d'Ouro and Licuati Forests and Eastern Swazi Lebombos) because these may have been underrated due to data deficiencies, as well as the Pongola-Magadu Key Biodiversity Area, as it provides the greatest opportunity to deliver conservation and socioeconomic benefits for land reform beneficiaries.



Zaluzianskya natalensis found in Dargle, KwaZulu-Natal, South Africa. © Nikki Brighton



Moving Forward

The Maputaland-Pondoland-Albany Hotspot is one of the biological wonders of the world. CEPF will provide funding in the hotspot that is designed to reach civil society in a way that complements funding from government agencies and other donors and inspires innovative conservation activities. The development of this comprehensive ecosystem profile and the CEPF investment strategy was made possible by extensive consultation with stakeholders. It marks an important point in conservation of the region. Through this process, for the first time, there has been an attempt to assess threats throughout the Maputaland-Pondoland-Albany Hotspot and to develop a regional strategy to address these—a critical step toward ensuring the future vitality of this natural treasure. It also provides a new opportunity for donors to deliver coordinated support to conservation groups working in the region.



Sunrise in the Transkei area of the Eastern Cape, South Africa.
© CI/photo by Will Turner



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Girl waits for her turn in a Zulu dance in KwaZulu-Natal Midlands, South Africa. © Nikki Brighton



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