The Cape Action Plan for the Environment: overview of an ecoregional planning process

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Received 15 October 2001; received in revised form 22 January 2002; accepted 26 January 2002

Abstract

A recent trend in biodiversity conservation has been to undertake conservation planning exercises at regional scale, which attempt to protect a representative sample of all habitat types in an entire ecological region. The Cape Action Plan for the Environment (CAPE), which focused on the Cape Floristic Region (CFR), is one of the more advanced of current initiatives. This 2-year project, funded by the Global Environment Facility, was designed to develop a strategy and action plan for the CFR. What was special about CAPE was the combination of stakeholder involvement with an explicit, quantitative planning procedure. This paper gives an account of the process by which this was achieved, and describes the project activities, the public involvement process and a brief overview of project findings. CAPE was a multidisciplinary conservation planning process at relatively large scale, with a key focus on building partnerships between executing agencies, non-governmental organizations, research institutes and the private sector from the outset. This was done to create commitment to implementation and ensure long-term “social” sustainability to match the efforts towards ecological sustainability. The paper concludes by offering some guidelines on the management of ecoregional conservation planning.

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Keywords: Biodiversity conservation; Ecoregional conservation planning; Public participation; Strategy development

1. Conserving the Cape Floristic Region: a global initiative

The Cape Floristic Region (CFR) is a unique biological region of global significance (Cowling and Richardson, 1995). It is the smallest of the world’s six floral kingdoms and the only one to be found entirely within one country, South Africa. Together with its adjoining marine areas, it has spectacularly high levels of plant and animal biodiversity, including more than 1400 Red Data Book plant species, three marine provinces, important RAMSAR sites and many sites of scenic beauty (e.g. Stuckenberg, 1962; Branch, 1988; Cowling and Hilton Taylor, 1994; Skelton et al., 1995; Picker and Samways, 1996; Impson et al., 1999; Griffiths and Prochazka, 2000; Jones et al., 2000; Proshazka and Griffiths, 2000; Van Nieuwenhuizen and Day, 2000; Awad et al., 2002). At least 70% of its 9000 plant species are found nowhere else on Earth (Goldblatt and Manning, 2000). Major threats include loss of habitat to agriculture, rapid and insensitive development of housing and infrastructure, overexploitation of marine resources and wild flowers, spread of alien species, and inappropriate fire regimes (Gelderblom et al., 2003; Rouget et al., 2003a). Some lowland habitats have been reduced by over 90% and less than 5% of land in the lowlands enjoys any conservation status (Rouget et al., 2003b). The region has, therefore, been identified as one of the world’s biodiversity hotspots requiring conservation action (Mittermeier et al., 1998; Myers et al., 2000). Underlying causes for ongoing biodiversity loss include lack of capacity and poor co-ordination between bodies responsible for management of natural resources, lack of awareness of the importance of biodiversity, and a short-term focus on meeting needs of a large, previously disadvantaged populace (Gelderblom et al., 2003; Lochner et al., 2003).

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During the last decade the political reform process in South Africa has created opportunities for improved environmental protection in two important ways. Firstly, clauses protecting the environment in South Africa’s constitution are now amongst the strongest in the world. Amongst others, the country is a party to the International Convention on Biodiversity, the RAMSAR Convention on Wetlands of International Importance, the Convention to Combat Desertification, and the World Heritage Convention. The government has also produced a White Paper on Biodiversity (1997) and the National Environmental Management Act (1998). Preparation of a National Biodiversity Strategy and Action Plan is underway. Secondly, the democratization process has enabled, encouraged and required greater levels of public participation in government decision-making at all levels.

Conservation in South Africa is faced with significant challenges. The country suffers from highly skewed income and resource distribution. The advent of democracy has, of necessity, focussed government funding on economic development and socio-economic priorities. This has led to a shift of funding away from sectors such as conservation, with consequent negative impacts on biodiversity. It has become evident that for conservation to receive significant government and popular support in the future, it will need to make a positive contribution to some of the development issues facing the rural poor. However, in spite of the decreasing trend in conservation funding, the South African government has given a clear indication that, owing to the global significance and vulnerability of the CFR, its protection will be a high priority.

The first steps taken after 1994 to support the conservation of this unique region resulted in South Africa being granted US$12.3 million by the Global Environment Facility (GEF) in support of the Cape Peninsula Biodiversity Conservation Project (World Bank, 1998). While the bulk of this funding was directed at conservation of the highly threatened Cape Peninsula, US$1 million was targeted at developing a strategy and action plan to conserve the whole Cape Floristic Region. This broader strategic project, termed the Cape Action Plan for the Environment (CAPE), extended over 2 years from 1998 to 2000. Its objectives were to develop a long term strategy to conserve biodiversity in the CFR, and to prepare a 5-year investment programme focussed on priorities within the strategy. The strategy and investment programme were to be presented to financial agencies, public and private, national and international, including the GEF, at the end of the 2-year period.

The CAPE project was co-ordinated by the World Wide Fund for Nature South Africa (WWF-SA) at the request of government, and in partnership with government, communities and the private sector. The project addressed the conservation of biodiversity in the terrestrial, marine and freshwater ecosystems of the Cape Floral Region. In particular, the CAPE Project aimed to:

- identify conservation priorities in a rigorous, scientifically defensible manner and based on assessments of biodiversity and threats;
- develop a long term strategy for biodiversity conservation in the CFR;
- draft a 5-year action plan and investment programme to address conservation priorities;
- identify potential sources of funding for these activities; and
- involve key stakeholders meaningfully in the process.

The CAPE project thus constitutes the first phase of a long-term programme to conserve biodiversity in the CFR.

2. Sustainable ecoregional biodiversity conservation:
CAPE in international context

CAPE is one of a number of ecoregion-based conservation (ERC) initiatives world-wide (e.g. Olivieri et al., 1995; Hannah et al., 1998; Dinerstein et al., 2000). Many of these initiatives are being co-ordinated by the World Wide Fund for Nature (WWF) in partnership with other conservation agencies. According to WWF, ecoregion-based conservation arose in part from the need to find ways to operate at a scale large enough to achieve conservation results that are ecologically viable, conserving networks of key sites, migration corridors, and the ecological processes that maintain healthy ecosystems. By addressing ecoregion-wide processes, the approach also recognizes the broader social, economic, and political factors that determine long-term success (WWF-International, 2000; Dinerstein et al., 2000).

The development of conservation strategies at this scale poses a number of challenges for conservation planning. While it enables a more comprehensive and integrated approach to be undertaken, it also increases the complexity of the process. It requires rigorous approaches to identifying ecoregional conservation targets and identifying ways of achieving these. Further, because ecoregional and administrative boundaries seldom coincide, ERC practitioners are obliged to work in a complex political, legal and socio-economic environment, and need to enhance their political knowledge, networking and lobbying skills, as well as their understanding of economic issues and dynamics. Stakeholder participation is also significantly more complex at this scale.

CAPE’s approach to the challenges of terrestrial conservation planning at the ecoregional scale differs
significantly from other approaches, which tend to rely heavily on the “expert workshop” to define ecological priorities (Dinerstein et al., 2000). In summary, CAPE approached the question in the following manner (Cowling et al., 1999, 2003):

- refining an explicit, stepwise protocol for eco-regional planning;
- identifying targets for conservation of biodiversity patterns and ecological processes; and
- combining expert judgement with new technologies for data analysis to lay out and resolve the options for achieving explicit conservation targets.

The CAPE project was undertaken in three major phases: stocktaking and analysis, strategy development, and implementation programming (action planning). Public involvement, in one form or another, was an integral part of each phase. The major challenges facing CAPE in terms of project management, project governance and stakeholder participation were the need to:

- integrate the work of biological and social scientists in an effective strategy and action plan for conservation;
- conduct a regional-scale public involvement process which included stakeholders meaningfully and created buy-in and commitment to implementation; and
- produce the strategy and action plan within a limited time (the entire process of stocktaking, issue identification, strategic planning and development of the action plan took 2 years);

The purpose of this paper is to provide an overview of the planning process as a whole, together with an account of public involvement. The paper deals first with issues of public involvement (Section 3), and then gives an account of the planning process (Sections 4–6). It concludes by deriving some principles to inform similar processes in the future. A discussion of the scientific methodologies used to identify conservation priorities is not included here.

3. Public involvement in the CAPE project

Byers (2000) argued that, to undertake conservation effectively, one needs an understanding of human behaviours with regard to the environment. He stressed the importance of identifying stakeholders and initiating a dialogue with them in the very early stages of the project. This principle applies as much in a regional-scale project as it does at local project level.

It is generally accepted that viewing public involvement as an “add-on” rather than an integral aspect of the planning process can lead to stakeholders feeling that their presence is merely a token gesture, resulting in their dissatisfaction and reduced support for the project. The need to ensure a high level of support by key stakeholders was of particular importance in the CAPE Project, since subsequent implementation of the programme would not be the responsibility of the organization responsible for developing the strategy and action plan (WWF-SA), but instead would be undertaken by key stakeholders.

The goal of the public involvement programme was, therefore, to support effective implementation of CAPE outcomes by creating legitimacy for the project process and buy-in to its outcomes by all relevant stakeholders, including government at all levels, civil society, non-governmental organizations (NGOs) and the private sector.

The objectives of the public involvement programme were to run a process that:

- included all relevant stakeholders;
- integrated the views of stakeholders effectively in the development of strategies; and
- built partnerships for and commitment to implementation.

3.1. Identifying stakeholders

The CFR spans nearly 90,000 km² and three administrative provinces, has nearly five million inhabitants, and contains a wide variety of organizations and government bodies with an interest in biodiversity, either directly or indirectly. As in all ecoregions, the vastness of the study area posed significant challenges in terms of identifying all the relevant stakeholders and ensuring their effective representation.

To identify all stakeholders who could influence biodiversity conservation in the CFR, or who could be affected by it, a systematic analysis was undertaken. This analysis addressed the following questions, drawing on the work of WWF-US (2000):

- who knows what? (identifying those who can provide information on the most important social, economic and political factors and trends affecting biodiversity conservation);
- who controls what? (identifying who owns, manages or harvests resources; who influences allocation, management and use of natural resources; who has legislated responsibility for natural resource management; who is marginalized);
- who can support the process? (who is sympathetic and has resources, skills and networks which can be used to assist the project in achieving its objectives; who has political, financial or economic influence and can “leverage” support for the project, i.e. who is able,
with the application of limited effort, to create significant effect.

3.2. Forms of stakeholder involvement

Stakeholders were grouped into three major categories:

1. General public.
2. Those who would have a direct responsibility for implementing the action plan drawn up in the CAPE process.
3. Interested and affected parties; those who either take an interest in biodiversity conservation, or who would be affected by project outcomes.

Participation in the CAPE process was structured to allow different degrees and forms of involvement by different groups, depending on their preference and on the roles that they would play in implementation. To ensure that the public involvement programme was tailored to the needs of each category, there were effectively three “streams” of activity required.

The first stream addressed the first category of stakeholders, the general public. There was a need to raise awareness in order to heighten CFR residents’ understanding and appreciation of the uniqueness of the area that is on their doorstep. This required a broadly based programme of communication. A publicity campaign (radio, press and television) was undertaken to inform the public of the CAPE process, strategy and action plan. Information was also made available through the Website, brochures and public presentations.

At the other end of the spectrum, the second stream of activity addressed the need for the project co-ordinator and consulting team to work as seamlessly as possible with the ultimate executing agencies (the “key stakeholders”), in particular the Western Cape Nature Conservation Board, South African National Parks, Eastern Cape Directorate of Environment Affairs and the national Department of Environment Affairs and Tourism, to ensure that these agencies took ownership of the project and its implementation. A concerted attempt was made to involve them closely in planning and management of the project, through the establishment of a project Steering Committee comprising key stakeholders. The Steering Committee was supported by a Technical Committee co-ordinated by WWF-SA and comprised the consultants (terrestrial, aquatic and socio-economic). Technical experts representing the major executing agencies were co-opted on to this committee, to ensure effective integration of these agencies in the project management process. This also allowed for a sense of collective responsibility to develop and for working partnerships to evolve. In addition, in-depth consultation with representatives of key stakeholders was held in each phase of the project, to ensure that the views, interests and concerns of these agencies were taken into account in the process and its products. This consultation brought together institutions with different

The analysis identified government bodies (national, provincial and local), scientific research institutes and technical experts, and non-governmental, private and community-based organizations across a range of sectors (including conservation, agriculture and tourism) and disciplines. Over 1500 individual stakeholders were involved in the project.

An interesting outcome of the analysis was the finding that most land in the CFR is in private ownership, particularly in the agricultural sector, and that agriculture is the major land use, occupying over 75% of the land area of the Western Cape Province which includes most of the CFR. This highlighted the need to involve organized agriculture. Attempts were made to draw AgriCape, the organization which represents farmers, farm workers and agricultural suppliers in the Western Cape into the process, and similar attempts were made with farmer’s organizations in the Eastern Cape (see Section 3.2).

Another interesting outcome of the analysis was the identification of organizations whose activities create additional impact, either positive or negative, through “leveraging”, that could support the objective of CAPE. A powerful example of a “leverager” is the Working for Water campaign that achieves multiple environmental and social goals by working with unemployed people to clear invading alien plants that diminish the yield of water catchments (Van Wilgen et al., 1998). Generally, the two groups that form the “leveragers” are those spending money on the CFR, and major income generators. Projects which entailed significant amounts of money being spent in the region and impacting on biodiversity, such as Working for Water, projects funded by the Global Environment Facility and WWF-SA with its associated Trust Funds, and projects being funded by various government agencies, were identified in terms of this criterion. In addition, those organizations exporting the CFR’s natural capital and generating economic benefits outside of the region were identified and the nature and extent of their activities explored. The South African Protea Producers and Exporters (which exports CFR-derived cut flowers), South African Forestry Company Limited and the various agricultural export organizations are examples of this group.
but related interests, characteristics, resources and roles to play, to improve communication, increase mutual understanding and common ground, and create collective commitment to an implementation partnership. The process provided a forum for their different interests to be articulated, common interests to be identified and partnerships to develop.

The third stream was more akin to conventional public involvement. At the outset, as outlined earlier, a wide range of potential stakeholders was identified and categorized in terms of the potential role they could play in the project. A database of over 1500 concerned organizations and individuals was developed, and consultation with those listed on the database was undertaken in a number of ways.

CAPE’s consultation process was of necessity regional. The focus therefore was on involving organizations with a regional character (also termed “umbrella” organizations). While there was no scope for local consultation to take place during the course of the CAPE project, the regional consultation process was open to anyone, including local organizations and individuals. It was felt that the most appropriate point for local involvement in CAPE would be in the design and implementation of specific projects.

A sense of ownership of the products of any project is significantly enhanced where role players can exercise their choice about the extent and nature of involvement that is appropriate for them. For this reason, all stakeholders identified in the CAPE process were canvassed as to which level and form of involvement was appropriate to their needs and resources. Stakeholders were asked:

What would it take for the CAPE project (or this phase of the project) to count for you/your organisation?

The range of possible answers to this question extended from a low level of involvement with minimal rights to influence the nature of the project, to a very high level of influence. All stakeholders were offered the option of engaging in any or all of four incremental levels (be informed, give input, interact, and participate in joint decision-making), each of which was made possible through the means indicated in Table 1. Approaches to involvement were cumulative from level 1 to level 4. For example, those who wanted to participate in joint decision-making also received mailings of brochures and invitations to participate in workshops.

Newsletters informed people of opportunities to participate and invited comments on developments and draft findings at each stage of the project, and the comments and responses were incorporated into reports where appropriate. In the stocktaking and review phase of the project (see Section 4), project initiation workshops were held with stakeholders to introduce the project and identify both important issues that needed to be addressed and stakeholders who needed to become involved. After this, smaller focus group meetings were held with representatives of specific constituencies to explore specific issues more deeply. Throughout the process, meetings were held with stakeholders to report back on progress and receive comment and input.

Inviting stakeholders to specify their preferred form of involvement has one significant weakness: it relies on the current perceptions of individuals and organizations as to what constitutes their interests, and fails to identify potential interests or interests that are not perceived by stakeholders. To counter this, the stakeholder analysis undertaken identified stakeholders whose support would be important to the successful implementation of the project, including groups within the agriculture and tourism sectors, and community-based organizations, and particular effort was made to create an awareness of the importance of CAPE for these groups, to involve them in the process and to gain their support for the outcomes. This was done through targeted media releases, presentations to interest groups and political bodies at local, provincial and national levels where a greater degree of involvement was sought or to allay concerns arising from inadequate information. Where media releases and presentations did not adequately elicit participation, networking—the use of personal contacts and relationships to engage key stakeholders—was used.

Table 1
Continuum of opportunities for involvement in CAPE

<table>
<thead>
<tr>
<th>Level of involvement</th>
<th>Be informed</th>
<th>Give input</th>
<th>Interact</th>
<th>Participate in joint decision-making</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approaches to deliver this level</td>
<td>Mailings of brochures, newsletters and response sheets</td>
<td>Opportunity to comment through response sheets, comment sheets and questionnaires</td>
<td>Opportunity to participate in project-initiation workshops, focus groups, interviews and strategy-development workshop</td>
<td>Sit on Technical and Steering Committees</td>
</tr>
<tr>
<td></td>
<td>Opportunity to attend presentations and report-back meetings</td>
<td>Website</td>
<td>Articles in publications and media</td>
<td></td>
</tr>
</tbody>
</table>

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Certain sectors and interest groups pose a threat to biodiversity because it is in their short-term economic interest to do so, and any attempts to create significant support for conservation in such a sector, within a 2-year process such as CAPE, are likely to be severely limited.

By far the most significant threat to biodiversity in the CFR is commercial agriculture (Rouget et al., 2003), and few representatives of this sector appear to view conservation as being in their interests. In the past, perverse incentives encouraged the ploughing of new lands, even in agriculturally marginal landscapes, while the benefits of conservation-friendly farming are generally not well understood, and no incentives exist to restore transformed land or to compensate farmers for forgone income from not clearing virgin land. Thus, while a measure of support for the project was forthcoming from government departments of agriculture at national and provincial level, from AgriCape, the organized body representing the farming sector, and from certain individual farmers, this was not sufficient to raise awareness or lead to any significant changes in behaviour during the planning phase. It was therefore considered a priority to include in the implementation programme actions to deepen awareness of the need to farm in a more sustainable manner, to remove perverse incentives, and to create a programme of positive incentives to conserve biodiversity in the implementation programme.

A similar difficulty arose in regard to marine conservation, where poaching of abalone is at crisis level (Griffiths and Prochazka, 2000). The issue is highly contested and government efforts to achieve sustainable levels of harvesting in the past have met with only limited success (Gelderblom et al., 2003). It did not prove possible to involve all players in this industry in the CAPE strategic planning process, or would such involvement have been able to address the specific problems faced. It was agreed that the implementation programme should address the resolution of this issue as a matter of priority. Actions proposed included enhancing the system of marine protected areas to secure the resource base, enforcing legislation more effectively, and establishing fisheries co-management arrangements (Gelderblom et al., 2003).

The ability to engage a constituency or stakeholder grouping in a strategic planning process depends not only on its ability to see the relevance of the process to its needs, but also on the constituency’s level of organization and the resources that it has available. It proved extremely difficult to involve relatively unorganized constituencies in the CAPE process, particularly those that lacked significant social and economic power and influence.

Disadvantaged communities in the CFR can be categorized into urban and rural constituencies; the urban being the larger and better organized group, for whom biodiversity conservation issues are relatively remote; the rural being poorly organized, and severely lacking in resources and mobility.

Unlike many other rural areas in South Africa and elsewhere in Africa, the CFR does not encompass significant communal farming areas. Disadvantaged rural constituencies generally comprise farm workers in commercial farming districts. For these constituencies, CAPE found that a shift towards biodiversity conservation could potentially improve rural livelihoods through improving the profitability of farming, and through increased job-creation in the nature-based tourism sector (Gelderblom et al., 2003). In spite of this, it proved extremely difficult to involve representatives from disadvantaged rural communities in the strategic planning process. This was due to a number of factors, the most important of which were that such communities were not highly organized at a local level and therefore difficult to involve and did not see the relevance of a regional biodiversity strategy process to their daily lives and priorities.

Where regional organizations existed, such as umbrella community associations representing impoverished communities, they tended to focus on immediate basic needs and were severely under-resourced, often lacking even the most basic office facilities and staff resources. CAPE was only able to engage regional umbrella civic organizations in the most superficial manner, although the project’s objectives and outputs were supported. However, there is significant potential for more meaningful involvement when the CAPE strategy is implemented locally, since as mentioned earlier each of the implementation projects will provide for public participation by affected parties. Given the immediacy of a local project, its accessibility to local communities, and its more tangible nature (as against a strategic planning process which is highly abstract) it is likely that poor communities will find it easier to engage with the process at this level.

At the level of individual projects, local stakeholder identification will be revisited to ensure that appropriate stakeholders are involved. Stakeholder communication will continue to be an important component of overall co-ordination, together with publicity. Further, to contribute to raising awareness locally of the value of the CFR, a project to promote environmental awareness forms part of the implementation programme.

A brief account of the phases of the planning process and summary of outcomes follows.

4. Phase 1: stocktaking and analysis

In the first phase of the project, between late 1998 and January 2000, a team of scientists led by the Institute for
Plant Conservation (IPC) and Zoology Department of the University of Cape Town (UCT), and the Council for Scientific and Industrial Research (CSIR) undertook a three-part analysis to assess:

1. The conservation status of terrestrial components (Cowling et al., 1999).
2. The conservation status of aquatic components (Impson et al., 1999; Griffiths and Prochazka, 2000; Prochazka and Griffiths, 2000; Van Nieuwenhuizen and Day, 2000).
3. The legal, policy, institutional, financial, social and economic aspects affecting the conservation of biodiversity in the CFR (CSIR, 2000).

Initial stakeholder consultation had taken place during the project development phase, and once the project was initiated, a database of stakeholders was developed and a series of meetings and workshops held to inform stakeholders about the project objectives, process and methodology; to identify additional stakeholders; and to nominate appropriate members for the Steering Committee which was established in this phase. Consultation with key stakeholders (defined as those agencies that would play an important role in implementation of the CAPE strategy and action plan) and other experts was undertaken to help identify, understand and prioritise the main issues to be addressed in the strategy. Methodological debates also took place during this phase. The major issues identified in the analysis fell into two categories: firstly, the biophysical manifestations of the deterioration of the environment, and secondly, the underlying socio-economic structural causes or exacerbating factors, including legal, financial, policy and institutional issues.

4.1. Key biophysical aspects of deterioration and underlying socio-economic causes

The key biophysical factors identified were (not in order of priority) (Fowkes, 1999):

- the increasing spread of invasive aliens species both on land and in the water;
- inappropriate burning or uncontrolled fires;
- problems in catchment management, with loss of water production, erosion and siltation occurring;
- farming methods, inter alia, over-fertilization, planting of inappropriate crops, uncontrolled use of herbicides/pesticides, etc.;
- expansion of agriculture into native vegetation;
- environmentally inappropriate changes in land-use e.g. for housing, extension of farm land, unplanned settlements and changing approaches to commercial forestry areas;
- environmentally damaging siting of bulk infrastructure e.g. dams, roads, power lines; and
- increasing housing and commercial development in coastal areas.

It was felt that these biophysical issues were caused or exacerbated by inadequate provision for protection of biodiversity through (again not in order of priority):

- a failure to correctly value the benefits or opportunities presented by the CFR (e.g. sustainable water production from managed catchments, the potential for job creation, generation of economic activity, the contribution to South Africa’s international obligations on biodiversity);
- lack of public awareness and support for the conservation of the CFR because of a failure to appreciate its value in terms of human health and economic opportunity;
- poverty and inequity of access to resources and a lack of an awareness by the needy members of society of the options for utilization of the natural resources of the CFR in the short and long-term and thus of its potential value to them;
- conflicting political agendas preventing appropriate intervention;
- lack of political will to protect the CFR;
- fragmented or inappropriate laws which impact upon land or resource utilization in the CFR;
- lack of a comprehensive land-use plan for the CFR and subsequent enforcement of that plan on a long-term basis;
- failure to identify and provide appropriate protection to key areas of biodiversity;
- inadequate funds and resources being made available to agencies responsible for biodiversity conservation and natural resource utilization; and
- confusion or conflict over institutional roles and responsibilities from national, through provincial to local government level and between the public and private sector.

4.2. Key findings

The findings of the research and analysis undertaken in the first phase were expressed as recommendations informing the strategy-development process.

4.2.1. Terrestrial recommendations

With regard to terrestrial biodiversity, it was recommended (Cowling et al., 1999; CSIR, 2000) that the strategy should seek to:
give priority to conserving those habitats that have highest conservation value (i.e. those for which all remaining habitat is required to achieve the conservation target) and are extremely vulnerable to threatening processes; ideally all untransformed land in these habitats (e.g. on the southwestern lowlands), irrespective of size of the remnant, should enjoy some form of conservation action in order to achieve the conservation targets;

- exploit opportunities in less transformed but highly threatened landscapes, such as the Agulhas Plain, in order to establish protected area systems that will achieve conservation targets before these are compromised by ongoing transformation;

- plan and implement large protected areas that extend across climatic and habitat gradients; where possible, include a wide altitudinal range in order to accommodate the effects of global climate change; the report recommends the establishment of three mega-conservation areas (400,000–600,000 ha) in the Cedarberg, Little Karoo and Baviaanskloof areas;

- link protected areas by means of natural “corridors”, for example, river courses, to allow plants and animals to move or migrate, either seasonally or in response to climate change;

- develop a land acquisition strategy; and

- develop capacity in executing agencies to strengthen conservation planning.

4.2.2. Marine recommendations

The major recommendations of the marine analysis (Griffiths and Prochazka, 2000) were:

- revise management plans for existing Marine Protected Areas (MPAs) in order to upgrade their capacity to conserve resources, provide monitoring stations and develop tourism-based alternatives to exploitation;

- create additional MPAs to rebuild over-exploited stocks;

- make significant improvements to enforcement capability;

- develop an intensive observer programme to collect important fisheries data and monitor the coastal zone;

- establish co-management arrangements to allow joint-decision making by authorities and local communities, where appropriate;

- promote increased awareness of the importance of sustainable resource-use.

4.2.3. Freshwater recommendations

The freshwater research concluded (Van Nieuwenhuizen and Day, 2000) that the following actions were necessary to conserve freshwater biodiversity in the region:

- support continued research on the diversity and conservation needs of freshwater ecosystems in the region, especially wetlands; and

- integrate freshwater and terrestrial components in conservation planning to ensure representation of freshwater species and habitats in protected areas.

4.2.4. Estuarine recommendations

Major recommendations relating to estuaries (Prochazka and Griffiths, 2000) included:

- effective management and conservation of entire catchments;

- establishment of protected estuaries in good physical condition in which no exploitation may occur, and which will act as refuges and serve to enhance populations of exploited species;

- development of management plans for all estuaries which include measures to improve or at least maintain the current state of each estuary (including improved pollution control, periodic flood releases to flush siltation, etc.);

- ensuring appropriate future development around estuaries and, in some cases rehabilitation of estuaries, particularly with regard to alteration of the estuary mouth;

- improvement of the current knowledge base, particularly with regard to the distribution and occurrence of species within estuaries, and biological processes such as fish reproduction and migration.

4.2.5. Socio-economic

A review of policies and legislation (CSIR, 2000) noted that the Constitution of South Africa guarantees the right to a healthy environment and environmental protection through conservation, pollution control and sustainable development, and that the Western Cape Province has adopted a bioregional approach to land-use planning and established a “Man and Biosphere” programme. However, the analysis concluded that, at provincial and local levels, more cohesive legal frameworks are needed to guarantee on- and off-reserve conservation of biodiversity.

Although the principle of sustainable development was contained in government policies such as the government’s Growth, Employment and Redistribution (GEAR) Policy, research indicated that in practice a number of socio-economic issues tended to override concerns for biodiversity conservation (CSIR, 2000). These included:
Researchers argued that awareness programmes were crucial for effective conservation, and that conservation programmes should be based on a model that integrates biodiversity benefits with economic benefits, particularly in rural areas.

From an institutional and financial point of view, the most serious problems facing biodiversity conservation in the CFR were the limited capacity of the conservation agencies in the region, in particular in the Eastern Cape Province, to manage and enforce effectively, and the lack of coordination between conservation agencies with regard to approaches, activities and priorities (CSIR, 2000).

The review highlighted the need to refocus and streamline functions in all conservation agencies in the region. More effective coordination of conservation projects and priorities was found to be essential, as was the establishment of a single, shared information management system to assist conservation planning across the whole CFR.

Involving stakeholders in providing and sharing information catalysed their deeper involvement in the project. The draft research and analysis undertaken with stakeholder input was circulated to stakeholders for information and comment. In addition to the benefits that this gave to the project in terms of checking and refining the analysis, it served as a resource to stakeholders, showing relationships, linkages, conflicts, contradictions, threats and opportunities that were sometimes not evident to individual stakeholders operating independently. The process of sharing information and identifying issues also facilitated the development of networks and partnerships between stakeholders for implementation (Fowkes, 1999).

5. Phase 2: strategy development

Owing to the need to involve key stakeholders meaningfully in the process of developing the strategy and the limited time available, it was felt that strategy-development should be undertaken in a participative workshop with representatives of key stakeholders. A 3-day workshop was therefore held in February 2000, attended by over 50 participants made up of both CAPE consultants and stakeholders (Lochner et al., 2003). The recommendations arising from the analysis undertaken in the first phase were used to inform the process of strategy development. A crucial input to the strategy development process was the development of a spatial plan outlining a notional system of conservation areas that would achieve explicit targets for the conservation of biodiversity patterns and processes (Cowling et al., 1999, and see Cowling et al., 2003 for an updated version). Aspects of the conceptual basis for the plan stimulated spirited debate within sectors of the scientific community, and adjustments were made to accommodate these. Although it was only feasible to engage in limited public consultation regarding the various options identified by the plan, the outcomes met with broad support at the workshop and from stakeholders afterwards. Once the strategy had been drafted, it was circulated to all stakeholders whose comments were sought by means of a questionnaire. There was a 5.9% response to the questionnaire. An analysis of responses revealed that 98% of respondents supported the draft vision, 95% supported the suggested goal and 100% of respondents supported the overall approach of the strategy, including the themes and components. Comments on specific aspects were integrated into the strategy where appropriate.

The strategy-development workshop developed a draft vision and goal for the conservation of biodiversity in the CFR. The CAPE Vision stated:

We, the people of South Africa, as proud custodians of the Cape Floral Kingdom(sic), will protect and share its full ecological, social and economic benefits now and in the future.

The Goal of CAPE was defined as follows:

By the year 2020, the natural environment and biodiversity of the Cape Floral Kingdom will be effectively conserved, restored wherever appropriate, and will deliver significant benefits to the people of the region in a way that is embraced by local communities, endorsed by government and recognized internationally.

Obstacles to attaining this goal were identified, followed by formulation of strategic objectives to achieve the goal. The key issues identified in the stocktaking and analysis were used to assist in developing draft themes and components of each theme for the strategy (Gelderblom et al., 2003):

- conserving biodiversity in priority areas (components: strengthening on- and off-reserve conservation; supporting bioregional planning);
- promoting sustainable use (components: conserving biodiversity and natural resources in catchments; improving the sustainability of harvesting; promoting sustainable nature-based tourism);
strengthening institutions to achieve the earlier components: strengthening institutions, enhancing cooperative governance (primarily inter-agency collaboration and fair process); promoting community involvement in decision-making).

The workshop then developed a strategic goal for each component, together with objectives to achieve these goals (Lochner et al., 2003). A set of actions needed to meet the objectives was identified, together with criteria for project prioritization. These are outlined later, and discussed more fully in Gelderblom et al. (2003).

5.1. Conserving biodiversity in priority areas

In conserving biodiversity in priority areas, the focus was placed on strengthening on- and off-reserve conservation, and on supporting bioregional planning in the region.

5.1.1. Strengthening on- and off-reserve conservation

The strategic goal identified for this component was:

By 2020, an effectively managed system of conservation areas, land-uses and ownership that is representative of the Cape Floral Kingdom and marine biodiversity, is implemented by landowners and responsible agencies.

An integrated package of project proposals to address the need for more effective biodiversity conservation both on- and off-reserves was developed. Key components were:

Establishing an effective reserve network: this component focused on designing and implementing a system of representative conservation areas to conserve processes and secure irreplaceable habitat. It aimed to establish a robust system, representative of the biodiversity of the Cape Floristic Region. There are three scales of operation:

- protecting the last remnants of highly threatened vegetation types;
- developing medium-sized reserves in lowland priority areas where enough natural habitat remains to create viable reserves;
- establishing mega-reserves in the Cedarberg, Little Karoo and Baviaanskloof areas, as well as mega-corridor reserves linking these and other protected areas.

Targeting threatened plant species: to complement the above projects which focus predominantly on habitat protection, a project targeting the identification and protection of Red Data Book plant species was identified as a priority.

Enhancing off-reserve conservation: off-reserve conservation measures can make a significant contribution to conserving the biodiversity of the region (Pence et al., 2003). Proposals include the development of co-operative management models and incentive mechanisms to enhance community involvement and increase the land under conservation management. Biosphere reserves, an important means for achieving this, are supported in the strategy.

5.1.2. Supporting bioregional planning

Bioregional planning is land-use planning that places biological patterns and processes at the forefront (Miller and Hamilton, 1999). The strategic goal identified for this component was:

By December 2002, planning and environmental policy and legislation are used to ensure integrated and informed decision-making which supports the conservation of biodiversity in the region.

It was felt strongly that the data, analysis and decision-support system for terrestrial conservation planning developed during CAPE (Cowling et al., 1999; and see Cowling et al., 2003) should be used on an ongoing basis in the future to inform all conservation and land-use planning in the region, including the “Man and Biosphere” programme, long-term conservation planning and ongoing assessment of the environmental impact of development proposals.

Legal recognition of this information and decision-making system was seen as necessary to ensure its application. In addition, training would be needed to support implementation at both regional and local level.

5.2. Using resources sustainably

Three major focus areas were identified for sustainable use: sustainable catchment management, sustainable harvesting, and sustainable nature-based tourism.

5.2.1. Sustainable catchment management

The strategic goal identified for this component was:

By the year 2020, institutions and communities will be working together to ensure that appropriate catchment management is in place to protect both water sources and biodiversity.

CAPE focussed attention on two aspects of sustainable catchment management:
1. South Africa’s new water law helps to protect catchments and sets up catchment management associations to support its implementation (Republic of South Africa, 1998). However, catchment management is focused only on securing the supply of water and needs to be broadened to consider biodiversity.

2. The Working for Water Programme of the Department of Water Affairs and Forestry is directed at controlling alien vegetation in order to ensure sustainable supplies of fresh water, while at the same time creating jobs and building capacity (Van Wilgen et al., 1998). This programme also delivers major benefits in terms of protecting biodiversity from alien plant infestation. CAPE needs to support Working for Water through developing capacity to manage alien plants and by identifying which areas/catchments are priorities for clearing from a biodiversity perspective.

Priorities for action identified included:

- broadening the mandate of catchment management agencies to include biodiversity conservation;
- developing capacity through training in clearing invasive alien plants and managing fires;
- undertaking a 5-year research programme on the biological control of invasive alien plants; and
- conserving and restoring inland aquatic systems.

5.2.2. Sustainable harvesting

The strategic goal identified for this component was:

By the year 2020, the natural resources of the Cape Floral Kingdom will be used sustainably providing maximum benefits to society without harming the environment.

Sustainable harvesting of natural products will require more effective conservation management. To ensure this, it was felt that a number of things were needed:

- a strong legal framework and the institutional capacity to implement policy and manage resources;
- sustainable management strategies to guide conservation and restoration, particularly in more threatened habitat types;
- a system of ownership or user rights to encourage communities to manage their local resources sustainably;
- incentives and a clear understanding of the intrinsic and economic value of natural resources to encourage good stewardship and efficient use of resources; and
- further research to determine sustainable levels of use.

Priorities for action were therefore identified as being:

- strengthening the system of Marine Protected Areas and establishing long-term monitoring programmes to help stocks of over-exploited marine organisms to recover;
- developing sustainable management strategies to conserve and restore lowland areas of the CFR in particular;
- establishing co-management forums in coastal and inland areas to facilitate collaboration between communities and conservation agencies;
- developing education programmes to build the understanding and capacity of communities to use resources in a sustainable manner; and
- developing and implementing effective law enforcement strategies and training programmes.

5.2.3. Sustainable nature-based tourism

The strategic goal identified for this component was:

By 2020, the tourism industry is contributing significantly to the sustainability of the natural resources of the Cape Floral Kingdom. Nature-based tourism is attracting visitors to the region, and in turn is providing sustainable benefits to communities, increased incentives for ongoing conservation, a contribution to the costs of managing the natural resource base of the industry, a stimulus to the regional economy and a world-class experience for tourists.

The priority for action was identified as being a strategy to guide the development and implementation of nature-based tourism in the CFR, together with pilot projects in the Agulhas Plain, the Garden Route and selected agricultural areas in the region.

5.3. Strengthening institutions and governance

Three major areas of focus were identified:

1. Strengthening institutions.
2. Enhancing co-operative governance.
3. Promoting community involvement.

The strategic goals identified for this component were:

**Strengthening institutions**: “The collective capacity and will of implementers is sufficient to sustain
innovative and adaptive management in the Cape Floral Kingdom.”

Enhancing cooperative governance: “Role players are aligned and mobilised towards a common vision, policy and purpose for the conservation of the Cape Floral Kingdom.”

Promoting community involvement: “Well-motivated and capable local communities and resource users act to promote and conserve the Cape Floral Kingdom.”

The achievement of these goals was supported by the development of projects designed to:

- create an effective legal and policy framework for biodiversity conservation in the CFR;
- strengthen protected area management in the Eastern Cape Province;
- undertake a 5-year research programme to support effective conservation management; and
- develop programmes to raise awareness and promote the sustainable use of natural resources and conservation.

6. Phase 3: implementation programming

During this phase, a project proposal was developed for each of the priorities for action identified in the strategy-development process (Gelderblom et al., 2003). Proposals were developed to the level of an outline project proposal suitable for submission to donor agencies. This was done in partnership with those conservation agencies that would be responsible for project implementation. This suite of projects, many of which were interdependent, constituted an integrated, comprehensive 5-year action plan or implementation programme, the first phase of a 20-year conservation programme (Gelderblom et al., 2003). This programme was presented at several stakeholder meetings for comment, where it met with broad support.

Monitoring and evaluation mechanisms were built into each project proposal and it was proposed that responsibility for monitoring the progress of the programme as a whole would be the task of a body to be nominated by government.

One of the project proposals addressed the needs of co-ordination and management of the implementation of the programme as a whole. In addition, it was felt that measures needed to be taken to strengthen the institutional framework for implementation and to give concrete form to the partnerships developed between key stakeholders during the planning process. A review of institutional “best practice” undertaken earlier in the process had recommended the establishment of a single body to co-ordinate biodiversity conservation in the CFR in the long term. This was supported by national government. However, the provincial government in the Western Cape felt that there was potential for such a body to usurp the constitutional powers of provincial government. As this issue could not be resolved in the short term, a looser arrangement in the form of an interim co-ordinating committee of executing agencies was established. Agreement on a final institutional framework for implementation had not been reached by the conclusion of the project, and negotiations continued thereafter, resulting finally in agreement that co-ordination and management of the implementation programme would fall under the National Botanical Institute.

An initial estimate of the total budget required to implement the 5-year action plan was R812 million (ca. US$70 million), of which R325 million would be provided by local executing agencies in the form of counterpart funding. Significantly, a major executing agency, the Western Cape Nature Conservation Board formally adopted the CAPE strategy and used it to focus its own activities throughout the region, with consequent realignment of its capital and operating budget. Additional funding being sought amounted to R487 million. A study to assess ways of increasing the financial self-sufficiency of the programme was commissioned subsequent to the findings and proposals being presented to donor agencies at the end of the 2-year period.

7. Concluding comments

This paper has attempted to give an overview of the process of drawing up the Cape Action Plan for the Environment, focussing on aspects other than the scientific methodology for identifying priorities and designing a viable protected area network. Hopefully the paper has provided a sense of the complexity of the task of ecoregional conservation planning: not only was CAPE a multidisciplinary planning process at a regional scale, that analysed and made proposals for conservation, but it engaged with a wide range and large number of stakeholder groupings with the ultimate goal of effecting significant long-term changes in human behaviour towards the environment in the region. It did this in a relatively short time, with limitations on knowledge, resources and experience.

In a guidance note for ecoregion-based conservation, WWF-US (2000) argues that despite the range and variety of approaches that are emerging in ecoregion-based conservation, successful outcomes are more likely if certain fundamental principles are adhered to. These are, in brief, a primary focus on biodiversity, a multidisciplinary approach, stakeholder participation and collaboration, partnership development, long-term
commitment by key participants, and adaptability and flexibility in approach.

In addition to these principles, a few additional points are suggested, arising from the CAPE experience:

- **strategic and pragmatic approach**: the need to prevent the process becoming bogged down at an inappropriate level of detail, to continually refer to the broader objectives and context in order to keep issues in perspective, to be pragmatic instead of perfectionist, and to focus on the implications of information and analysis for the development of strategies, rather than on for its own sake;
- **emphasis on communication**: the need for full, frequent and frank communication with stakeholder groups as often as possible to eliminate misunderstandings and to support consensus and collective decision-making;
- **differentiating roles of stakeholders**: the need to determine in consultation with stakeholders a range of levels and forms of involvement appropriate to the project’s needs and those of stakeholders;
- **key stakeholder involvement in project governance**: the need to ensure commitment to implementation by executing agencies, through involving them extensively in project committees and decision-making processes, including the strategy-development process and implementation programming;
- **balancing the need to give direction and build relationship**: reconciling two sometimes conflicting objectives—the need to ensure that the process has direction and maintains momentum, while at the same time ensuring that as far as possible players are focussing on issues of common interest and are in agreement.

In a number of ways, CAPE represents a unique and innovative approach to ecoregion-based conservation, integrating biodiversity and human concerns in a coherent, comprehensive conservation strategy and action plan to conserve the globally significant biodiversity in the Cape Floristic Region. Faced with the challenge of conducting a participative strategic planning process in an entire ecoregion, its public involvement programme needed to be innovative and flexible, and to focus on building partnerships between executing agencies, non-governmental organizations, research institutes and the private sector, creating commitment to implementation and thereby ensuring long-term sustainability of the implementation programme.

### Acknowledgements

We would like to thank Richard Cowling, Bob Pressey and John Fowkes for their advice and comments on drafts of this paper.

### References


biodiversity conservation strategy for the Cape Floral Kingdom. Biological Conservation 112, 29–43.