

**STRATEGIC  
ENVIRONMENTAL  
ASSESSMENT**  
FOR THE MANAGEMENT OF  
ECOSYSTEM SERVICES  
WITHIN THE CAPE WINELANDS  
DISTRICT MUNICIPAL AREA

**STRATEGY REPORT**

*Draft*

**FEBRUARY 2007**



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# STRATEGIC ENVIRONMENTAL ASSESSMENT

*for the management of Ecosystem Services within the  
Cape Winelands District Municipal Area*

## STRATEGY REPORT

*DRAFT FOR PUBLIC REVIEW*

FEBRUARY 2007

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## 1. BACKGROUND TO THE ENVIRONMENTAL STRATEGY

The Cape Winelands District Municipality wishes to ensure that the ecosystem services which provide the foundation for economic and human development in its area of jurisdiction, are effectively protected and managed into the long term future. Towards this end, the District Council commissioned the CSIR to undertake a Strategic Environmental Assessment to develop a decision-aiding tool for the management of ecological resources within the District. The focus of this assessment is on formulating an Environmental Strategy and Implementation Plan to sustain ecosystem services.

The Scoping Report provides the *current status quo with regard to the management of ecosystem services* and information on the baseline situation. It also identifies the *trends* evident for each component of the ecosystem and the services provided by it, as well as the *pressures* being brought to bear on each of these components and services.

This report contains the Environmental Strategy which forms the *bridge* between the outcomes of the Scoping process<sup>1</sup> and the practical implementation plan – the Strategic Environmental Management Plan (SEMP) – that the Cape Winelands District Municipality will use for the control and management of all future development planning in the District.

## 2. VISION FOR THE SEA

A draft vision for the SEA was formulated by representatives of the Cape Winelands District Municipality and the CSIR project team, based on discussions held at a visioning workshop on 14 February 2006 in Worcester. This workshop was attended by representatives of the Cape Winelands District Municipality and the Local Municipalities in the District. Various stakeholders and the general public, were given the opportunity to comment on this vision and propose changes if there was a need. The Environmental Strategy is based on providing a mechanism for achieving this vision, and therefore assumes broad based acceptance and adoption of the vision as it stands.

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<sup>1</sup> The outcomes of the Scoping Process are documented in the Scoping Report (July 2006), currently in Draft form, produced for the first phase of the SEA.

### BOX 1: VISION

The Cape Winelands District Municipality, together with its key stakeholders, effectively manages human activities to ensure the maintenance and enhancement of key ecosystem services within the area, for the benefit of all, now and into the future.

## 3. STATUS QUO OF ECOSYSTEM SERVICES IN THE CWDM AREA<sup>2</sup>

Unless otherwise indicated and referenced in the text, the information presented in the remainder of this strategy report, is derived from five specialist studies conducted to inform the SEA, viz. studies on the ecosystem services provided by biodiversity, water, air quality, land and soil, and the governance context<sup>3</sup>.

### *3.1 Human activities being practiced in the CWDM Area*

The most prominent economic activities in the Cape Winelands District are the practice of agriculture, primarily wine and deciduous fruit production, and tourism, which centres on the wine industry, the natural environment and cultural history in the District. Other less prominent economic activity includes forestry, mining, manufacturing and construction.

<sup>2</sup> 'CWDM Area' is used in this report to indicate the Cape Winelands District Municipal Area.

<sup>3</sup> Specialist studies:

- (i) Kotze, I., Forsyth, G. and O'Farrell, P.J. (2006) Biodiversity Study. Specialist Study for the SEA for the Management of Ecosystem Services within the Cape Winelands District Municipality Area. CSIR, Stellenbosch.
- (ii) Saayman, I. and Leaner, J. (2006). Water Resources. Specialist Study for the SEA for the Management of Ecosystem Services within the Cape Winelands District Municipality Area. CSIR, Stellenbosch.
- (iii) Oosthuizen, R. and John, J. (2006). Air Quality. Specialist Study for the SEA for the Management of Ecosystem Services within the Cape Winelands District Municipality Area. CSIR, Pretoria.
- (iv) Lanz, J. (2006). Land and Soil. Specialist Study for the SEA for the Management of Ecosystem Services within the Cape Winelands District Municipality Area. CSIR, Stellenbosch.
- (v) Fortuin, H.H. (2006). Governance Context. Specialist Study for the SEA for the Management of Ecosystem Services within the Cape Winelands District Municipality Area. CSIR, Stellenbosch.

Agricultural activity comprises not only viticulture and deciduous fruit production, but also vegetable, poultry and essential oil production, and aquaculture<sup>4</sup>. A wide range of manufacturing industry operates in the District including food and tobacco, textiles, leather tanning, wood and paper products, chemicals, metals, machinery, household and medical supplies, motor vehicles and jewellery production. The tourism sector in the District offers a diverse mix of opportunities in health and wellness, food and wine, eco-and adventure tourism, conferencing, and history and cultural heritage categories.

### **3.2 Ecosystem services**

Ecosystem services are the processes and conditions of natural ecosystems that support human activity and sustain human life<sup>5</sup>. They encompass all the benefits we derive both directly and indirectly from the functioning of ecosystems<sup>6</sup>. The Millennium Ecosystem Assessment identified ecosystem services as falling into the following four major categories, provisioning services (e.g. food, water), regulating services (e.g. climate, water, disease regulation), cultural services (e.g. spiritual, aesthetic), and supporting services (e.g. primary production, soil formation).

The ability of the ecosystem to provide these benefits that support human life and development in the Cape Winelands District, is directly dependent on the health of the ecosystem. There are several pressures on the ecosystem in the region that are already limiting, or that may in the future limit the ability of the ecosystem to continue providing these services. These pressures need to be carefully managed and controlled to prevent the loss of the critical services provided by the ecosystem. The Environmental Strategy and the SEMP will provide a substantive foundation and practical mechanism for managing these pressures, in the context of providing opportunities for sustainable economic development and the improvement of the quality of life of people in the District.

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<sup>4</sup> Cape Winelands District Information Booklet, (2005). [www.capewinelands.gov.za](http://www.capewinelands.gov.za)

<sup>5</sup> Daily, G. (ed) (1997) *Nature's Services - Societal Dependence on Natural Ecosystems*, Island Press, Washington.

<sup>6</sup> Costanza, R., d'Arge, R., deGroot, R., Farber, S., Grasso, M., Hannon, B., Limburg, K., Naeem, S., O'Neill, R. V., Paruelo, J., Raskin, R. G., Sutton, P., and vandenBelt, M. (1997). The value of the world's ecosystem services and natural capital. *Nature*. 387:253-260.

The *ecosystem services* provided to the people of the Cape Winelands District include:

SOURCE OF ECOSYSTEM SERVICE	BENEFITS DERIVED
<b>Biodiversity</b>	<ul style="list-style-type: none"> <li>▪ Pollination of crops and natural vegetation, from which humans derive fruits and other foods.</li> <li>▪ Provision of useful species for beneficial uses such as flower harvesting, wood for fuel, food, medicines.</li> <li>▪ Cycling and movement of nutrients, soil stability and soil carbon storage, providing fertile and non-eroding soils and the potential for carbon trading.</li> <li>▪ Control of the vast majority of potential agricultural pests prevents loss of livelihood from damage of crops.</li> <li>▪ Climate stabilisation and moderation of weather extremes and their impacts, providing liveable climates.</li> <li>▪ The provision of aesthetic beauty and intellectual stimulation in a place that tourists want to visit.</li> </ul>
<b>Water</b>	<ul style="list-style-type: none"> <li>▪ Purification of water and attenuation of floods by wetlands.</li> <li>▪ Supply of water by rivers and from ground water for drinking, irrigation and manufacture of products.</li> <li>▪ Breakdown or dilution of waste in rivers.</li> <li>▪ Provision, by rivers and freshwater bodies, of places of recreational, aesthetic, spiritual or religious value<sup>7</sup>.</li> </ul>
<b>Air (quality)</b>	<ul style="list-style-type: none"> <li>▪ Provision of clean air that is beneficial for humans and the ecosystem, including the conversion of CO<sub>2</sub> to oxygen by plants through photosynthesis.</li> </ul>
<b>Land and soil</b>	<ul style="list-style-type: none"> <li>▪ Provision of nutrients, water and physical rooting support for agricultural crops.</li> <li>▪ Provision of nutrients, water and physical rooting support for natural vegetation, as well as other roles that soil plays in natural ecosystem functioning, such as a medium for completion of insect life cycles.</li> <li>▪ Role played in hydrology and water supply, which includes infiltration of precipitation, runoff control and recharge of groundwater.</li> <li>▪ Attenuation of environmental pollution, which is a specific role of soil in land fills and land farming, but also more generally in attenuating the potential effects of air pollution on surface and groundwaters.</li> <li>▪ Provision of construction and road building material in the form of sand and laterite gravel that are sourced from the soil profile.</li> </ul>

<sup>7</sup> River Health Programme (2005). *State-of-River Report: Greater Cape Town's Rivers*. Department of Water Affairs and Forestry, Pretoria. ISBN: 0-620-34026-6.

*Current status and pressures on ecosystem services*

Currently, the overall trend in the health of ecosystem services in the Cape Winelands District is a gradual deterioration, which without the necessary interventions, will lead to a crisis in the ability of these ecosystem services to support the sustainable economic development and improved quality of life that the Municipality strives for in its area of jurisdiction.

Human activity in the CWDM Area is imposing pressures on the continued ability of the ecosystem to deliver ecosystem services into the future. A brief overview of these pressures follows, in relation to each component of the ecosystem.

SOURCE OF ECOSYSTEM SERVICE	TRENDS AND PRESSURES
Biodiversity	<p>The integrity of the two biomes (Cape Floristic Kingdom and Succulent Karoo) represented in the CWDM Area, is significantly threatened by intense <i>fragmentation</i>. This means that the ecological viability of the biodiversity is compromised. The situation is exacerbated by the fact that the most severely transformed and fragmented areas of high value biodiversity, lie outside of formally protected areas.</p> <p>Current activities adding to this increasing fragmentation include:</p> <ul style="list-style-type: none"> <li>▪ development on marginal or vulnerable land (e.g. vineyards on steep slopes (foothills)) by investors in the Stellenbosch area;</li> <li>▪ the expansion of vegetable and fruit production onto virgin land (into fynbos areas);</li> <li>▪ the rapid spread of urban development; and</li> <li>▪ increasing infestation by alien vegetation.</li> </ul> <p>The increasing incidence of uncontrolled fires and the inappropriate use of fire as a management tool, is causing a potential <i>permanent loss of species and damage to the soil</i> e.g. lower infiltration capacity and higher risk of erosion.</p>
Water	<p>There is a <i>rapid expansion of inappropriate agricultural development</i> in spite of the problems associated with manifesting climate change (e.g. crops with high water needs such as fruit). Inappropriate agricultural development is that which has a high water demand in an area that could experience significant water stress in the future.</p> <p>The <i>demands for increased urban water supply</i> by the Cape Town Metropolitan Area. There is a general sustained increased demand for water supply (from within and outside the Area) and this could increase the demand for inter-catchment water transfers which have ecological effects, and could place pressure on ground water resources as well, particularly without the necessary water demand management practices in place.</p>

SOURCE OF ECOSYSTEM SERVICE	TRENDS AND PRESSURES
	<p>A general increase in pollution of rivers (e.g. the Breede River) and the associated <i>deterioration of water quality</i>. Increasing abstraction, infestation by alien vegetation that consumes high volumes of water, and the effects of climate change, are reducing river flow. This has a significant ecological effect.</p>
Air quality	<p>The <i>air quality</i> in the CWDM Area is gradually <i>deteriorating</i> and <i>regulation and monitoring</i> of air quality is <i>fragmented and inconsistent</i>.</p> <p>There is a general trend towards increased industrial emissions (including those from brickworks), an increase in the application of pesticides (including occasional aerial spraying due to the rapid expansion of agricultural development) and increased greenhouse gas and particulate emissions from the increasing incidence of veld fires in the region.</p> <p><i>Low priority</i> is given to increasing the <i>use of renewable energy</i> which avoids the atmospheric emissions associated with dominant forms of energy production in South Africa, such as burning carbon-based fuels (e.g. coal).</p>
Land and Soil	<p>The soils in the CWDM Area are of a low agricultural potential and therefore further damage to the land could significantly threaten agricultural production.</p> <p><i>Soil and land degradation</i> is evident in the CWDM Area. In particular, <i>salinisation</i> of soils has occurred in some areas, such as the lower Breede River Valley as a result of poor agricultural practices. In many other areas, soils and surface and ground water are being <i>contaminated</i> by irrigation with untreated winery and industrial effluent (wine and other industries), by substandard releases from waste water treatment works, leachate from poorly designed and operated landfill sites, and poorly designed and maintained on-site domestic sanitation.</p> <p><i>High potential agricultural land is being lost to changes in land use</i> i.e. rezoned for inappropriate land uses such as housing, golf course development, high income residential estates, and certain types of tourism development. The productive capacity of the land is also being negatively affected by poor rehabilitation after mining in areas where mining is being / has been practiced.</p> <p>Climate change (hotter and drier climate) will cause a further <i>reduction in land capability and crop suitability</i>.</p>

Balancing these many trends and pressures, however, is a range of existing initiatives that encourage and facilitate sound management of land use and development. A brief outline of these initiatives is introduced in section 3.4 below.

### **3.3 Governance context**

Sound governance is a vital determinant of the effectiveness of any action the District Council may take in protecting and managing ecosystem services in the CWDM Area. The

statutory and constitutional obligations<sup>8</sup> of the Cape Winelands District Council require that it integrates social, economic and environmental factors into the planning, implementation and evaluation of its decisions. The governance context within which the District Council is tasked to fulfil these obligations is briefly outlined in Appendix A. The Environmental Strategy must be aligned with, and also inform the governance context, to ensure that it is practicable.

### ***3.4 Existing initiatives available for the protection of ecosystem services***

It is important that the District Council collaborates with existing established initiatives in the Western Cape, or specifically in the CWDM Area, for the protection and management of ecosystem services. Given the demands on the Municipality's resources, it is essential that it does not duplicate the efforts of initiatives that are already well established and in some cases have been operational and successful for several years. It is recommended that the Municipality benefits from various levels of interaction with these initiatives and assists in rationalising the contributions made for the protection and management of ecosystem services.

Examples of relevant existing initiatives are summarised in Appendix B, and recommendations have been made in the Environmental Strategy for specific collaborative efforts that could be made by the District Municipality to achieve synergies in protecting and managing ecosystem services in the CWDM Area.

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<sup>8</sup> Section 24 of the Bill of Rights in The Constitution, 1996 (Act 108 of 1996). Schedules 4 and 6 of The Constitution (Act 108 of 1996), Section 83 (3) of the Municipal Structures Act, 1998 (Act 117 of 1998, as amended)

## 4. ENVIRONMENTAL STRATEGY

The point of departure of this Environmental Strategy is the *current status quo with regard to the management of ecosystem services*, as documented in the Draft Scoping Report. This report provides information on the baseline situation, and also on the *trends* evident for each component of the ecosystem and the services provided by it, as well as the *pressures* being brought to bear on each of these components and services<sup>9</sup>.

The challenge for the CWDM is to create a mechanism that will enable it to effectively manage these trends and pressures, to prevent irreversible damage to the ability of the ecosystem to provide the essential services that underpin the economy and quality of life of people living in the District.

In response to the trends and pressures identified by stakeholders, the CWDM, specialists and the CSIR project team, a number of *strategic goals* and specific *objectives* have been formulated to ensure that ecosystem services are effectively protected and managed in the Cape Winelands District. The achievement of each of these objectives is subject to a range of *opportunities and constraints* presented by the current spatial and development planning context, the realities of governance in the Province and in the District Municipality and local municipalities, and the levels of environmental awareness of both officials and the public in the District.

The Environmental Strategy provides a *practical framework* for the identification of specific actions (to be presented in the Strategic Environmental Management Plan (SEMP)) that must be taken into account to ensure that ecosystem services are protected and judiciously managed.

Further detail is provided below on each of the components of the Environmental Strategy.

- 4.1 *Strategic Goals*
- 4.2 *Objectives*
- 4.3 *Opportunities and constraints*
- 4.4 *Strategic actions required to achieve the strategic goals and objectives (i.e. what is needed to overcome constraints or realise opportunities)*

<sup>9</sup> See Appendix 3, Draft Scoping Report for the SEA for the Management of Ecosystem Services in the Cape Winelands District Municipal Area, July 2006

#### **4.1 Strategic Goals**

A number of *strategic goals* were identified based on the outcomes of the two key stakeholder workshops and the specialist studies in the Scoping phase. The strategic goals are as follows:

- A. Sustainable economic development;
- B. Strong institutional capacity, collaboration and law enforcement;
- C. Sound land use and development planning and resource management;
- D. High level of stakeholder capacity manifested through the availability of information, awareness and education; and
- E. Effective waste management, pollution control and service provision.

The purpose of these goals is to guide the maintenance and enhancement of ecosystem services in the District Municipality Area into the long term future. The dependency of sustainable economic development and the alleviation of poverty, on the maintenance of ecosystem services within the Cape Winelands District is at the root of the Environmental Strategy.

#### **4.2 Objectives**

A range of objectives have been formulated based on the outcome of the stakeholder workshops. These objectives should be met in order for the strategic goals to be realised. The objectives, responding to each of the Strategic Goals, for the protection and management of ecosystem services, are as follows:

##### ***Strategic Goal: Sustainable economic development***

- a) Producers in the CWDM Area benefit from the comparative and competitive advantages of ecologically sound production in the CFK.
- b) The nature-based tourism potential of the CWDM Area is realised.
- c) Long-term ecological, economic and social sustainability is assured in the agricultural sector through large-scale substantive adoption of crops, products and farming methods suitable to dryer and hotter climates.

***Strategic Goal: Strong institutional capacity, collaboration and law enforcement***

- d) The capacity (education, leadership and resources) exists within the CWDM Area and major stakeholders in the District, to ensure that planning, economic development and other activities are sustainable and there is an understanding of the importance of maintaining ecosystem services.
- e) Environmental legislation (e.g. for control of alien vegetation) is effectively enforced and environmental programmes currently underway in the District are substantively supported by the CWDM.
- f) Land use planning and decision-making is coordinated at local municipality level and between various spheres of government.

***Strategic Goal: Sound land use and development planning and resource management***

- g) Local authorities and others responsible for development planning and decision-making in the CWDM are aware of the potential social, economic and environmental implications of all forms of human activities and consider these in their planning and decision-making in a participatory way that ensures that the ecosystem services of the CWDM Area are maintained and enhanced.
- h) SDFs and IDPs provide a sound strategic planning framework that facilitates the sustainability of all new development in the CWDM Area.
- i) An effective, well- resourced and coordinated fire-management, emergency and disaster prevention programme is implemented across the CWDM Area.
- j) The energy needs of the CWDM Area are provided for by a district level integrated energy plan that comprises both conventional electricity supply, as well as the increased development of alternative energy solutions to provide a greater level of self sufficiency in the economy of the District.

***Strategic goal: High level of stakeholder capacity manifested through the availability of information, awareness and education***

- k) All key stakeholders within the District are informed of the vital role of the area's ecosystem services in supporting economic development.
- l) Farmers and other land users are aware of the effects of ecosystem fragmentation and alien infestation on the provision of ecosystem services, as well as the influence of climate change on the type of crops that should be cultivated.

***Strategic goal: Effective waste management, pollution control and service provision***

- m) Waste management and air pollution prevention within the District is undertaken in a coordinated and integrated way.
- n) Adequate water supply, waste water treatment and storm water management infrastructure is an integral part of all new development and is maintained in good working order to prevent contamination of natural waters

### ***4.3 Opportunities and Constraints***

A range of opportunities and constraints to achieving the objectives have been identified based on the inputs of stakeholders, the specialist studies, existing planning frameworks, and existing initiatives that affect the management and maintenance of ecosystem services in the CWDM Area. The initiatives span the entire range of organisations from central government to local NGO involvement, and can all be drawn upon to assist the District Municipality in its endeavours to maintain the ecosystem services in the area in a healthy state. The opportunities and constraints relating to the achievement of the objectives in the Strategy have been accounted for in the recommended strategic actions.

### ***4.4 Strategic Actions***

The strategic actions required to achieve the goals and objectives outlined above, are presented in the following pages. After stakeholder review of this report, these actions will be taken forward and translated into practical projects in the SEMP.

**STRATEGIC GOAL: Sustainable Economic Development**

**Objective:**

- a) **Producers in the CWDM Area benefit from the comparative and competitive advantages of ecologically sound production in the CFK.**

Opportunities	Constraints
<ul style="list-style-type: none"> <li>• The actual and potential contribution of ecosystem services in the CWDM Area to the regional economy.</li> <li>• Existing requirements that encourage sustainable development practices in certain economic sectors (e.g. agriculture).</li> <li>• Existing enabling legislation for the maintenance and management of ecosystem services.</li> <li>• Growth that is occurring in certain industries reliant on the Cape Floristic Kingdom e.g. in the sales of flowers.<sup>10</sup></li> <li>• Growth in the demand for high quality wine and deciduous fruit.<sup>11</sup></li> </ul>	<ul style="list-style-type: none"> <li>• External demands on the ecosystem services in the CWDM Area e.g. from Cape Town.</li> <li>• Climate change (i.e. hotter, drier conditions and increased climatic variability), which could have a negative effect on agricultural production</li> <li>• The undermining of ecological resilience that is currently occurring.</li> <li>• The dependency of sustainable land and soil management practices on the prosperity of agricultural production.</li> </ul>
Strategic Actions	
<ul style="list-style-type: none"> <li>• Engage with all relevant agencies, NGOs, and the public sector (including farmers) in the management of ecosystem services. The CWDM should actively partner with- and support initiatives such as the CapeNature Conservation Stewardship Programme.</li> <li>• Support the agricultural sector with the aim of improving its economic viability and environmental sustainability. This will reduce pressure from land use changes and encourage good agricultural practices.</li> <li>• Increase the understanding of future external demands on the ecosystem services of the Cape Winelands in the short, medium and long term (by the City of Cape Town and others) and include this information in all future urban development planning.</li> <li>• Assist and support farmers, their labour and others working in the agricultural value chain, in diversifying their products, services and markets, with due consideration to sustainability issues.</li> <li>• Provide incentives for producer accreditation with internationally recognised systems such as EurepGAP and the Integrated Production of Wine (IPW), to encourage farmers to adopt sustainable agricultural practices.</li> <li>• Support agricultural industry initiatives that are developing proactive strategies to take account of future changes, including climate change. These include the wine industry's Vision 2020 and strategies of the Deciduous Fruit Producers Trust.</li> <li>• See Objective C for recommendations concerning climate change</li> </ul>	

<sup>10</sup> Cape Winelands District Municipality (2006) *Cape Winelands District: Growth and Development Strategy: Second Draft*, 13 November 2006.

<sup>11</sup> *ibid*

<b>STRATEGIC GOAL: Sustainable Economic Development</b>	
<b><u>Objective:</u></b>	
<b>b) The nature-based tourism potential of the CWDM Area is realised</b>	
<b>Opportunities</b>	<b>Constraints</b>
<ul style="list-style-type: none"> <li>• The intrinsic value of ecosystem services in the CWDM Area provides opportunities for eco-tourism.</li> <li>• The significant potential for growth in the tourism market in the Cape Winelands,<sup>12</sup>.</li> <li>• The track record of the tourism sector, of which ecotourism is one of the five key sub-sectors, as an important contributor to economic growth in the Cape Winelands between 2000 and 2004.<sup>13</sup></li> <li>• The diversification, by a number of farmers, into agri-tourism products.<sup>14</sup></li> <li>• The recognition in certain policy and planning documents (e.g. the draft Growth and Development Strategy (Cape Winelands, 2006)) of tourism as a key sector for driving economic growth and poverty reduction in the Cape Winelands District.</li> <li>• The foreign market tourism demands for scenery value for money, peace and quiet and animals, amongst other elements.<sup>15</sup></li> </ul>	<ul style="list-style-type: none"> <li>• The current undermining of ecosystem services on which ecotourism depends.</li> <li>• Reduction of the image and identity of towns<sup>16</sup> and the scenic value of natural resources, due to inappropriate urban development and erosion.</li> <li>• The lack of a clear eco-tourism strategy in the Growth and Development Strategy, the IDP and the SDF.</li> </ul>
<b>Strategic Actions</b>	
<ul style="list-style-type: none"> <li>• Engage the provincial and local tourism authorities, local eco-tourism operators, conservation agencies (such as Cape Nature), environmental NGOs, and other relevant stakeholders in developing unique and innovative eco-tourism products for the CWDM Area.</li> <li>• Ensure that there is a clear and accessible strategy for the development of sustainable eco-tourism in the area which is incorporated into the final Growth and Development Strategy, the IDP, the SDF, and any future tourism planning and marketing. This strategy should particularly benefit low income communities and be linked to poverty reduction strategies.</li> <li>• Contain urban sprawl and protect valuable natural and historical resources, on which tourism depends, through the development of guidelines for the delineation of urban edges by the local "B" municipalities, based on the Spatial Planning Categories developed by the</li> </ul>	

<sup>12</sup> Cape Winelands District Municipality (2006) *Cape Winelands District: Growth and Development Strategy: Second Draft*, 13 November 2006.

<sup>13</sup> *ibid*

<sup>14</sup> *ibid*

<sup>15</sup> *ibid*

<sup>16</sup> Cape Winelands District Municipality (2005) *Cape Winelands District Municipality: Spatial Development Framework*, compiled by MCA.

District.

- Ensure that urban development does not compromise key resources for nature based tourism. This will require the identification and demarcation of no-go areas to prevent fragmentation of the scenic and historic quality of the landscape, and value of cultural and natural resources for tourism. Feed this information into the identification of Spatial Planning Categories, in the SDF and the IDP.
- Implement, across the District Municipality, the “Guidelines for Assessing Land Use Management Applications in Rural Areas” (Cape Winelands District Municipality, 2006), particularly those related to holiday resorts and accommodation.

**STRATEGIC GOAL: Sustainable Economic Development**

***Objective(s):***

- c) Long-term ecological, economic and social sustainability is assured in the agricultural sector through large-scale substantive adoption of crops, products and farming methods suitable to dryer and hotter climates**

Opportunities	Constraints
<ul style="list-style-type: none"> <li>• The encouragement of good agricultural practices by market forces and the requirements of certain international certification systems.</li> <li>• The programmes and initiatives already being implemented in the area to promote sustainable agricultural practices e.g. the Land Care Programme and the Biodiversity and Wine Initiative.</li> <li>• South Africa has ratified the United Nations Framework Convention on Climate Change (1997), the Montreal Protocol and the Kyoto Protocol (2002).</li> </ul>	<ul style="list-style-type: none"> <li>• The dependency of sustainable land and soil management practices on the prosperity of agricultural production.</li> <li>• The reduction of land capability due to the effects of climate change and therefore the decrease in potential for alternative crop production.</li> <li>• The limited area of land available for agricultural production in the Cape Winelands District Municipality.</li> <li>• The generally very poor soil conditions in the District that limit the type of crops that can be cultivated.</li> <li>• The lack of awareness or acknowledgement of the risks of climate change (e.g. reduced rainfall and crop losses).<sup>17</sup></li> <li>• Lack of clear strategies in key planning documents (e.g. IDP) that begin to take explicit cognisance of the predicted effects of climate change on local economic development.</li> </ul>

**Strategic Actions**

- Initiate a coordinated response to climate change between key stakeholders (e.g. Department of Agriculture, organised agriculture, initiatives such as LandCare and the Biodiversity and Wine Initiative, as well as certification bodies) to ensure the sustainability of the economic base of the Cape Winelands into the future.
- Play a leading role in convening a District level climate change forum that brings together all economic sectors to find ways of protecting ecosystem services in a changing climate.
- Provide substantive support to LED offices to assist producers in moving up the agricultural value chain i.e. produce value added products and services. Campaign to develop a 'Product of Origin' culture and label for the Cape Winelands area, offering the competitive advantage of environmentally sustainable production.
- Ensure that producers and LED offices in the area have access to recent research on appropriate farming methods, crop selection and innovative product development, within the constraints of the land capability under climate change.
- Ensure that the predicted effects of climate change inform the strategies and action plans contained in the IDP, the SDF, the Growth and Development Strategy, the economic marketing strategy for the area, the investment opportunities promoted for the area and all business support programmes initiated in terms of the 2006/07 draft IDP.

<sup>17</sup> Stakeholder Scoping Workshop, 16 May 2006, Worcester

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- Raise awareness amongst politicians, officials, economic sectors and local communities, of the implications of climate change for the Cape Winelands District.
- Implement a broad information and education programme on climate change and its implications for the Cape Winelands through the local media.

**STRATEGIC GOAL: Strong institutional capacity, collaboration and law enforcement**

**Objective:**

- d) **The capacity (i.e. education, leadership and resources) exists within the CWDM and major stakeholders in the District, to ensure that planning, economic development and other activities are sustainable and there is an understanding of the importance of maintaining ecosystem services.**

<b>Opportunities</b>	<b>Constraints</b>
<ul style="list-style-type: none"> <li>• The enabling legislation for effective environmental management that is currently in place.</li> <li>• The establishment of Catchment Management Agencies that is in progress.</li> <li>• The guidelines that have been developed for assessing land use management applications in the rural areas within the District.</li> <li>• The initiatives and programmes (e.g. Biodiversity and Wine Initiative) are being implemented, through various external partnership arrangements, to promote sustainable land use within the District.</li> <li>• The Integrated Development Plans (IDPs) and Spatial Development Frameworks that exist for all the “B” municipalities within the District.</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate cooperation, communication and coordination between various spheres of government and between Local (B) and District (C) municipalities.</li> <li>• Inadequate communication and cooperation between municipalities and other stakeholders.</li> <li>• The uncertainty around the roles and responsibilities for the management of ecosystem services.</li> <li>• Inadequate or unenforced by-laws for the maintenance of ecosystem services.</li> <li>• The lack of resources and human capacity within government for effective environmental management.</li> <li>• The inconsistency in the extent to which the environment is effectively considered in IDPs and SDFs within the District.</li> <li>• The lack of fine-scale biodiversity data for the region.</li> </ul>

**Strategic Actions**

- Facilitate a clear understanding, amongst key stakeholders, of the roles and responsibilities between the various spheres of government, concerning the maintenance of ecosystem services within the District.
- Facilitate the participation of key stakeholders in the development and the implementation of the spatial planning categories (for the proposed Boland Biosphere Reserve) and the corresponding land use guidelines that are to be formulated for the District.
- Ensure that the principles of cooperative governance and stakeholder engagement are implemented in the maintenance and enhancement of ecosystem services, through, *inter alia*, the facilitation of a District-level environmental task team that comprises representatives of the District, the “B” municipalities and key stakeholders.
- Promote interaction and the sharing of learning and information between stakeholders, particularly those in the environmental sector, through, for example, the environmental task team proposed above.
- Guide environmental management within the District with an effective environmental and heritage policy and action plan. This Environmental Strategy and the Strategic Environmental Management Plan are integral to such a policy and action plan.

- Ensure that the available information contained in a variety of current initiatives (e.g. information on the status of the Berg River and tributaries from the River Health Programme; and both spatial and non-spatial information on wetlands in the area from the Working on Wetlands Programme) informs the activities of the District Municipality, the environmental task team and other key stakeholders in the area.
- Participate in the establishment and operation of Catchment Management Agencies in the District.
- Develop internal capacity (a designated environmental officer for the CWDM Area) to assess all planning applications from an ecosystem service perspective, as well as providing biodiversity inputs into the SDF's of local municipalities and the bioregional framework.
- Develop a capacity building programme for politicians, officials and key stakeholders that focuses on promoting a concise, well-illustrated description of key ecosystem services within the CWMD Area, an understanding of why these are important, threats to ecosystem services in the region, environmental priorities in the CWDM Area, and tools and guidelines available that could assist in planning and decision-making in line with environmental priorities.

**STRATEGIC GOAL: Strong institutional capacity, collaboration and law enforcement**

**Objective:**

- e) **Environmental legislation (e.g. for control of alien vegetation) is effectively enforced and environmental programmes currently underway in the District are substantively supported by the CWDM.**

Opportunities	Constraints
<ul style="list-style-type: none"> <li>• The revision of by-laws and their enforcement, is identified as a strategy for achieving the principle of sustainable development in the Draft Cape Winelands District Growth and Development Strategy (Cape Winelands District Municipality, Draft 2006).</li> <li>• The Draft Cape Winelands District Growth and Development Strategy explicitly recognises the need for the revision and enforcement of by-laws related to sustainable development.</li> <li>• The District Municipality is submitting an application to UNESCO for the declaration of a biosphere reserve within the Cape Winelands.</li> <li>• There are currently a number of environmental initiatives in the area, to which the CWDM could possibly link and share resources (e.g. the Working for Water and Working on Fire Programmes, the LandCare project and the Biodiversity and Wine Initiative).</li> </ul>	<ul style="list-style-type: none"> <li>• No umbrella environmental management or sustainable development policy for the District to guide sustainable use, enhancement and conservation of the environment.</li> <li>• Lack of resources and human capacity within government for effective environmental management and the development of regulations and frameworks.<sup>18</sup></li> <li>• Lack of resources and human capacity for the monitoring and enforcement of legislation.</li> <li>• Unenforced or inadequate by-laws for the maintenance of ecosystem services. There is also a lack of and/or weak enforcement of planning controls.<sup>19</sup></li> <li>• Uncertainty around the roles and responsibilities in terms of legislation for the management of ecosystem services e.g. air and land.</li> <li>• Lack of consistency in environmental by-laws between the “B” municipalities.</li> <li>• Absence of a District policy for heritage preservation.<sup>20</sup></li> </ul>

**Strategic Actions**

- Ensure that there is a comprehensive understanding amongst the politicians and relevant officials in the District, of the national, provincial and local legislation relating to the maintenance and enhancement of ecosystem services in the area.
- Facilitate a working understanding of environmental legislation amongst key stakeholders in the District.
- Clarify the roles and responsibilities, in terms of environmental and other legislation, of various spheres of government for the management of ecosystem services. Bring inconsistencies and ambiguities in the legislation to the attention of the relevant government authorities.

<sup>18</sup> Stakeholder Scoping Workshop, 16 May 2006, Worcester

<sup>19</sup> *ibid*

<sup>20</sup> *ibid*

- Develop an overarching environmental and heritage policy for the District in consultation with key stakeholders.
- Ensure that the District's by-laws relating to the maintenance and enhancement of ecosystem services in the area effectively address the threats to these services and promote their conservation and sustainable use.
- Develop internal capacity (including a designated environmental officer for the CWDM Area) for the enforcement of environmental legislation, linking to the activities of the Municipal Health Services Directorate.
- Provide a guiding framework for local municipalities to review their by-laws to reflect the importance of maintaining ecosystem services, and to facilitate a greater degree of consistency in environmental by-laws between the "B" municipalities.

**STRATEGIC GOAL: Strong institutional capacity, collaboration and law enforcement**

**Objective:**

- f) **Land use planning and decision-making is coordinated at local municipality level and between various spheres of government**

Opportunities	Constraints
<ul style="list-style-type: none"> <li>• Existing institutions such as the District Intergovernmental Forum provide the opportunity for coordination between the local municipalities and the District.</li> <li>• The environmental strategy and action plan currently being developed presents an opportunity to coordinate and focus environmental management in the District.</li> <li>• Catchment Management Agencies (CMAs) are in the process of being established.</li> <li>• It is recognised in the Draft Cape Winelands District Growth and Development Strategy (Cape Winelands District Municipality, Draft 2006) that the District has a critical stakeholder coordination role.</li> <li>• One of the 10 objectives contained in the Draft Cape Winelands District Growth and Development Strategy is that of institutional networking, cooperation and communication. The need to institutionalise communication channels between the sectors is highlighted.</li> <li>• The Draft Cape Winelands District Growth and Development Strategy proposes the development of the Cape Winelands Economic Development Council which will have representation from government, business, labour, civil society and other stakeholders. An environmental management sub-committee that will meet on a quarterly basis is also proposed.</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate cooperation, communication and coordination between various spheres of government and between Local (B) and District (C) municipalities.</li> <li>• Inadequate communication and cooperation between municipalities and other stakeholders<sup>21</sup>.</li> <li>• The uncertainty around the roles and responsibilities for the management of ecosystem services.</li> <li>• The lack of resources and human capacity within government for effective environmental management.</li> </ul>

**Strategic Actions**

- Ensure that the principles of cooperative governance and stakeholder engagement are implemented in the maintenance and enhancement of ecosystem services, through, *inter alia*, the facilitation of a District-level environmental task team that comprises representatives of the District, the “B” municipalities and key stakeholders. This task team could take the form of the Environmental Management Sub-Committee which is proposed in terms of the Draft Cape Winelands District Growth and Development Strategy (Cape Winelands District Municipality, Draft 2006) or be linked to this forum.

<sup>21</sup> Stakeholder Scoping Workshop, 16 May 2006, Worcester

- Continue the current interactions and regular meetings that occur between those involved in planning at the District and local authority levels. Ensure that at least one official involved in environmental management (or an aspect thereof) from each institution, attends these meetings.
- Develop internal capacity (including a designated environmental officer for the CWDM Area) for the enforcement of environmental legislation and the coordination of environmental activities between the local authorities.
- Clarify the roles and responsibilities, in terms of environmental and other legislation, of various spheres of government for the management of ecosystem services. Bring inconsistencies and ambiguities in the legislation to the attention of the relevant government authorities.

**STRATEGIC GOAL: Sound land use / development planning and resource management**

**Objective:**

- g) Local authorities and others responsible for development planning and decision-making in the CWDM Area are aware of the potential social, economic and environmental implications of all forms of human activities and consider these in their planning and decision-making in a participatory way, that ensures that the ecosystem services of the CWDM Area are maintained and enhanced.**

<b>Opportunities</b>	<b>Constraints</b>
<ul style="list-style-type: none"> <li>• Certain enabling legislation for effective environmental management is in place, which requires municipalities to develop a range of environmental management tools.</li> <li>• There is a commitment to the principles of sustainable development in the planning and policy documents for the country, the province and the district.</li> <li>• Catchment Management Agencies are in the process of being established. Local authorities have an opportunity to participate in these.</li> <li>• Guidelines have been developed for assessing land use management applications in the rural areas within the District<sup>22</sup>.</li> <li>• Several initiatives and programmes are being implemented, through various partnership arrangements, which promote sustainable land use within the District e.g. CAPE LandCare, Working for Water.</li> <li>• Good information / data exist on some ecosystem services (e.g. wetlands) and in certain areas (e.g. biodiversity fine scale planning that has been done for the Drakenstein Municipality<sup>23</sup>).</li> <li>• There are several documents and guidelines available to assist decision-makers, local authorities and practitioners in incorporating sustainability concerns into decision-making (e.g. The Fynbos Forum Ecosystem-Specific Guidelines for</li> </ul>	<ul style="list-style-type: none"> <li>• There is uncertainty around roles and responsibilities for the management of ecosystem services.</li> <li>• The responsibility for strategic planning is assigned to the District Municipalities in terms of the Municipal Systems Act (No 32 of 2000), however, there is no department for this within the CWDM. Land use planning, environmental planning and strategic planning are therefore being mixed at the “B” municipality level<sup>25</sup>.</li> <li>• There is no integrated environmental policy for the District.</li> <li>• By-laws for the maintenance of ecosystem services are often unenforced or inadequate. There is also a lack of and/or weak enforcement of planning controls<sup>26</sup>.</li> <li>• There is a lack of resources and human capacity within government for effective environmental management and sound land use planning.</li> <li>• Lack of knowledge / data on certain aspects e.g. no applied research has been done on the ecosystem as a whole, there is little data on air quality and a lack of fine-scale biodiversity planning.</li> <li>• Current lack of awareness in planning of the fundamental role of ecosystem services in supporting economic development<sup>27</sup>.</li> <li>• There is increasing pressure on the resource base of the CWDM Area and</li> </ul>

<sup>22</sup> MCA (2006) *Guidelines for Assessing Land Use Management Applications in Rural Areas: Document 3 – Final Document*, prepared for the Cape Winelands District Municipality.

<sup>23</sup> See CD: Botanical Society of South Africa, CapeNature (n.d.) *Supporting land-use planning and decision-making in threatened ecosystems and special habitats*, CD produced as part of the Putting Biodiversity Plans to Work project, funded by the Critical Ecosystem Partnership Fund through the CAPE programme.

<p>Environmental Assessment in the Western Cape<sup>24</sup>).</p> <ul style="list-style-type: none"> <li>• The District Municipality is submitting an application to UNESCO for the declaration of a biosphere reserve within the Cape Winelands.</li> <li>• The Environmental Strategy and the Strategic Environmental Management Plan can assist decision-makers and other stakeholders in the incorporation of environmental aspects into planning and development in a more transparent and cohesive way.</li> </ul>	<p>a declining quality of ecosystem services.</p>
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### Strategic Actions

<ul style="list-style-type: none"> <li>• Refine existing conservation priority maps (e.g. CAPE maps), that focus on broad areas of significance, through fine-scale mapping that focuses on priority areas. This should be undertaken through a collaborative process, working with partners such as CapeNature's fine scale planning process, to derive a map that includes the following, as required by CapeNature<sup>28</sup>:             <ul style="list-style-type: none"> <li>– Rivers, wetlands, groundwater-dependent communities and estuaries</li> <li>– Viable and/or connected Critically Endangered and Endangered ecosystems</li> <li>– Any area in irreplaceable habitat that is important for biodiversity conservation, as identified by a systematic conservation plan</li> <li>– Any other special habitats that may contain a unique signature of species e.g. dolomite outcrops, quartz or ferricrete patches</li> <li>– Any habitat that contains rare or threatened plant and animal species</li> <li>– Natural habitat in an ecological corridor or along a vegetation boundary (including frontal dune systems)</li> <li>– Formally declared Mountain Catchment Areas</li> </ul> </li> <li>• Guide environmental management within the District with an effective environmental and heritage policy and action plan. This Environmental Strategy and the Strategic Environmental Management Plan are integral to such a policy and action plan.</li> <li>• Ensure that environmental management in the District is informed by the available information contained in a variety of current initiatives (e.g. information on the status of the Berg River and tributaries from the River Health Programme; and both spatial and non-spatial information on wetlands in the area from the Working on Wetlands Programme).</li> <li>• Ensure that planning and decision-making is undertaken in accordance with defined spatial planning categories (SPC) that have been developed with the participation of the conservation sector (e.g. CapeNature representatives) and for which corresponding land use guidelines have been formulated.</li> <li>• Ensure that development applications and environmental assessment's are evaluated</li> </ul>	
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<sup>24</sup> De Villiers, C., Driver, A., Clark, B., Euston-Brown, D., Day, L., Job, N., Helme, N., Holmes, P., Brownlie, S. and Rebelo, T (2005) *Fynbos Forum Ecosystem Guidelines for Environmental Assessment in the Western Cape*. Fynbos Forum c/o Botanical Society of South Africa: Conservation Unit, Kirstenbosch, Cape Town.

<sup>25</sup> Stakeholder Scoping Workshop, 16 May 2006, Worcester

<sup>26</sup> *ibid*

<sup>27</sup> *ibid*

<sup>28</sup> CapeNature, Dr K.C.D. Hamman, for acting CEO, letter concerning CapeNature's commenting role in EIA and development applications, 17 August 2006.

according to an agreed set of environmental criteria within the District, that include the area's SPC guidelines, as well as guidelines that have been developed on a national or provincial scale (e.g. the Fynbos Forum Ecosystem Guidelines for Environmental Assessment in the Western Cape).

- Facilitate an understanding of national, provincial and local environmental legislation amongst politicians, officials and key stakeholders and inform decision-making of the ecosystem priorities identified in terms of this legislation and important environmental initiatives<sup>29</sup> in the area, for example, the Biodiversity Act (Act 10 of 2004), The National Environmental Management Act (Act 107 of 1998) the National Spatial Biodiversity Assessment (DEAT and SANBI), and the Western Cape Provincial Spatial Development Planning Framework (Provincial Government of the Western Cape, 2005), in which threatened ecosystems and ecological corridors with accompanying policy recommendations, were identified at a provincial scale.
- Develop a capacity building programme for politicians, officials and key stakeholder that focuses on promoting a concise, well-illustrated description of key ecosystem services within the CWMDA, an understanding of why these are important, threats to these services in the region, the ecosystem service priorities in the CWDM Area, and tools and guidelines available that could assist in planning and decision-making in line with these priorities. Ensure that such capacity programmes use and build on existing resources and use existing fora e.g. the Drakenstein Natural Resources Reference group.

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<sup>29</sup> Many of the key Acts and policies related to ecosystem services are listed in the specialist studies undertaken as part of this SEA.

**STRATEGIC GOAL: Sound land use / development planning and resource management**

**Objective h:**

**h) SDFs and IDPs provide a sound strategic planning framework that facilitates the sustainability of all new development in the CWDM Area**

Opportunities	Constraints
<ul style="list-style-type: none"> <li>• There is a commitment to the principles of sustainable development in the planning and policy documents for the country, the province and the district.</li> <li>• Several initiatives and programmes are being implemented, through various partnership arrangements, which promote sustainable land use within the District e.g. CAPE, LandCare, Working for Water. Information from these initiatives can be used in the formulation of IDP's and SDF's.</li> <li>• Good information/ data exists on some ecosystem services (e.g. those provided by wetlands) and in certain areas (e.g. biodiversity fine scale planning for the Drakenstein Municipality<sup>30</sup>).</li> <li>• The District Municipality is submitting an application to UNESCO for the declaration of a biosphere reserve within the Cape Winelands. The core, buffer and transitional areas of the biosphere reserve can guide future integrated development planning and spatial development frameworks in the District.</li> <li>• The Western Cape Provincial Spatial Development Framework promotes a bioregional planning approach to achieve continuity in the landscape and to maintain important natural areas and ecological processes<sup>31</sup>.</li> <li>• The Environmental Strategy and the Strategic Environmental Management Framework can provide information into IDP and SDF processes within the District.</li> </ul>	<ul style="list-style-type: none"> <li>• The extent to which the environment is effectively considered in IDPs and SDFs within the District varies but coverage is generally limited.</li> <li>• The responsibility for strategic planning is assigned to the District Municipalities in terms of the Municipal Systems Act, however, there is no department for this within the CWDM. Land use planning, environmental planning and strategic planning and therefore being mixed at the "B" municipality level<sup>32</sup>.</li> <li>• There is no integrated environmental policy for the District.</li> <li>• There is a lack of resources and human capacity within government for sound environmental management and land use planning<sup>33</sup>.</li> <li>• There is a lack of knowledge / data on certain aspects e.g. no applied research has been done on the ecosystem as a whole, there is little data on air quality and a lack of fine-scale biodiversity data.</li> <li>• Current lack of awareness in planning of the fundamental role of ecosystem services in supporting economic development<sup>34</sup>.</li> </ul>

<sup>30</sup> De Villiers, C., Driver, A., Clark, B., Euston-Brown, D., Day, L., Job, N., Helme, N, Holmes, P., Brownlie, S. and Rebelo, T (2005) *Fynbos Forum Ecosystem Guidelines for Environmental Assessment in the Western Cape*. Fynbos Forum c/o Botanical Society of South Africa: Conservation Unit, Kirstenbosch, Cape Town.

<sup>31</sup> Provincial Government of the Western Cape (2005) *Western Cape Provincial Spatial Development Framework*, prepared by CNdV Africa.

<sup>32</sup> Stakeholder Scoping Workshop, 16 May 2006, Worcester

<sup>33</sup> Stakeholder Scoping Workshop, 16 May 2006, Worcester

<sup>34</sup> *ibid*

### Strategic Actions

- Facilitate a consistent approach to the consideration of environmental issues in the formulation of IDP's and SDF's in the District, thereby guiding environmental management within the District, potentially through the development and implementation of an environmental and heritage policy and action plan.
- Develop future SDF's in line with the spatial planning categories (SPCs) defined in terms of the bioregional planning framework.
- Ensure that environmental management in the District is informed by the available information contained in a variety of current initiatives (e.g. information on the status of the Berg River and tributaries from the River Health Programme; and both spatial and non-spatial information on wetlands in the area from the Working on Wetlands Programme).
- Ensure that planning and decision-making is undertaken in accordance with defined spatial planning categories that have been developed with the participation of the conservation sector (e.g. CapeNature representatives) and for which corresponding land use guidelines have been formulated.
- Inform District-level planning and decision-making of the ecological priorities identified by local municipalities.
- Provide training within the local and District municipality on the effective integration of environmental issues into SDF and IDP's.

<b>STRATEGIC GOAL: Sound land use / development planning and resource management</b>	
<b><u>Objective:</u></b>	
i) <b>An effective, well- resourced and coordinated fire-management, emergency and disaster prevention programme is implemented across the CWDM Area</b>	
Opportunities	Constraints
<ul style="list-style-type: none"> <li>• A Fire Services Business Plan has been compiled by the CWDM.</li> <li>• A study has been undertaken on the hazards within the District that include fire<sup>35</sup>.</li> <li>• The Working on Fire Programme aims to develop a three-year training programme that can supply well trained fire fighters and managers to the Forestry Industry, Fire Protection Associations, conservation agencies and local municipalities, while maintaining an elite fighting corps as a national disaster management resource.</li> <li>• The Department of Water Affairs and Forestry have developed guidelines to assist in the formation of Fire Protection Agencies (PFA) and the drafting of FPA business plans.<sup>36</sup></li> </ul>	<ul style="list-style-type: none"> <li>• The insufficient resources for fire services in the District<sup>37</sup>.</li> <li>• The lack of capacity for fire control and response<sup>38</sup></li> <li>• The lack of detailed Disaster Management Plans for the district.</li> <li>• The lack of explicit coordination with Cape Nature in the formation and implementation of the fire business plan.</li> <li>• The lack of sufficient attention to proactive fire prevention strategies (based on an understanding of current fire trends in the area) in the fire business plan.</li> </ul>
<b>Strategic Actions</b>	
<ul style="list-style-type: none"> <li>• Ensure that disaster prevention and management within the District is informed by a proactive, resourced management strategy that is formulated with the participation of all key stakeholders and incorporates provisions for fire prevention as well as all other risks. Several studies, plans and programmes are already in place and should be integrated under the umbrella of the strategy.</li> <li>• Guide fire prevention and management according to detailed, resourced Disaster Management Plans that are informed by the strategy.</li> <li>• Involve all key stakeholders (e.g. Cape Nature, land owners, communities on communal lands and fire fighting associations) in the development of disaster management plans and the fire business plan.</li> <li>• Give sufficient attention to proactive strategies for fire prevention (based on an understanding of current trends and the causes of fires in the area) in all strategy and planning documents, as well as to suppression planning.</li> </ul>	

<sup>35</sup> Africon (2005) *Towards Disaster Management Plans for the Cape Winelands District Municipality: Hazard Identification, Vulnerability Assessment and Risk Prioritisation in the Cape Winelands District Municipality: Version 1*, prepared for the Cape Winelands District Municipality

<sup>36</sup> Department of Water Affairs and Forestry (2003), *The Veldfire Bulletin*, DWAF, November 2003.

<sup>37</sup> Stakeholder Scoping Workshop, 16 May 2006, Worcester

<sup>38</sup> *ibid*

<sup>39</sup> Department of Water Affairs and Forestry (2003), *The Veldfire Bulletin*, DWAF, November 2003.

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- Encourage the formation of Fire Protection Agencies (FPA) within the District in terms of the National Veld and Forest Fire Act of 1998, and participate in their activities, possibly forming an umbrella FPA at the District level.
- Inform all fire management strategies and business plans of the ecological conditions that affect fire risks within the District. Such strategies and plans should also be informed by, *inter alia*, social and economic conditions in the area, as well as an assessment of the effects of past fires in terms of social, economic and environmental impacts<sup>39</sup>.

**STRATEGIC GOAL: Sound land use / development planning and resource management**

**Objective:**

- j) **The energy needs of the CWDM Area are provided for by a district level integrated energy plan, that comprises both conventional electricity supply, as well as the increased development of alternative energy solutions to provide a greater level of self sufficiency in the economy of the District.**

<b>Opportunities</b>	<b>Constraints</b>
<ul style="list-style-type: none"> <li>• Commitment to the principles of sustainable development in developing planning and policy.</li> <li>• South Africa has ratified the United Nations Framework Convention on Climate change (1997), the Montreal Protocol and the Kyoto Protocol (2002).</li> <li>• South Africa is part of the Air Pollution Information Network in Africa (APINA), a network of scientists, policymakers, NGO's and the private sector in Africa.</li> <li>• The National Energy Efficiency Strategy was developed in 2005 and aims to increase energy efficiency in the country by 12% by 2015 (Department of Minerals and Energy, 2005).</li> <li>• The Government's vision, policy and strategic goals and objectives for promoting and implementing renewable energy in South Africa are presented in the White Paper on Renewable Energy (Republic of South Africa, 2004)</li> </ul>	<ul style="list-style-type: none"> <li>• The District does not have an overarching energy policy.</li> <li>• The District's IDP does not explicitly address issues related to the use of renewable energy.</li> <li>• Widespread use of renewable energy sources is still in its infancy in South Africa.</li> </ul>

**Strategic Actions**

- Develop an Integrated Energy Plan for the District that incorporates practical alternative and renewable energy options.
- Develop guidelines for energy-efficient housing and amend by-laws to reflect the new emphasis on renewable energy e.g. all new housing development to be at least of energy efficient design.
- Raise awareness amongst key stakeholders of the need to conserve energy and the alternative and renewable energy options available.
- Initiate pilot projects to test and encourage the use of alternative renewable energy sources in the District.
- Encourage the use of renewable energy sources by introducing incentives such as subsidies on smoke-free paraffin appliances, or solar heating and/or cooking systems.

**STRATEGIC GOAL: High level of stakeholder capacity (available information, awareness, education)**

**Objective:**

- k) All key stakeholders within the District are informed of the vital role of the area's ecosystem services in supporting economic development.

Opportunities	Constraints
<ul style="list-style-type: none"> <li>• There are currently a number of environmental initiatives in the area (e.g. the Working for Wetlands Programme) that can be approached to assist with training in some way and/or to provide information for the development of training material.</li> <li>• Excellent material has been developed for some areas within the District that can be used in training courses. For example, the information pack for the Drakenstein Municipality, entitled Supporting Land-use Planning and Decision-making in Threatened Ecosystems and Special Habitats, produced by the Botanical Society of South Africa and CapeNature as part of the Putting Biodiversity Plans to Work project, funded by the Critical Ecosystem Partnership Fund through the CAPE programme.</li> <li>• There are existing institutional structures that could provide opportunities for capacity building and shared learning, for example, Drakenstein's Natural Resources Reference Group.</li> <li>• There are several institutions in the District that can be approached to assist with training (e.g. the University of Stellenbosch).</li> <li>• A number of guidelines exist that can assist in training, for example the Fynbos Forum Ecosystem Guidelines for Environmental Assessment in the Western Cape (De Villiers, C.,2005) and the Integrated Environmental Management Information Series published by DEAT.</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of knowledge of the consequences of various activities on the environment and the risks to human health associated with degraded environments.</li> <li>• The lack of awareness or acknowledgement of the risks of climate change (e.g. reduced rainfall and crop losses)<sup>40</sup></li> <li>• The lack of resources and human capacity within government for effective environmental management.</li> <li>• Lack of knowledge / data on certain aspects e.g. no applied research has been done on the ecosystem as a whole, there is little data on air quality and a lack of fine-scale biodiversity planning.</li> <li>• Current lack of awareness in planning of the fundamental role of ecosystem services in supporting economic development<sup>41</sup>.</li> </ul>

<sup>40</sup> Stakeholder Scoping Workshop, 16 May 2006, Worcester

<sup>41</sup> *ibid*

### Strategic Actions

- Develop an ongoing, well conceived and resourced environmental education programme that comprises, for example, workshops, courses, one-on-one sessions, presentations to key sectors and the development of distance learning material. The courses and material should be adapted to the needs of different stakeholders and developed with their participation. Where possible the District should link up and share resources with the capacity building and education efforts of the local authorities and other government departments such as the Department of Water Affairs and Forestry (DWAF). The overall programme should facilitate an understanding, amongst the politicians, officials, key economic sectors, communities and others of, *inter alia*, the following:
  - The fundamental importance of the ecosystems services provided by land and soil, biodiversity, air and water within the Cape Winelands District;
  - The types of ecosystems within the District;
  - The key ecosystem features and services within the District and the priorities for conservation;
  - The current threats to the maintenance and enhancement of ecosystems services provided by land and soil, biodiversity, air and water within the Cape Winelands District;
  - The principles of sustainable development;
  - The national, provincial and local environmental legislation;
  - The roles and responsibilities of various spheres of government in the maintenance of ecosystem services within the District;
  - The environmental management tools and processes that are available;
  - The current initiatives, guidelines and key reports that could assist stakeholders in planning and development in the area, while maintaining the key ecosystem services;
  - The integration of environmental issues into IDP's and SDF's at the local and District levels;
  - The ecological conditions that affect fire risks within the District and the effects of past fires on the social, economic and biophysical environment;
  - The implications of climate change on key sectors in the District and the appropriate farming methods, crop selection and innovative product development, within the constraints of land capability under climate change; and
  - Monitoring, the interpretation of results and reporting.
- Ensure that environmental education and awareness is an integral part of the key strategic planning processes for the District.

**STRATEGIC GOAL: High level of stakeholder capacity (available information, awareness, education)**

***Objective:***

- l) Farmers and other land users are aware of the effects of ecosystem fragmentation and alien infestation on the provision of ecosystem services, as well as the influence of climate change on the type of crops that should be cultivated.**

Opportunities	Constraints
<ul style="list-style-type: none"> <li>• There are currently a number of environmental initiatives in the area (e.g. the Working for Wetlands Programme) that can be approached to assist with training in some way and/or to provide information for the development of training material.</li> <li>• There are existing courses and programmes in the region that can assist in awareness raising and education concerning the environmental impacts of agricultural activities. For example the LandCare awareness programme that aims to promote, <i>inter alia</i>, an understanding of the factors that lead to the unsustainable use of resources in agriculture.<sup>42</sup></li> <li>• There are a number of existing initiatives that provide guidelines to farmers for the management of environmental impacts. For example, the Integrated Production of Wine Guidelines (ARC Infruitec-Nietvoorbij, 2006)<sup>43</sup>, for the management of the environmental impacts of the wine industry).</li> <li>• There are existing institutional structures and programmes that could provide opportunities for capacity building and shared learning concerning environmental management and farming, for example, the Small Farmer Support Programme proposed in the IDP (Cape Winelands Municipality, draft 2006/2007).</li> <li>• There are several institutions in the District that can be approached to assist with training (e.g. the University of Stellenbosch).</li> </ul>	<ul style="list-style-type: none"> <li>• The lack of awareness or acknowledgement of the risks of climate change (e.g. reduced rainfall and crop losses).<sup>44</sup></li> <li>• The lack of resources and human capacity within government for effective environmental management activities.</li> <li>• Lack of knowledge / data on certain aspects e.g. there is little data on air quality and a lack of fine-scale biodiversity planning.</li> <li>• Lack of awareness and education regarding the maintenance of quality environments.</li> </ul>

<sup>42</sup> Available at: [www.nda.agric.za/docs/Landcarepage/landcare.htm](http://www.nda.agric.za/docs/Landcarepage/landcare.htm), downloaded 21/12/06

<sup>43</sup> Available at: <http://www.ipw.co.za>

<sup>44</sup> Stakeholder Scoping Workshop, 16 May 2006, Worcester

### Strategic Actions

- Raise awareness amongst politicians, officials, economic sectors and local communities, of the implications of climate change for the Cape Winelands District.
- Implement a broad information and education programme on environmental management and farming, linking with existing and proposed education and farmer support initiatives in the area.
- Provide substantive support to LED offices to assist producers in moving up the agricultural value chain i.e. produce value added products and services. Campaign to develop a 'Product of Origin' culture and label for the Cape Winelands area, offering the competitive advantage of environmentally sustainable production
- Ensure that producers and LED offices in the area have access to recent research on appropriate farming methods, crop selection and innovative product development, within the constraints of the land capability under climate change.

**STRATEGIC GOAL: Effective waste management, pollution control and service provision**

***Objective:***

**m) Waste management and pollution prevention within the District is undertaken in a coordinated and integrated way.**

<b>Opportunities</b>	<b>Constraints</b>
<ul style="list-style-type: none"> <li>• The CWDM is in the process of developing a Waste Management Plan for the district as a whole<sup>45</sup> and which addresses solid waste and waste water (sewage).</li> <li>• The District has a Water Services Development Plan for its DMA<sup>46</sup>.</li> <li>• The short life span remaining of many waste disposal facilities in the Province presents an opportunity for the regionalisation of waste disposal facilities, a process in which District municipalities could take a leading role.</li> <li>• Each municipality is required to include an air quality management plan as part of its integrated development plan.</li> <li>• South Africa is part of the Air Pollution Information Network in Africa (APINA).</li> <li>• South Africa has ratified the United Nations Framework Convention on Climate change (1997), the Montreal Protocol and the Kyoto Protocol (2002).</li> <li>• Stellenbosch has by-laws, not only to declare the town as a smoke-free zone, but also to regulate dust emissions from building operations and excavations and to prohibit heavy industrial emissions in town.</li> <li>• Drakenstein municipality has a municipal sub-committee that addresses air quality complaints.</li> </ul>	<ul style="list-style-type: none"> <li>• The current lack of an integrated waste management plan for the district.</li> <li>• The Western Cape Provincial IDP (Provincial Government of the Western Cape, 2005) highlights a possible looming waste management crisis in the Province, due to the very short lifespan remaining on many waste disposal facilities.</li> <li>• Backlogs in service delivery and infrastructure provision, resulting in contamination of water resources by substandard effluent and associated health risks<sup>4748</sup>.</li> <li>• Water quality and quantity threatened by waste water discharges.</li> <li>• No formal waste collection and disposal facilities in the rural areas.<sup>49</sup></li> <li>• Lack of data on air quality due to the lack of monitoring of criteria pollutants that are normally used as indicators.</li> <li>• Inability to determine the 'adaptive capacity' of the atmosphere in the area i.e. the quantity of pollution the air can still absorb before guidelines will be exceeded, due to the lack of monitoring.</li> <li>• There is inadequate consideration of air quality issues in the integrated development planning within the District.</li> <li>• The transboundary pollution that is likely to occur, in certain weather conditions, from the City of Cape Town.</li> <li>• The lack of clarity on how to handle smoke caused by fires due to inconsistency in the by-laws applicable to Stellenbosch and to Franschoek.</li> <li>• The confusion concerning the roles and</li> </ul>

<sup>45</sup> Cape Winelands District Municipality (n.d.) *IDP/Review – 2006/2007: Draft*, Available at: <http://www.pms.gov.za/website/default.aspx>, downloaded 18 December 2006.

<sup>46</sup> *ibid*

<sup>47</sup> Stakeholder Scoping Workshop, 16 May 2006, Worcester

<sup>48</sup> Africon (2005) *Towards Disaster Management Plans for the Cape Winelands District Municipality: Hazard Identification, Vulnerability Assessment and Risk Prioritisation in the Cape Winelands District Municipality: Version 1*, prepared for the Cape Winelands District Municipality

<sup>49</sup> *ibid*

	<p>responsibilities between the local and district municipalities, in terms of the National Environmental Management: Air Quality Act (No 39 of 2004).</p> <ul style="list-style-type: none"> <li>• There is no formal agreement between the Department of Agriculture and the Department of Environmental Affairs and Tourism (DEAT) to coordinate activities that may cause pollution and odours (e.g. the burning of waste) in peri-urban areas (these mostly comprise farmland).</li> <li>• Not all local municipalities within the District have the required designated air quality officer.</li> </ul>
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**Strategic Actions**

<ul style="list-style-type: none"> <li>• Facilitate the development of comprehensive Waste Management Plans (WMP) by the local municipalities that encourage all new developments, particularly those in rural areas, to separate waste on site and to recycle waste, as proposed in the Guidelines for assessing Land Use Management Applications in Rural Areas (Africon, 2006).</li> <li>• Guide waste management within the District according to a strategic plan, which takes into account the WMP drafted by the local municipalities, their IDP's, SDF's, as well as other relevant plans. This strategic plan should focus on District-level issues, assistance and coordination.</li> <li>• Ensure municipalities are aware of the impact of poorly sited and managed waste disposal facilities have on water resources, particularly groundwater resources.</li> <li>• Develop and test innovative approaches to waste minimisation, re-use and recycling.</li> <li>• Ensure that infrastructure development plans are always accompanied by a public education campaign.</li> <li>• Encourage applicants for development approvals in the district to undertake on-site sewage treatment methods - where this can be achieved without risk to the natural environment - as described in the Guidelines for assessing Land Use Management Applications in Rural Areas (Africon, 2006).</li> <li>• Ensure that the development decision-making process is informed by an understanding of the capacity of existing sanitation infrastructure and waste management capabilities, and that this capacity is not exceeded, or that sufficient and effective new infrastructure is installed to service new urban development.</li> <li>• Continue to support the activities of the technical Action Committees within each sub-district, comprising officials from the C and B municipalities, that jointly address "hotspots"/problems concerning water and sanitation provision, as described in the draft Winelands IDP (2006/2007).</li> <li>• Implement an effective capacity building programme to meet the need for skilled air quality officers that can correctly interpret monitoring results and report on these.</li> <li>• Implement an effective air pollution monitoring programme to establish a databank that can be used as a tool to inform decision-making regarding all future development.</li> <li>• Encourage industries to monitor air pollutants on site while local authorities monitor such pollution in residential areas.</li> </ul>
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**STRATEGIC GOAL: Effective waste management, pollution control and service provision**

**Objective:**

n) Adequate water supply, waste water (sewage) treatment and storm water management infrastructure is an integral part of all new development and is maintained in good working order to prevent contamination of natural waters

Opportunities	Constraints
<ul style="list-style-type: none"> <li>• The CWDM is in the process of developing a Waste Management Plan for the district as a whole.<sup>50</sup></li> <li>• The District has a Water Services Development Plan for its DMA<sup>51</sup>.</li> <li>• The Integrated Development Planning process provides an opportunity for Integrated Water Resources Management.</li> <li>• District municipalities will have an opportunity to participate in the establishment and operation of Catchment Management Agencies, which will also in most instances act as Water Services Authorities and Water Services Providers.</li> <li>• The short life span remaining of many waste disposal facilities in the Province presents an opportunity for the regionalisation of waste disposal facilities, a process in which District municipalities could take a leading role.</li> <li>• Among the key objectives of the Working for Water Programme is to increase the sustainable flow of water in rivers.</li> <li>• There is an opportunity to implement water conservation and demand management initiatives in the agriculture sector, as the biggest water user in the area.</li> <li>• The District Municipality has committed itself to addressing the backlogs in sanitation in the draft Integrated Development Plan (Cape Winelands District Municipality, draft for 2006/2007).</li> </ul>	<ul style="list-style-type: none"> <li>• The Western Cape Provincial IDP (Provincial Government of the Western Cape, 2005) highlights a possible looming waste management crisis in the Province, due to the very short lifespan remaining on many waste disposal facilities.</li> <li>• Spread of invasive alien plants could threaten water availability.</li> <li>• Backlogs in service delivery and infrastructure provision, resulting in contamination of water resources by substandard effluent and associated health risks<sup>52 53</sup>.</li> <li>• Water quality and quantity threatened by waste water discharges, sedimentation as a result of erosion from the clearing of indigenous vegetation, the use of pesticides, climate change, poor irrigation practices, water transfers and alien vegetation encroachment, amongst other factors.</li> <li>• There are external demands on the ecosystem services provided by water in the CWDM Area e.g. from Cape Town</li> <li>• No formal waste collection and disposal facilities in the rural areas.<sup>54</sup></li> </ul>

<sup>50</sup> Cape Winelands District Municipality (n.d.) *IDP/Review – 2006/2007: Draft*, Available at: <http://www.pms.gov.za/website/default.aspx>, downloaded 18 December 2006.

<sup>51</sup> *ibid*

<sup>52</sup> Stakeholder Scoping Workshop, 16 May 2006, Worcester

<sup>53</sup> Africon (2005) *Towards Disaster Management Plans for the Cape Winelands District Municipality: Hazard Identification, Vulnerability Assessment and Risk Prioritisation in the Cape Winelands District Municipality: Version 1*, prepared for the Cape Winelands District Municipality

<sup>54</sup> *ibid*

### Strategic Actions

- Facilitate the development of comprehensive Waste Management Plans (WMP) by the local municipalities that encourage all new developments, particularly those in rural areas, to separate waste on site and to recycle waste, as proposed in the Guidelines for assessing Land Use Management Applications in Rural Areas (Africon, 2006).
- Support (e.g. through provision of information and the development of guidelines on most recent best practice) the formulation and revision of comprehensive Water Services Development Plans (WSDP) by all local municipalities in the District.
- Guide waste and water management within the District according to a strategic plan, which takes into account the WMP drafted by the local municipalities, their IDP's SDF's, as well as other relevant plans. These strategic plans should focus on District-level issues, assistance and coordination.
- Protect water resources from various hazards and associated contamination<sup>55</sup> through the implementation of detailed disaster management plans.
- Investigate the potential for the sustainable use of groundwater resources in the District.
- Ensure municipalities are aware of the impact of poorly sited and managed waste disposal facilities have on water resources, particularly groundwater resources.
- Participate in the establishment of Catchment Management Agencies within the District and in the activities of the CMA reference group and Catchment Management Committee.
- Continue to support the activities of the Water Quality Task Team to proactively improve water quality in the CWDM Area.
- Inform planners and decision-makers within the Municipality of the current state of the rivers in the District and the changes in this state over time. Use this information to support the work of the CMA's, the Water Quality Task Team and the local authorities.
- Encourage applicants for development approvals in the district to implement water saving mechanisms (e.g. grey water re-use) and to undertake on-site sewage treatment, (where this can be achieved without risk to the natural environment), as described in the Guidelines for assessing Land Use Management Applications in Rural Areas (Africon, 2006).
- Ensure that the development decision-making process is informed by an understanding of the capacity of existing water and sanitation infrastructure and that this capacity is not exceeded, or that sufficient and effective new infrastructure is installed to service new urban development.
- Continue to support the activities of the technical Action Committees within each sub-district, comprising officials from the C and B municipalities, that jointly address "hotspots"/problems concerning water and sanitation provision, as described in the draft Winelands IDP (2006/2007) Develop and test innovative approaches to waste minimisation, re-use and recycling and to water demand management and purification (e.g. current project to provide water purification systems on farms in order to ensure people in rural areas have safe drinking water<sup>56</sup>). Emphasis should be placed on finding alternative solutions to conventional capital intensive infrastructure development in isolation.
- Ensure that infrastructure development plans are always accompanied by a public education campaign regarding the implications for water supply, and waste water and stormwater management.
- Support initiatives such as LandCare and the CapeNature Conservation Stewardship Programme, to engage the public in sustainable land management practices.
- Support and complement initiatives for the clearing of alien invasive plants.

<sup>55</sup> as outlined in the following document: Africon (2005) *Towards Disaster Management Plans for the Cape Winelands District Municipality: Hazard Identification, Vulnerability Assessment and Risk Prioritisation in the Cape Winelands District Municipality: Version 1*, prepared for the Cape Winelands District Municipality

<sup>56</sup> Cape Winelands District Municipality (n.d.) *IDP/Review – 2006/2007: Draft*, Available at: <http://www.pms.gov.za/website/default.aspx>, downloaded 18 December 2006.

## 5. TRANSLATING THE STRATEGY INTO ACTION

The Environmental Strategy provides a broad guide for what needs to be done to ensure that ecosystem services in the CWDM Area are protected and well managed in perpetuity. The strategic actions must now be prioritised and translated into practicable actions. In the third and final phase of the SEA, which begins after this strategy formulation process has been completed, the process of action planning will culminate in the production of the Strategic Environmental Management Plan (SEMP). The SEMP will identify specific projects, which will be implemented according to specific timelines and budgets, with assigned responsibilities for implementation. It will therefore be used by the CWDM and other relevant parties to manage day-to-day activities in the CWDM Area from the perspective of looking after the ecosystem services that support sustainable development and the quality of life in the District.

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## 7. APPENDICES

### *Appendix A: Governance Context*

#### **Current institutional arrangements for the management of ecosystem services in the Cape Winelands**

The Cape Winelands District Municipality (CWDM) is a Category “C” municipality in terms of the Municipal Structures Act, 1998<sup>57</sup> (Act 117 of 1998, as amended) and the area it covers includes a District Management Area that it administers directly, as well as five “B” municipalities, namely, Witzenberg, Drakenstein, Stellenbosch, Breede River/Winelands and Breede Valley. It shares responsibility for local government with these municipalities, so that all communities have equal access to resources and services. The area includes the large urban centres of Stellenbosch, Worcester and Paarl, smaller towns such as Franschhoek, Wellington, Robertson and Ceres, and rural villages such as Saron, Tulbagh, Wolseley, Rawsonville, De Doorns, Bonnievale and McGregor.

The structure for the leadership and management of the Cape Winelands District Municipality is described in Table 1. The political portfolios do not have a 1:1 alignment with municipal departments, and are more a reflection of strategic objectives, e.g. housing as a distinct portfolio in the Executive Mayoral Committee.

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<sup>57</sup> Sections 3, 6, 10, 83-89 of the Act

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*Table 1: Political and Management Leadership of the Cape Winelands District Municipality*

<b>POLITICAL LEADERSHIP</b>	<b>OPERATIONS AND MANAGEMENT</b>
Mayor Deputy Mayor	Municipal Manager Deputy Municipal Manager
Executive Mayoral Committee <ul style="list-style-type: none"> <li>▪ Corporate Services</li> <li>▪ Finance</li> <li>▪ Community and Developmental services</li> <li>▪ Engineering and Infrastructure, Public Safety and Planning Services</li> <li>▪ Special Projects</li> <li>▪ Housing</li> </ul>	Executive Committee: <ul style="list-style-type: none"> <li>▪ Corporate and Strategic Services</li> <li>▪ Financial Services</li> <li>▪ Community and Developmental Services</li> <li>▪ Engineering and Infrastructure Services</li> <li>▪ Public Safety and Planning Services</li> </ul>

Current responsibility for managing and/or protecting ecosystem services, either directly or indirectly within the CWDM and local municipalities, is fragmented and inconsistent (See Table 2). It is significant that, apart from water supply, water quality and sanitation, none of these institutions have any policy, plan, programme, project or measurable objective that addresses unsustainable trends associated with the ecosystem services of soil and land, air or biodiversity. The institutional arrangements in all the municipalities for dealing with these services are therefore, peripheral or non-existent.

*Table 2: Institutional Structures associated with ecosystem services in “B” and “C” municipalities in the Cape Winelands*

<b>Municipality</b>	<b>Institutional Structure</b>	<b>Ecosystem services</b>
CWDM (DMA)	Public Safety and Planning: Fire Services Joint Fire Services Committee	<i>biodiversity, land &amp; soil, air, water</i>
	Public Safety and Planning: Disaster Management Municipal Disaster Mgmt Advisory Forum	<i>biodiversity, land &amp; soil, air, water</i>
	Public Safety and Planning: Land Use and Spatial Planning	<i>biodiversity</i>
	Community and Development Services: Municipal Health Sub-district Action Committees and Service Level Agreements (B and C municipalities)	<i>air</i>
	Community and Development Services: Municipal Health (Water and sanitation)	<i>water</i>
	Community and Development Services: Water Quality (rivers)	<i>water</i>

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Municipality	Institutional Structure	Ecosystem services
	Water Quality Task Team (B and C municipalities)	
	Engineering and Infrastructure Services: (Water and sanitation)	<i>water</i>
Drakenstein	Head: Civil Engineering Services (Natural environment)	<i>biodiversity</i>
	Head: Planning and Economic Development (Spatial planning and land use management)	<i>biodiversity, land &amp; soil</i>
Stellenbosch	Economic Facilitation Services: Planning (Environmental legislation)	<i>biodiversity</i>
	Civil Engineering and Technical Services (Water and sanitation)	<i>water</i>
Witzenberg	Technical Services	<i>none</i>
Breede River / Winelands	Commercial and Economic Services: Civil Engineering (Water supply)	<i>water</i>
Breede Valley	Head: Engineering (Air, water, ecosystem contamination)	<i>biodiversity, land &amp; soil, air, water</i>

**Key spatial planning and development frameworks relevant to the management of ecosystem services in the Cape Winelands**

The core of South Africa's intergovernmental planning system for the three spheres of government are the National Spatial Development Perspective (NSDP), Medium Term Strategic Framework (MTSF), Provincial Growth and Development Strategy (PGDS) and the Integrated Development Plan (IDP). These instruments focus on the cross-sectoral, spatial and institutional strategies for development within the various spheres of government. For these to be aligned, agreement is required on objectives, targets, strategies, projects and programmes, and delivery methods<sup>58</sup>.

In the **National Spatial Development Perspective (NSDP)**<sup>59</sup>, it is proposed that the bulk of Government's fixed investment is focused in areas with the potential for sustainable

<sup>58</sup> Department of Provincial and Local Government. 2005. *Harmonizing and Aligning the National Spatial Development Perspective, Provincial Growth and Development Strategies and Municipal Integrated Development Plans*. Cabinet Approved Document; released by the Presidency, 2005. (online). URL: <http://www.idp.org.za/documents/PGDS/National/General/2005/Cabinet%20Approved%20Alignmen%20Strategy%201204-final1a.pdf>. Accessed 31 January 2007.

<sup>59</sup> *National Spatial Development Perspective* (online). URL: <http://www.idp.org.za/NSDP/NSDP/nsdp.htm>. Accessed 31 January 2007.

economic development. For areas of low potential it is proposed that Government concentrates primarily on social investment such as human resource development, labour market intelligence and social transfers. The purpose of this is to empower people in areas of limited potential with information on opportunities in areas of potential, as well as the necessary skills to enable them to move to those areas. Within the CWDM Area, Worcester (Breede Valley), Paarl (Drakenstein) and Stellenbosch (Stellenbosch) are identified as areas of high development potential, and therefore potential recipients of fixed capital investment. The PGDS and the IDPs should operationalise the intentions of the NSDP.

The **Medium Term Strategic Framework (MTSF)**, also applicable at national level, includes a range of monitoring and evaluation programmes related to financial matters, and achieving certain socio-economic impacts and outcomes. A mechanism is provided for integrating IDPs within the framework, via the Office of the Presidency and the Department of Provincial and Local Government.

The **Provincial Growth and Development Strategy (PGDS)** is a medium-term strategy for 3-5 years<sup>60</sup>. It sets the tone for development in the province and must be aligned with growth and development strategies of national government, such as the MTSF and the NSDP. The PGDS must draw on national and sector strategies, and include commitments made in terms of international treaties and protocols. The PGDS spells out the broad objectives and priority areas within which service delivery and transformation should take place. The broad goals of the PGDS must be translated into clearly defined programmes for implementation through annual departmental or municipal plans. As the core alignment mechanism for a province, it serves as the coordination and implementation strategy. It helps lay the basis for sustainable development and ensures that plans are economically productive and efficient, meet social needs, and address equity issues whilst building on, and taking advantage of opportunities within the constraints of a province's natural resource base.

**Integrated Development Plans (IDPs)** address planning and development at District and local municipality levels<sup>61</sup>. Spatial planning, disaster management, finances, performance targets and economic development are covered within the IDP framework. A key consideration is integration between all spatial and economic development planning

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<sup>60</sup> *Provincial Growth and Development Strategy for the Western Cape*. (online). URL: [http://www.idp.org.za/documents/PGDS/Western%20Cape/2004/WC\\_PGDS.zip](http://www.idp.org.za/documents/PGDS/Western%20Cape/2004/WC_PGDS.zip). Accessed 31 January 2007.

<sup>61</sup> Department of Provincial and Local Government. 2001. *IDP Guide Pack. Guide 1: Guidelines*. (online) URL: [http://www.idp.org.za/documents/Guides/IDP/2001/Guide\\_IDP\\_1\\_Guidelines.pdf](http://www.idp.org.za/documents/Guides/IDP/2001/Guide_IDP_1_Guidelines.pdf). Accessed 31 January 2007.

processes. The bulk of the detailed planning of the provincial framework is done in the process of preparing municipal IDPs and should be implemented via the proposals contained in these IDPs, which should be linked to the budgets of municipalities and provincial and national sector departments. The Winelands District Municipality, as well as the local “B” municipalities have compiled IDPs.

Two key planning frameworks are relevant to any programme for the maintenance of ecosystem services in the CWDM Area *viz.* **the Provincial Spatial Development Framework (PSDF)**, which is aligned with and reinforces the NSDP through its generic proposals for the province and its spatial/land use management guidelines for the local level. In turn, the **Cape Winelands Spatial Development Framework (CWSDF)** outlines the development trends and patterns in the District, and the corresponding key concerns. It establishes a strategic spatial direction for the CWDM to achieve its overall vision. Policies are proposed to guide land use management within the context of four frameworks (*viz.* a biophysical framework, a settlement framework, a social infrastructure, facilities and services framework, and an economic framework). Also of key importance for the maintenance and enhancement of ecosystem services in the District are the SDF’s formulated by the five local municipalities in the area.

#### **Powers and functions of the CWDM**

Schedule 4 of the Constitution of the Republic of South Africa outlines the concurrent responsibilities (competencies) of national and provincial government, expressed as functional areas of legislative competence<sup>62</sup>. Section 5 in turn specifies responsibilities that are exclusive to Provincial government. In turn, in terms of Section 84(1) of the Municipal Structures Act, 1998 (Act 17 of 1998, as amended), powers and functions assigned to the CWDM legally oblige it to provide infrastructure and services as follows at District level:

- Integrated development planning for the district as a whole, as well as establish a framework for the Integrated Development Plans (IDPs) of all Category “B” municipalities in its area;
- Bulk supply of water and electricity to local municipalities;
- Bulk sewage purification works that affect local municipalities;
- Municipal roads that form an integral part of a road transport system;
- Regulation of passenger transport services;
- Municipal airports;
- Monitoring of solid waste disposal sites;
- Establishment, conduct and control of fresh produce markets and abattoirs, and cemeteries and crematoria;
- Fire fighting services;

<sup>62</sup> Schedules 4 and 5 of The Constitution of the Republic of South Africa, 1996, Act 108 of 1996.

- Promotion of local tourism;
- Municipal public works relating to any functions assigned to the CWDM;
- The imposition and collection of taxes, levies and duties related to functions assigned to the CWDM in terms of national legislation; and
- The receipt, allocation and distribution of grants made to the District Municipality.

In addition, the CWDM also fulfils an agency role for roads, on behalf of the Provincial Administration of the Western Cape.

Any contributions that the CWDM can make to the protection and management of ecosystem services, must occur within the context of these assigned responsibilities, and it is clear that the CWDM has no direct executive function in this task. However, there is much scope for cooperative governance, the provision of guidance to local municipalities by the CWDM, and collaborative work with Non-Governmental Organisations (NGOs) and non-governmental initiatives in ensuring the protection and management of ecosystem services.

#### **Effective governance for maintenance of ecosystem services in the CWDM Area**

Several issues were raised by key stakeholders in the SEA scoping process relating to how governance affects the maintenance of ecosystem services in the CWDM Area. The issues concern matters of public policy and institutional “style”, the capacity of stakeholders and institutions for environmental management, and the effectiveness of the municipalities in the Cape Winelands District in fulfilling their roles and responsibilities.

Despite the constraints that these issues may or may not place on effective governance for ecosystem management, a District Intergovernmental Forum (DIF), similar to the Forum at National Level, has been established that brings together district and local level municipalities in the CWDM Area. This provides a potential forum for the development of effective cooperative governance for the management of ecosystem services in the CWDM Area.

### *Appendix B : Existing Initiatives available for the Protection of Ecosystem Services*

Examples of existing initiatives of relevance in the Cape Winelands District Municipal Area are briefly summarised in the table below. The website addresses are provided as references as well as sources of further information.

Initiative	Description
<p>1. Cape Action for People and the Environment (C.A.P.E.) Programme.</p> <p><u>Website:</u> <a href="http://www.capeaction.org.za">www.capeaction.org.za</a></p>	<p>Partnership programme that aims to conserve and restore the biodiversity of the Cape Floristic Kingdom, as well as the adjacent marine environment, while delivering benefits to the people of the region.</p> <p>The C.A.P.E. biodiversity strategy and action plan was prepared in 2000 and includes a long-term strategy and vision for the biodiversity conservation of the CFR and a five year action plan and investment programme to address conservation priorities.</p> <p>C.A.P.E is coordinated by the C.A.P.E Co-ordination Unit, which is hosted by the South African National Biodiversity Institute (SANBI). Responsibility for implementing the strategy lies with agencies including CapeNature, The Department of Environmental Affairs and Development Planning, The Department of Water Affairs and Forestry and the Provincial Department of Agriculture: Western Cape, as well as SANBI and several NGOs.</p> <p>The C.A.P.E. programme comprises six components, two of which are directly relevant to this Environmental Strategy, viz.</p> <p>Component 5.1: Undertaking fine-scale biodiversity planning;</p> <p>Component 5.2: Integrating biodiversity in land-use decision-making, which includes:</p> <ul style="list-style-type: none"> <li>▪ Integrating biodiversity plans into spatial development frameworks and decision-making;</li> <li>▪ Strengthening land-use regulation; and</li> <li>▪ Building institutional and individual capacity in municipalities in priority areas.</li> </ul>

<sup>65</sup> WWF. (2006). World Wide Fund for Nature South Africa.(online) URL: <http://www.wwf.org.za/fynbos.htm>. Accessed on: 3 October 2006.

	<p>Some of the initiatives<sup>65</sup> that have been catalysed by C.A.P.E., and which are particularly relevant to sustainable development in the area of the Cape Winelands District Municipality Area, are:</p> <ul style="list-style-type: none"> <li>▪ <u>Conservation incentives on private and communal land:</u> The aim of the project is to establish biodiversity corridors in priority non-state areas and to conserve vital lowland habitat. It focuses on the empowerment of civil society and the development and use of co-operative management models and incentive schemes.</li> <li>▪ <u>Flower Valley Conservation Trust:</u> This project aims to develop the public image and market position of wild fynbos harvested in a sustainable manner, establishing it as a recognized and viable alternative to other forms of land-use. In this way, the project aims to contribute to biodiversity conservation and also aims to develop capacity within previously disadvantaged communities through a co-management approach to business.</li> <li>▪ <u>Slanghoek Valley hotspot identification project:</u> This project is a fine scale conservation plan for the area that will provide land owners, land use planners and conservation agencies information about important biodiversity areas that must be conserved and areas which can be developed. This initiative was started by landowners and the Department of Agriculture, flowing out of the LandCare programme.</li> </ul> <p>In addition, the South African National Botanical Institute (SANBI) is playing a lead role in the development of fine scale biodiversity plans in five priority areas of the CFR which include the Upper Breede River. The other areas are the Riversdale Coastal Plain, Nieuwoudville, North West Sandveld and the Saldanha Peninsula. This initiative forms part of the implementation phase of the C.A.P.E. programme. (See also Initiative No. 4 "Putting Biodiversity Plans to Work").</p>
<p>2. National Spatial Biodiversity Assessment</p> <p><u>Website:</u> <a href="http://www.sanbi.org/frames/biodiversityfram.htm">http://www.sanbi.org/frames/biodiversityfram.htm</a></p>	<p>This project is co-funded by the Department of Environmental Affairs and Tourism (DEAT) and the South African National Botanical Institute (SANBI).</p> <p>The NSBA forms part of the National Biodiversity Strategy and Action Plan (NBSAP) and is required in terms of the new Biodiversity Act. The NSBA and will be updated every five years, or more frequently as new data becomes available.</p>

	<p>The aims of the NSBA are to:</p> <ul style="list-style-type: none"> <li>• identify broad spatial priority areas for conservation action;</li> <li>• make recommendations about options for conservation action in each priority area; and</li> <li>• provide a national context for conservation plans at the sub-national scale</li> </ul> <p>The NSBA covers terrestrial, river, estuary and marine components. Initial results have identified nine broad priority areas for conservation action in South Africa which include the Cape Floristic Kingdom. The technical reports from these 4 components and the NSBA Summary can be downloaded at : <a href="http://www.sanbi.org/frames/biodiversityfram.htm">http://www.sanbi.org/frames/biodiversityfram.htm</a></p>
<p>3. Threatened Species Programme (TSP) and CREW (Custodians of Rare and Endangered Wildflowers)</p> <p><i>Website:</i> <a href="http://www.sanbi.org/frames/biodiversityfram.htm">http://www.sanbi.org/frames/biodiversityfram.htm</a></p>	<p>This initiative aims to facilitate the conservation of South Africa's rare and endangered species. There is, however, a lack of information on rare and newly described species, as well as on the threats to these species in specific areas. The TSP and the CREW project were developed with the specific aim of obtaining this information.</p> <p>The CREW programme, which has been in operation for 3 years, comprises largely members of the public who volunteer to undergo training on plant identification and then collect data on rare and endangered plants in their local areas. So far 7 interest groups and communities have become involved in this project.</p> <p>SANBI and the Botanical Society of South Africa are now assisting CREW to establish civil society groups around the country to conserve rare plant populations.</p>
<p>4. Botanical Society of South Africa: Putting Biodiversity Plans to Work Project (2004 – 2006)</p> <p><i>Information on this project from biodiversity specialist study undertaken for this SEA.</i></p> <p><i>For further information:</i> <a href="http://www.capeaction.org.za/">http://www.capeaction.org.za/</a></p>	<p>There are three main broad scale biodiversity conservation programmes that have produced plans that cover parts or all of the CWDM Area, i.e. the C.A.P.E initiative, the Succulent Karoo Ecosystem Programme (SKEP), and the National Biodiversity Strategy and Action Plan (NBSAP). These biodiversity conservation plans have however, all been produced at a scale of 1:250 000 and indicate geographic priorities for biodiversity conservation. Some fine scale planning has already been undertaken for the Cape lowlands Renosterveld and other fine scale planning is currently underway for other priority areas identified in these broad scale biodiversity conservation</p>

	<p>plans.</p> <p>The Putting Biodiversity Plans to Work (PBPTW) project was a pilot study focused on developing fine scale biodiversity priority maps for seven local municipalities, one of which was the Drakenstein Local Municipality. Outputs from this project include a package that provides relevant biodiversity information for the ongoing development of the Drakenstein Municipality's Spatial Development Framework.</p>
<p>5. SKEP (Succulent Karoo Ecosystem Programme)</p> <p><u>Website:</u> <a href="http://www.skep.org/">http://www.skep.org/</a></p>	<p>The Succulent Karoo Ecosystem Programme (SKEP) developed out of a one-year planning initiative directed at establishing broad consensus on a set of conservation targets for the Succulent Karoo Biome. As a result of this planning process an ecosystem profile was produced for the Critical Ecosystem Partnership Fund (CEPF) that identifies key conservation areas for investment. Conservation targets have been set for the next 20 years that focus on the conservation and protection of 135 vegetation types.</p>
<p>6. The Biodiversity and Wine Initiative (BWI)</p> <p><u>Website:</u> <a href="http://www.bwi.co.za/">http://www.bwi.co.za/</a></p>	<p>The Biodiversity and Wine Initiative (BWI), with offices in Stellenbosch, is a partnership between the South African Wine Industry, individual farmers and the conservation sector.</p> <p>This initiative aims to incorporate biodiversity best practice guidelines into wine production. The purpose is to prevent further loss of habitat in critical areas, increase the total area set aside as natural habitat in contractually protected areas, promote farming practices that support biodiversity and sustainability, and provide a competitive advantage for wines produced by participants.</p> <p>The primary strategy of the BWI is to enlist interested producers as members or champions of the initiative, who will implement the biodiversity guidelines, conserve critical ecosystems and incorporate a biodiversity story into their winery experience.</p>
<p>7. Integrated Production of Wine (IPW)</p> <p><u>Website:</u> <a href="http://www.bwi.co.za/ipw">http://www.bwi.co.za/ipw</a></p>	<p>IPW is a voluntary auditing system that was developed to manage the environmental impacts of wine production. The system operates on an auditing basis according to guidelines, which encourage good agricultural practices. There are detailed sections in the guidelines, which cover biodiversity, soil and land management, amongst other factors.</p>

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<p>8. CapeNature Conservation Stewardship Programme</p> <p><i>Website:</i> <a href="http://www.capenature.co.za/">http://www.capenature.co.za/</a></p>	<p>The Cape Nature Conservation Stewardship Programme (CSP) is a collaborative initiative that provides incentives for private landowners to protect biodiversity on their land.</p> <p>Key participants in the CSP are landowners, primarily farmers, as well as the operational staff within CapeNature. All involvement in the programme is voluntary, although CapeNature has actively promoted the programme to landowners, and has disseminated information to farmers, encouraging them to participate in the programme.</p> <p>Three stewardship options are offered to private landowners that would like to set aside land for conservation or sustainable use. These options are: contract nature reserves; co-operation agreements and conservation areas.</p>
<p>9. River Health Programme</p> <p><i>Website:</i> <a href="http://www.csir.co.za/rhp/rhp_background.htm">http://www.csir.co.za/rhp/rhp_background.htm</a></p>	<p>The South African River Health Programme (RHP) primarily makes use of biological indicators (e.g. fish communities, riparian vegetation, aquatic invertebrate fauna) to assess the condition or health of river systems. The rationale for using biological monitoring is that the integrity of biota inhabiting river ecosystems provides a direct, holistic and integrated measure of the integrity or health of the river as a whole.</p> <p>The RHP is a source of information on the ecological state of river ecosystems in South Africa, which can be used to support the rational management of these natural resources.</p>
<p>10. Working for Water Programme (DWAF)</p> <p><i>Website:</i> <a href="http://www.dwaf.gov.za/wfw">http://www.dwaf.gov.za/wfw</a></p>	<p>The Working for Water (WfW) programme was launched in 1995 to fight against invasive alien plants.</p> <p>The programme is administered through the Department of Water Affairs and Forestry and is based on partnerships between local communities and government (including Departments of Environmental Affairs and Tourism, Agriculture, and Trade and Industry, and provincial departments of agriculture), conservation and environment groups, research foundations and private companies.</p> <p>Since the beginning of the programme in 1995, more than a million hectares of invasive alien plants have been cleared. This has provided jobs and training to approximately 20 000 people from among the most marginalized sectors of society. The programme is globally and nationally recognised for its achievements.</p>

<p>11. Working for Wetlands</p> <p><u>Websites:</u> <a href="http://www.sanbi.org/research/wetlandprog.htm">http://www.sanbi.org/research/wetlandprog.htm</a></p>	<p>As a dry country, but endowed with exceptionally rich biodiversity, South Africa has particular reason to value its wetlands. Wetlands the world over are widely acknowledged for providing important ecosystem services. In South Africa many wetlands have been degraded or irreversibly lost as a result of human activities. In response to this, the departments of Environmental Affairs and Tourism, Water Affairs and Forestry, and Agriculture, together with partners in provincial and local government and civil society, particularly the Mondi Wetlands Project, have jointly launched the Working for Wetlands programme.</p> <p>This programme is focused on the rehabilitation of wetlands, but also addresses their protection and sustainable use. Funding for the programme's activities is provided by the Department of Environmental Affairs and Tourism through the South African National Biodiversity Institute (SANBI). The programme enables its government partners to meet policy objectives and commitments to several international agreements, such as the Ramsar Convention on Wetlands.</p> <p>Emphasis is placed in the programme on raising awareness and influencing behaviour and practices impacting on wetlands, rather than focusing exclusively on engineering solutions. All rehabilitation interventions are undertaken within the context of improving the integrity and functioning of the ecosystem, and include measures that address both causes and effects of degradation.</p>
<p>12. Working on Fire (WoF) Programme (the Forest Fire Association)</p> <p><u>Websites:</u> <a href="http://www.info.gov.za/issues/govtprog/environment.htm">http://www.info.gov.za/issues/govtprog/environment.htm</a></p>	<p>The Working on Fire Programme is a labour-intensive initiative that was developed to control wild fires in South Africa.</p> <p>The main objectives of the project are to: limit the effect of veld fires on poor communities; create opportunities for in the activities of Fire Protection Associations; and develop skills and capacity in affected communities.</p>
<p>13. Landcare/ Area wide planning</p> <p><u>Websites:</u> <a href="http://www.nda.agric.za/docs/Landcarepage/landcare.htm">http://www.nda.agric.za/docs/Landcarepage/landcare.htm</a> <a href="http://www.wcape.agric.za">http://www.wcape.agric.za</a></p>	<p>LandCare is an integrated community-based approach to the sustainable management and use of agricultural natural resources.</p> <p>The overall objective of LandCare is to optimise the productivity and sustainability of natural resources to, <i>inter alia</i>, ensure food security and job creation.</p>

	<p>LandCare operates on specific projects, developing partnerships between government, LandCare groups and communities, NGOs and industry. Emphasis is placed on ownership of the process by the local community involved and on increasing awareness of land care issues. The LandCare project also provides short term employment in activities such as farm planning, clearing of alien invasive species and constructing erosion prevention structures in Landcare areas.</p>
<p>14. Catchment Management Area establishment</p> <p><i>Information on this project from water specialist study undertaken for this SEA.</i></p>	<p>The National Water Policy and the National Water Act envisage the empowerment of local communities in the management of their water resources. This will primarily be achieved through Catchment Management Agencies which will be established for each of the country's 19 Water Management Areas (WMAs). Catchment Management Agencies are statutory bodies, with jurisdiction over a defined Water Management Area. The Cape Winelands District Municipality Area falls within two of these WMAs - the Berg and Breede-Overberg WMAs.</p> <p>A proposal for the establishment of the Breede-Overberg CMA has already been submitted to the Minister of Water Affairs and Forestry, however, the public consultation process in the Berg WMA is still in progress. Local authorities are able to make a valuable contribution to the public consultation process, and to the constitution of the CMA reference group and the Catchment Management Committee.</p> <p>Once the CMAs are established they will rely on local authorities to provide them with information on the state of water resources from which municipalities abstract their water (i.e. dam levels, groundwater levels and water quality). Municipalities will also play an important role in the management of water resources through their influence on land-use and the water consumption patterns of citizens and industry.</p>