CHAPTER 7
CONCLUSIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

The overall goal of the study was to develop a strategic management plan for the sustainable development of geotourism in South Africa. In order to achieve this goal, a number of objectives were identified, namely:

- To critically evaluate the theoretical foundations of sustainability and its applicability with regard to geotourism (c.f. 1.3.1). This goal was achieved in Chapter 2: "*The pillars of sustainable tourism*".
- To critically evaluate internationally existing concepts and guidelines for geotourism and geoconservation (c.f. 1.3.2). This goal was achieved in Chapter 3: "*Components of geotourism*".
- To critically evaluate the development of geotourism, site and visitor management and how the various approaches and tools for the management of geotourism can be applied (c.f. 1.3.3). This goal was achieved in Chapter 4: "*Geotourism development, site and visitor management*".
- To develop criteria for the implementation of a strategic management plan for geotourism in South Africa (c.f. 1.3.4). This goal was achieved in Chapter 5: "*Developing a strategic management plan for geotourism*".
- To evaluate and discuss the results of the case studies. This goal was achieved in Chapter 6: "*Results of the case studies*".

The last objective, to draw conclusions and make recommendations, will be addressed in this chapter. This concluding chapter will also indicate the contributions made by this thesis.

7.2 THE CONTRIBUTION OF THE STUDY

The contributions made by this study are listed below:

- Firstly, a strategic plan was developed that can serve as basis on how to develop geotourism in South Africa.
- Secondly, guidelines were developed that can be considered useful tools towards achieving sustainability.
- Thirdly, the results of the thesis can assist entrepreneurs/developers in the establishment of future geosites, geo-areas and geoparks.
- Fourthly, the expansion and contextualisation of literature in the field of geotourism especially in a South African context was achieved. This included the integration of aspects such as sustainability, geotourism and strategic management.
- Finally, it is noted that this was the first study of this kind in South Africa

The results of this thesis also led to the publication of two international conference papers.

7.3 CONCLUSIONS WITH REGARD TO THE LITERATURE REVIEW

Because geotourism is a completely new concept that developed mainly in Europe and China since 1991, very little literature was available in libraries in South Africa. The first tentative attempts to describe geology to the layman were completed in Namibia during 2002 and 2004. This could be regarded as the foundation of geotourism in Southern Africa. The researcher wrote a number of articles for Geobulletin during 2003 and 2004 regarding geotourism in the Kruger National Park (KNP). Geological books for the layman were published in South Africa in 2005 and 2006. In 2006, geotourism in Southern Africa was described with special focus on the potential South Africa, but no concerted, definitive attempt was made to say how this potential could be developed and used.

Most of the literature for this study was obtained through the Internet by means a Google search. Some few e-mails were written to the most prominent persons involved in geotourism overseas, and many brochures and booklets were sent to the researcher. During visits to geotourism conferences in Europe during 2006 and once more in 2008, the researcher also sought relevant information on the subject. This material proved to be very useful when determining how geotourism was applied.

The conclusions will deal with the following aspects listed below:

- Sustainability aspects
- Geotourism aspects
- Geotourism management aspects, and
- Geotourism management plan aspects.

7.3.1 SUSTAINABILITY ASPECTS (c.f. 2.1)

The pillars on which sustainability is constructed were described in Chapter 2. The United Nations Conference on the Human Environment held in Stockholm, Sweden (1972) marked the emergence of international environmental law. In the Brundland Report (1987), sustainability was defined as "*Meeting the needs of the present generation without compromising the ability of future generations to meet their needs.*" At the Rio 92 Conference, sustainability as a separate issue, for the first time it was opined that all resources should be managed in such a way that economic, social and aesthetic needs can be fulfilled. This led to the adoption of Agenda 21. Since then various definitions of sustainability have been described and expanded by different authors (c.f. 2.2). A very informative explanation in 2002 was depicted as the "*EcoSteps sustainability tree*". It is depicted as a coherent, conceptual framework brought about by integrating the social, environmental and economic dimensions using a systems approach (c.f. 2.2).

Following the United Nations Conference on the Human Environment (1972) in Stockholm, Sweden, there has been an evolution of the concept of sustainability. Subsequent to the

Brundtland Report (1987), the concept of "*sustainable development*" was introduced. Several important dates of sustainable development are shown in a figure and the evolution of the concept over time, as well as the actions of the different actors during more than 30 years (c.f. 2.2.1). Sustainable development is thereafter illustrated as the three spheres/pillars diagram. True sustainable development may be defined then as the development that meets the triple bottom line, where all three systems are in equilibrium (c.f. 2.2.1, Figure 2.4). Sustainable development, as defined, was expanded by an US mining company in 2008 to include economic prosperity, social well-being, environmental stewardship, and governance as the starting points on which the other elements are based (c.f. 2.2.1). In 2006, the National Strategy for Sustainable Development (NSSD) showed, in a different way, how social, economic and ecosystem factors are embedded within each other and are underpinned by systems of governance (c.f. 2.2.1). At the "*3rd UNESCO International Conference on Geoparks*", Osnabrück, Germany, (2008) one of the key speakers stated that:

- Sustainability underpins all tourism development today including geotourism;
- Sustainability means being economically viable, community beneficial, and environmentally responsible, and
- Sustainability is only achieved through appropriate planning and management (c.f. 2.2.1).

The Local Agenda 21 (LA 21) was adopted at the Earth Summit in Rio de Janeiro (1992) requesting local authorities to consult with their communities to develop and implement a local plan for sustainability of development. There is no fixed model for LA 21. It is rather a program that provides a framework for implementing sustainable development at the local level. As no fixed model exists for LA 21, it should have processes that integrate environmental, economic and social development. The programs being integrated should be relevant to the local Government and to the community involved in its development (c.f. 2.2.2).

At the World Conference on 'Sustainable Tourism' that was held in Lanzarote (Spain) during 1995, tourism development was discussed and it was stated that this too should be based on the criteria of sustainability. The relationship between sustainable tourism and other terms are interwoven (c.f. 2.3, Figure 2.7). Other researchers maintained that four primary pillars of sustainable tourism exist: ecological, economic, socio/cultural and political/governance environments (c.f. 2.3). Another viewpoint in 2002 showed six dimensions of sustainable tourism: ecological, economic, socio-cultural, institutional, local agenda 21 process, with tourism and political systems core (c.f. 2.3). A very informative way to depict sustainability was developed as the Concentric Circles Model of Sustainable Tourism. It consisted of three concentric circles of sustainability. The centre of the model shows the intergenerational equity (IE); the next (middle) circle shows the interactions between capital stock and stakeholders, and interactions within stakeholders shall be sustainable, a and the outer circle shows how sustainable strategies should be implemented in order to reach equilibrium (c.f. 2.3, Figure 2.9).

In 2004, the Department of the Environment and Heritage of Australia developed and documented ten steps for developing sustainable tourism plans. These are used as a tool when managing and developing regions, places and tourism products. In step 6 of the development, the SWOT-analysis is an important consideration (c.f. 2.4).

7.3.2 GEOTOURISM ASPECTS (c.f. 3.1)

Geotourism, seen as a new form of tourism, and all the terms associated with it were identified in Chapter 3.

In 1994, the term geotope was introduced to Europe. Since then it has been used widely on the European continent. In 1996, the term geosite was proposed to encompass any site that contains significant geodiversity. In the rest of the world, geosite is used instead of geotope. The geological Survey of Canada (2004) discussed a list of geosite selection criteria showing that even a single criterion may be sufficient to recognise the outstanding character of a geosite (c.f. 3.2).

Since 1992, the World Heritage Convention was the world's leading international instrument for the protection of the most outstanding destinations on Earth. They compiled the World Heritage List (WHL) consisting of natural, cultural and mixed properties. They proposed that the key criterion for World Heritage Inscription is that the site has to be of '*outstanding universal value*', Thus, the most important aspects of World Heritage Sites are their superlative characteristics, their high level of representation of places worth protecting and their irreplaceable value to humankind. At present, there are 8 World Heritage Sites (WHS) in the country, with the most notable being the Vredefort Dome and St. Lucia Wetlands (c.f. 3.2.1).

In December 2008 The World Heritage List includes 878 properties forming part of the cultural and natural heritage that the World Heritage Committee considers as having outstanding universal value. These include 679 cultural, 174 natural and 25 mixed properties in 145 States. As noted above, in South Africa there were 8 World Heritage Sites (WHS); one was mixed, 4 were cultural and 4 were natural properties. The natural properties are:

- Greater St. Lucia Wetland Park (iSimangaliso) (1999)
- uKhahlamba/Drakensberg (2000). (It is a mixed property)
- Cape Floral Region Protected Areas (2004), and
- Vredefort Dome (2005)

(http://whc.unesco.org/en/list/).

Although the Fossil Hominid Sites of Sterkfontein, Swartkrans, Kromdraai and Environs (1999, 2005) are classified as a cultural property, the importance of geology and cave formation is ignored and it should be re-classified as mixed in the future.

To be classified as WHS, properties nominated should:

- Be outstanding examples representing major stages of earth's history, or
- Be outstanding examples representing significant on-going ecological and biological processes, or
- Contain superlative natural phenomena or areas of exceptional natural beauty, or
- Contain the most important and significant natural habitats for *in situ* conservation of biological diversity.

Criteria for the inclusion of natural (N) and cultural (C) properties are:

- The Fossil Hominid Sites of Sterkfontein, Swartkrans, Kromdraai and Environs (C iii, vi)
- Greater St. Lucia Wetland Park (iSimangaliso) (N ii, iii, iv)
- uKhahlamba/Drakensberg Park (C i, ii, and N vii, x)
- Cape Floral Region Protected Areas (N ix, x), and
- Vredefort Dome (N viii)

(http://whc.unesco.org/en/list/, http://whc.unesco.org/whc/nwhc/pages/sites/main.htm**).**

A short list of WHS overseas was given for comparison (c.f. 3.2.1). A short description of the most stunning geosites/areas in South Africa was also given, as well as those from overseas (c.f. 3.2.2, 3.2.3).

A new term called geodiversity defines the natural variety of the Earth's surface. This is a useful concept for geoconservation and management of abiotic heritage, referring to geological and geomorphological aspects, and was described by several authors. A useful diagram summarises the benefits and social functions of geodiversity in a descriptive diagram (c.f. 3.3, 3.3.1, Figure 3.2).

"*Heritage*" refers to products and events in a historical context. Geoheritage implies the heritage of geology and the various products thereof. South Africa has a rich variety of geoheritage that is world-known (c.f. 3.4).

Geotourism is a new form of tourism is that has been developed in Europe and China since 1991. It includes geology, mineralogy, palaeontology, geosites, present and defunct mines, caves, and collections of geological specimens in museums. The focus is that geology forms the basis of geotourism (c.f. 3.5). The Wieliczka Salt Mine in Poland (c.f. 3.5.1) can be regarded as the place where geotourism originally started to develop (http://whc.unesco.org/sites/32.htm). In Australia, a substantial contribution of the nature and scope of geotourism was made in 2006. Diagrammatically, the three main components are form, process and tourism with its various sub-divisions. This is the best diagram developed so far to explain the concept, and it can be used to explain the basis for the pillars on which geotourism is built (c.f. 3.5.2, Figure 3.4). At the "*3rd International UNESCO-Conference on Geoparks*", held at Osnabrück, Germany, between 22-26 June 2008, one of the main speakers

from Australia gave a PowerPoint© presentation on geotourism where all the newest research and the most recent views on the subject were covered. This can be regarded as the most extensive explication of geotourism so far. Dowling (2008:10) defined geotourism by saying that:

"***Geotourism is sustainable tourism with a primary focus on experiencing the earth's geological features in such a way that fosters environmental and cultural understanding, appreciation and conservation, and is locally beneficial***".

For the first time in South Africa, geotourism featured prominently at the Geocongress 2000 held at Stellenbosch. Posters were displayed, four pre-congress excursions were held, and a workshop on quality-appraisal of diamonds was presented. Brochures of the eleven geosites of the Western Cape were also available. With these actions, geotourism was formally introduced to the public. A reconnaissance study on geotourism was done in 2003 by Smit from a geological point of view and so does not represent fully the country's variety of geoheritage. It is a superficial study, and only one researcher's findings from overseas were used with very little tourism literature researched even from the Internet. Not enough background research was done from the tourism point of view. Other South African authors have had some minor publications but, again, not enough research on the subject was undertaken (c.f. 3.5.2).

The Geotourism Study (c.f. 3.5.3) that was completed in 2002 for National Geographic Traveller (NGT) in the USA gave another definition of geotourism, this time approaching the issue from a geographical point of view:

"***Tourism that sustains or enhances the geographical character of the place being visited - its environment, culture, aesthetics, heritage, and also the well being of its residents***".

It was established that there is a close relation of geotourism with all other forms of tourism and that ecotourism is very closely related to this niche market tourism. Much of the criteria of ecotourism are applicable to geotourism (c.f. 3.5.4).

Geosites as part of a nation's geoheritage must be properly conserved before it can be used by geotourism. Thus, geoconservation is essential to maintaining the best of the geoscience heritage. At a meeting in Strasbourg, France (2004), conservation of geoheritage on a world-wide scale was discussed for the first time (c.f. 3.6, 3.6.1). The six appendices of the conference report summarised the issues:

- Philosophy and practice of geological and geomorphological conservation
- Existing conservation programmes, and criteria for selecting areas of special geological importance
- Managing areas of special geological interest

- Information and education programmes to promote action in the field of geological heritage conservation
- Strengthening co-operation with international organisations; and
- Scientific institutions and NGOs in the field of geological heritage conservation.

In Australia, Europe and the US much has been done to conserve geoheritage. But so far, not much has been done to conserve geoheritage in South Africa except for the work undertaken at the Vredefort Dome, Cradle of Humankind (COH), uKhahlamba/Drakensberg Park and the Greater St. Lucia Wetlands (c.f. 3.6.2).

Overseas geotourism is used for geo-educational purposes in geosites, for example, old mines, caves, geomuseums, geo-exhibitions, geotrails, and at geoparks, and using a variety of communication media (c.f. 3.7). Excellent examples demonstrating where geology is explained to the layman can be found in France, Germany, South Wales, at the Klondike Gold Rush National Historical Park (US), Canada and in Western Australia. A few fossil parks in the US allow the public to collect and keep the fossils they find (c.f. 3.7.1). In South Africa, the only examples of geosites are Cullinan mine, the Big Hole in Kimberley, Kleinzee and Gold Reef City. Geological museums also educate the layman about geology.

7.3.3 GEOTOURISM MANAGEMENT ASPECTS (c.f. 4.1)

In Chapter 4, geotourism development, site and visitor management and international examples were given.

Visitor attractions are an important aspect for successful destinations. It was shown that attractions and destinations deliver tourism services. A geotourism destination should be able to compete involving social, environmental, economical, cultural, political and technological strengths. For a competitive and successful destination, certain steps to destination success must be followed. A sustainable geotourism approach implies that the natural and other recourses of tourism are conserved for continuous use and benefits in the future (c.f. 4.2.1, Figure 4.2)

The "*Australian Natural Heritage Charter for the Conservation of Places of Natural Heritage Significance*" of 2002 assists destinations with an interest in natural places to establish their natural heritage values and manage them accordingly (c.f. 4.4, Figure 4.5). It stresses that the planning process, conservation policy, management strategy and the conservation plan must be monitored and reviewed continuously.

Since 1864, certain areas were proclaimed in the US as protected areas. They later became protected area management categories (c.f. 4.4.1). After the Digne declaration (1991), geoparks were established in Europe, China, and now also in other parts of the world. They have rich and diversified geoheritage and geoheritage are conserved, enhanced and managed for future generations and for its use to visitors. People are also educated about the value of

geoheritage (c.f. 4.5). An ecomuseum in Sweden is similar to a geopark. Geoparks are administered by the European Geoparks Network (EGN) (c.f. 4.5.1, Figure 4.9) and the Global UNESCO Network of Geoparks. Several criteria are set for the establishment of a geopark that wants to join the Global Geoparks Network: Size and setting, management and involvement, economic development, education, protection and conservation (c.f. 4.5.2).

Examples were given how geotourism products are utilised in mining museums, historical mining towns and theme parks. Many mining heritage places were conserved and are now being used as tourist attractions. Examples are mostly found in countries that have a mineral/mining industry. A few were declared World Heritage Sites, i.e. the mining history of Røros (Norway), the historic centre of the town of Diamantina (Brazil), the mines of Rammelsberg and the historic town of Goslar (Germany). The German Mining Museum in Bochum (Germany) is a big tourist attraction with more than 400 000 visitors per year. The British Museum of Mining in Vancouver (Canada) celebrates the importance of natural resources to Canada's history (c.f. 4.6.1).

The towns of Pilgrim's Rest, Barberton, Kimberley and Johannesburg (Gold Reef City) are examples of the mining heritage of South Africa where geoheritage is explained to the visitors (c.f. 4.6.1). Platinum City (Rustenburg) will follow when the construction of the park will be finished in 2010. The whole town of Pilgrim's Rest was declared a museum. The South African Gold Panning Championships, hold annually in the town is the only event of its kind in the country so far.

The "*3rd International UNESCO-Conference on Geoparks*" was an important event that was held in Osnabrück (Germany) in 2008. The topic was communication and the goal was to create appropriate methods to raise the awareness of the geological heritage of the planet - far beyond a geopark's borders. Before the conference posters, education pamphlets and booklets from 58 World Geoparks were displayed at the 1st International Geoparks Fair. The "*Inaugural Global Geotourism Conference 2008*" was held in Fremantle (Western Australia) in 2008. The event set a benchmark for the tourism industry in relation to the development, management, marketing and promotion of landscapes. All aspects of geotourism, geoconservation, and geo-education were highlighted (c.f. 4.6.3). A geo-exhibition was the Dartmoor Rock 370,000th Millennium Exhibition (2002) that was held in Cornwall, (UK) (c.f. 4.6.4).

Interpretation is an educational activity aimed at revealing meanings and relationships to people about the places they visit (c.f. 4.7). There are certain guiding principles for interpretation (c.f. 4.7.1). Principles for successful interpretation must be applied (c.f. 7.4.2). Geoheritage interpretation is necessary because geoheritage underpins the landscapes and the geodiversity that exists (c.f. 4.7.3). It can enhance the geotourism experience, help job creation, and help with on-site management. The benefits are that interpretation is an effective way of adding value to the experience. It educates and entertains visitors that cause them to reflect about environmental values. The role of interpretation is to make people more

aware of what they visit and to provide knowledge that increases their understanding of geoheritage (c.f. 4.7.4).

7.3.4 GEOTOURISM MANAGEMENT PLAN ASPECTS (c.f. 5.1)

In Chapter 5 aspects related to the development of a strategic management plan for geotourism were examined.

Strategic planning was the starting point from which to select a desirable future from alternatives of strategies and actions to be implemented in achieving the desired outcome. Various references of well-known authors were described to get an overview of the strategic management process (c.f. 5.2). A practical example of the Network History of the Earth (Germany) illustrated how stakeholder involvement is crucial for successful partnerships by the process of networking where persons from different disciplines that are linked together and keep their independence to create a win-win situation. Innovation, high-quality standards and sustainability guidelines show that a network is really performing very effectively to develop and promote high-quality, sustainable geotourism. A bottom-up, starter project and promoter strategies are crucial (c. f. 5.2.1).

A sustainable tourism management plan (2007) was developed as a methodology guide for biosphere reserves (BR) in Eastern Europe. The guide was used as a basis to develop a geotourism management plan for South Africa (c.f. 5.3). The basics of strategic management were discussed (c.f. 5.3.1).

The conceptual framework for a strategic management plan of Schutte (2007) was amended and used as a basis for the sustainable development of geotourism. The steps used by most authors are:

1. Vision and mission
2. Situation and resource analysis
3. Strategy formulation
4. Implementation, and
5. Evaluation (c.f. 5.3.1, Figure 5.18).

A vision and mission for geotourism should be proactive to give guidance in terms of where one wants to be, and also who one is, what one does and where one is headed. The mission statement set the course for future geotourism development. The South Australian Tourism Plan 2003-2008 is an example how a vision can be used through partnerships to achieve sustainability in destination development, strategic practice, marketing and profitable business. It can be applied in South Africa with regard to geotourism (c.f. 5.4).

A situation and resource analysis help tourism managers to identify key internal and external variables, as well as potential business opportunities (c.f. 5.5). A SWOT-analysis is very important to give guidelines for geotourism development in the future. In the environmental,

social and economic analysis of geotourism all three components must be weighed together to achieve a balanced development of geotourism (c.f. 5.5.1).

Environmental, economic and social analysis of tourism is important. These considerations must be well understood in the successful planning, development and management of tourism. The impacts for tourism should also be considered (c.f. 5.5.2).

The three Heritage Legislation Acts (No's 11, 25, 49 of 1999) with regard to geology and geoconservation in South Africa has little significance. Only the identification of cultural heritage resources is emphasised by Act 25; natural heritage is only mentioned. A completely new act about natural heritage should be formulated and be restructured to give more attention to natural heritage (geoheritage) (c.f. 5.5.3).

Strategic management and planning is the core of management and indicates the direction of a business. Without strategic planning, there will be no quality management. Strategy is the way an organisation seeks to achieve its vision and mission. It is also a course of action that includes planned resources required, to achieve a specific objective and deploy its capabilities. An example of a geotourism strategy is for the Flinders Ranges (Australia) (c.f. 5.6).

The implementation of strategic management is the action phase of the strategic management process. It deals with making a strategic choice that is concerned with the generation and evaluation of various strategic options. A proper strategic strategy should also be selected. A practical example was given in the South Australian Tourism Plan 2003-2008 where sustainability and its relationship to the triple bottom line (TBL) were described (c.f. 5.7, Figure 5.11).

The geosites, geo-attractions and geodestinations in South Africa should be managed according to sound strategic business management principles. Appendix 3 of the "*Recommendation Rec (2004)3 on Conservation of the Geological Heritage and Areas of Special Geological Interest*" in Strasbourg (France) gives guidelines for the management of geosites (c.f. 5.7.1).

Marketing is an important component in the implementation of sustainable tourism principles and practices. Strategic marketing and promotion and an awareness campaign can emphasise the importance of geology (c.f. 5.7.2). Awareness campaigns to emphasise the importance of geotourism as a new niche market in tourism is necessary (c.f. 5.7.2.1).

The purpose of monitoring is to scrutinise how the plan is working in practise and give feedback of modifications of the original plan. Therefore, a strategic management evaluation and monitoring of geotourism progress should be done. Address future challenges/issues and show how it can contribute to the achievement of sustainable tourism (c.f. 5.8).

7.4 CONCLUSIONS WITH REGARD TO FIELD WORK/CASE STUDIES

Chapter 6 reflected the conclusions from the six case studies based on the interviews with the respondents, regarding geotourism. The case studies represented the spectrum of geotourism in South Africa. They are examples of a National Park, a conserved gold mining heritage town, a visitor gold mine, a well-established diamond tourism centre, a World Heritage Site and a museum collection that were chosen as representative of geosites. The various issues that were discussed during the interviews were:

- Background and history
- Present status
- Lessons learned
- Implementation of sustainability
- Benefits, and
- Future actions.

7.4.1 MAIN FINDINGS

The main findings from the case studies were:

- There was either a lack or no knowledge at all of geotourism by the respondents
- There was no policy or strategic geotourism development plan for geotourism.
- Little planning, management and marketing had been done. The Cradle of Humankind (COH) was an exception as extensive research has been done since 1997 when an application was submitted for a World Heritage Site status. Today, this WHS is a world-class visitor destination
- Very little financial support has been received either from the Government, local municipalities, or from mining or financial companies
- Too little funding was a problem for all the case studies
- No geoconservation legislation exits.

General findings from the case studies are:

- Four of the case studies were located in protected areas, while two were located in an area/building that is protected because of specific visiting hours, and
- New concepts of geotourism and associated concepts were introduced. Other supplementary products could complement geotourism in each of the cases.

General findings with regard to the implementation of sustainability are:

- The application of overseas research and experience in geotourism development is necessary but the principle of sustainability is not yet well understood in a third world country
- The layman is not aware of geotourism and also has little or no knowledge of it
- The enhancement or integration of economic, social and environmental principles is a prerequisite in every case

- Geotourism was not a part of the present management plans and great awareness and knowledge of geotourism should be inculcated
- In all the cases, there are sufficient stakeholders from varied communities. However, much more can be done such that each of the exemplars work together, and start networking for their mutual benefit
- This principle of synergistic networking applies to all the stakeholders, too
- The management of individual geosites was excellent in all cases, perhaps because four of the sites are located in protected areas while the other two have defined and published visiting hours
- Not enough marketing has been done so that the nonprofessional understands the concept of geotourism and of its undoubted benefits.

In all the case studies, the various stakeholders had the following in common:

- They sought to conserve natural heritage, geoheritage and mining heritage
- They sought to create opportunities to work with other tourism sectors
- Every place or area enhanced the visitor experience with their existing geotourism product
- They believed that geo-education was one of the cornerstones for geotourism, particularly when geology, as the foundational process, is explained to tourists.
- They understood that interpretation is provided in all the cases to lead the visitor to discover and understand the wonders of the place or area
- They understood that successful tourism can be achieved when all the above are fulfilled.

7.5 MANAGEMENT PLAN FOR GEOTOURISM IN SOUTH AFRICA

The structure of Chapter 5 was adapted by the researcher, and used to develop a strategic geotourism management plan.

The plan consists of:

1. Vision and mission
2. Situation and resource analysis
3. Goals and objectives
4. Strategy, and
5. Implementation and evaluation (c.f. 5.2, Figure 5.1).

7.5.1 VISION AND MISSION (c.f. 5.5)

The vision and mission that will be proposed could serve as a basis for the sustainable development of geotourism in South Africa. It also reflects the purpose and core responsibility of future geotourism actions (c.f. 7.4.2, 5.5, 5.5.1) for South Africa:

1. Geotourism vision:

"Establish South Africa as a world class geotourism destination".

2. Geotourism mission:

"To *identify, document, promote and conserve South Africa's geological features in a sustainable manner in order for tourists and visitors to enjoy an enlightening experience".*

7.5.2 SITUATION AND RESOURCE ANALYSIS (c.f. 5.6)

A georesource analysis must be undertaken to determine the country's geo-assets, (that is, the natural and geomorphological sites, landscapes, mountains, meteorite impact craters, geosites and geo-areas, caves, fossil deposits and wetlands). The case studies that have been presented were representative of geosites or areas in South Africa. The case studies represent excellent examples of geosites such as those found in a National Park, a gold mining heritage town, a visitor gold mine, a diamond theme park, in cave systems developed as a World Heritage Site for anthropologic reasons (COH) and a geological museum. Another pertinent point is that South Africa is well known for having some of the world's most representative and spectacular examples of geological phenomena (c.f. 1.1, 1.2, 1.4.2).

There are many stakeholders in the tourism industry (CRC for Sustainable Tourism 2002). Local government authorities have helped to establish legislation to regulate tourism. Resource and traditional landowners worked with planners to provide the infrastructure for new destinations. Resource, hospitality, communication, Information and Communication Technology (ICT), finance and National Park managers manage the tourism enterprise, while enterprise operators (such as hotels, airlines, airports, hire cares, attractions, tour operators, travel agents, farm stays, convention centres, restaurants, museums, sporting events) are all service providers in the tourism industry. Marketers do promotions to attract visitors. Employees do the normal operational tasks associate with tourism. Tourists (domestic and international) are classified as, for example, package holidays, ecotourists, business travellers, backpackers, visiting friends and relatives, events, conferences, or cultural tourists (http://www.crctourism.com.au/about/default.aspx) (c.f. 5.3.2).

Some (or all) of these categories of stakeholders will be involved in the future development and management of geotourism in South Africa.

7.5.2.1 Swot analysis

The SWOT analysis served as a basis for collecting information from the case study examples so that they can be used as guidelines for future planning, development, management and marketing for geotourism in the country.

Strengths that would be in the interest of the South Africa are:

- Each geosite or geo-area has its own authentic and unique geoproduct

- They are excellent geodestinations
- They have professional management
- There is well established tourism infrastructure
- They have well-produced and informative websites
- They adhere to good geoconservation practices
- The organisations have good infrastructure
- The Diamonds and Destiny Visitor Centre (Big Hole, Kimberley) and the Maropeng and Sterkfontein Caves are world-class visitor centres
- Each of them can be used as an example or good geo-education practices.

Weaknesses that should, in the broader interest of South Africa, be avoided are:

- The concept of geotourism as a new product that is not very well known
- Failing to implement geotourism
- The current abysmal lack of knowledge concerning geo-tourism
- Too little funding available to effectively promote the concept.

Opportunities that would further the interests of South Africa are:

- The integration of geotourism into the mainly biological ecotourism activities at National Parks, Private Game Parks, Botanical Gardens and Conservancy Visitor Destinations, with the following sub-aims:
  - Establish world class interpretation centres
  - Exhibit more posters about geology in the existing/planned information centres
  - Develop geological exhibitions and open-air geological museums
  - Organise guided geotourism tours
  - Provide and promote extensive geo-education and geo-interpretation
  - Install a computerised system of all the geosites/areas activities for the public in an information centre
  - Print geotourism guides (c.f. 7.3.4), and
  - Publish visitors' geobrochures and georoutes.
- The integration of geotourism into the mining heritage of the country, with the following sub-aims:
  - Prepare a regional, provincial and national strategy concerning the role of mining heritage in the industrial development of the country
  - Establish world class interpretation centres
  - Exhibit more posters about geology and mining activities in the existing and planned information centres
  - Develop geological, mining, perhaps open-air, geological or mining museums;
  - Organise and provide guided mine tours
  - Provide and promote extensive geo-education and geo-interpretation
  - Install a computerised system of all the geosites/areas activities for the public in an information centre
  - Have mining companies support and invest in the development of the mining

complex, particularly emphasising the importance of mining history
    - Support the declaration of the reduction works in Pilgrim's Rest as the first industrial World Heritage Site (WHS) in Africa
    - Publish a book aimed at the lay-market on gold, diamond and platinum geology
    - Educate the layman concerning gold, diamond and platinum geology.
- The integration of geotourism into the palaeontology and palaeo-anthropology experiences at the Cradle of Humankind (COH), Makapan's Valley and Taung
- The integration of geotourism into geological museums' activities by:
    - Revamping and upgrading the existing collections
    - Creating moving exhibits
    - Opening geologically-themed, strategically placed, geological museum shops.
- The planning of better interpretation facilities at geosites and geo-areas to enhance the geotourism experience of the visitors.

At present, there are no geoparks in South Africa. However, there are a few areas should be considered for UNESCO World Geopark status, such as:

- The Kruger National Park (KNP)
- The Barberton Mountainland with rocks that shows the evolution of the ancient Earth's crust
- Phalaborwa area, including the Murchison Range to the north
- Panorama Route Geopark on the escarpment, including Pilgrim's Rest (mining history)
- The Vredefort Dome (meteorite impact crater)
- The Witwatersrand Goldfields area, from Springs to Krugersdorp
- The Pretoria area, Cullinan Diamond Mine and Tswaing Meteorite Impact Crater
- Rustenburg area, including working chrome and platinum mines, and Platinum City;
- Pilanesberg National Park (volcanic complex)
- Kimberley, and the surrounding area
- Cradle of Humankind World Heritage Site (World Heritage Site)
- uKhahlamba/Drakensberg Park; and finally,
- Table Mountain (c.f. 3.2.2).

Threats that would have an adverse effect on geotourism in South Africa are:

- The present world-wide economic downturn
- Fluctuations in the exchange rate
- Economic downturn in the local economy
- Rising costs of fuel and food
- Land claims and land restitution, resulting in possible fragmented land ownership
- Growing human populations and the ever increasing need for limited resources;
- Declining mining industry in the country
- Intervention by the government as the sole mineral rights holder

- Too little financial support being available for geotourism development.

7.5.3 GOALS AND OBJECTIVES

Seven goals are postulated to encourage the development of geotourism in South Africa:

1. To identify authentic geotourism attractions and products
2. To plan for sustainable geotourism development
3. To develop a geotourism awareness and marketing campaign
4. To conserve geoheritage assets
5. To develop geosites/areas
6. To manage geosites/areas responsible
7. To utilise geo-attractions and geodestinations.

The goals and objectives providing guidance concerning the realisation of the vision of sustainable tourism development and key issues of concern are addressed. They also apply to, build upon, integrate and clarify directives for tourism development (www.capegateway.gov.za/Text/2004/1/whitepapertourism.pdf). The goals must be pursued through the development of strong implementation partnerships with key stakeholders. Sustainable tourism development and growth should be at the very heart of the geotourism strategy (c.f. 5.4, Figure 5.9).

To achieve the goals, they must be broken down into objectives. Each of these objectives then represents a detailed task that needs to be accomplished in a given period, for example, one year (c.f. 5.4). Each of the goals is delivered by achieving a set of objectives and actions to achieve it, as shown below in Tables 7.1-7.7. The proposed objectives can be grouped into programs and main activities. The objectives can then be integrated into the work plan of the tourism management plan as overall tasks. This approach was adapted by the researcher (2008) from the South Australian Tourism Plan (2003) and the City of Cape Town's "*Tourism Development Framework, Business Plan*" of *2005/6 – 2008/9* (www.capetown.gov.za/en/tourism/Documents/Policies%20and%20Publications/Tourism_business_plan.pdf).

A project called "*The geology and geosites of the Kruger National Park, South Africa*" (2004-2006) concerning the documenting of geosites in the KNP will be used as an example for South Africa (c.f. 6.2.1.4, 6.2.1.5, 6.2.1.6). The first step must be to visit the chosen area. The criteria for a geosite should be adhered to (i.e. scientific value, geotourism appeal, educational value, etc). On an overlay on a 1: 250 000 geological map, individual possible geosites must be identified to see if they are representative of a specific geological phenomenon. GPS measurements must be taken in addition to many photographs. Other geosites along main roads must also be documented. Less accessible geosites should also be located and documented. Each of the visited geosites will be shown as dotted numbers on maps mainly along the tourist roads. A number of potential geowalks may also be identified. At a subsequent stage, a panel of geologists and geographers should discuss which sites

should be used or left out for a possible future geopark. The last step is that a priority list of geodestinations to be developed should be compiled. These aspects are listed in Table 7.1.

TABLE 7.1: GOALS, OBJECTIVES AND ACTIONS STEPS TO IDENTIFY GEOSITES/AREAS IN SOUTH AFRICA

GOAL ONE	OBJECTIVE	ACTION STEPS
Identify authentic geotourism attractions and products	Objective 1: Identify individual possible geosites in an area.	Plot the geosite on an overlay on a 1: 250 00 geological map. Take many photographs
Identify geosites/areas in South Africa	Objective 2: Document geosites along the main roads and less accessible geosites.	Take a GPS measurement in the field for latitude and longitude, enabling the geosite to be plotted on a map and also enabling the database to interface with a GIS
	Objective 3: Process the field data	Show each of the visited geosites as dotted numbers on the map
	Objective 4: Future actions	Identify a number of potential geowalks Discuss which sites should be used or left out for a possible future geopark by a panel of geologists and geographers

Strategic planning is the first step for geotourism development when stakeholders should be identified (c.f. 5.2, 5.2.1). In the planning of sustainable geotourism development, certain role players that were identified would be:

- Central and/or local government
- Department of Tourism
- Municipalities
- The management authority of the geosite/area to be developed
- The local tourism industry, individual tourism enterprises
- Community stakeholders
- Financial institutions
- Research institutions: Institute of Tourism Management, University of the North-West
- SANParks, and
- Geologists, geographers, landscape architects.

A proposed "*Geotourism Advisory Forum*" should be established with representatives from the above-mentioned list. They would plan, discuss, develop and implement the geotourism strategy. An important aspect is that practises and policies from overseas institutions/geoparks must be evaluated and adapted to a South African context. It will also be necessary to visit geoparks and geological/mining museums in other parts of the world, largely because South Africa is some 15 years behind what other countries are doing concerning geotourism. The various South African role players should come together to discuss the goals, objectives and actions to achieve them as the foundations for a future national geotourism strategy. The Department of Tourism should handle the legislation. These aspects are summarised in Table 7.2.

TABLE 7.2: GOALS, OBJECTIVES AND ACTIONS STEPS TO PLAN FOR SUSTAINABLE GEOTOURISM DEVELOPMENT

GOAL TWO	OBJECTIVE	ACTION STEPS
Plan for sustainable geotourism development	Objective 1: Prepare a geotourism strategy by identifying strategic opportunities for geosite/geo-area development (c.f. 5.6. 5.6.1, 5.6.2, 5.6.3, 2.3)	The Department of Tourism should rewrite the present heritage legislation Acts and write other necessary enabling legislation.
	Objective 2: Policy formulation	Establish a clear, concise and conclusive policy framework to steer the development of the country's geotourism destinations Assess and balance the costs and the benefits of geotourism in relation to impacts on geodiversity
	Objective 3: Create partnerships and alliances	Build a culture of working together through networking Involve all stakeholders in the planning and development of geotourism Get all stakeholders prepared and involved in a participatory planning process Work in partnerships that rely upon the input and commitment of all multi-sectoral partnerships for success.

		Use various processes to integrate and engage in participatory planning, consensus building, and conflict resolution among all stakeholders.
	Objective 4: Improve effective communication with the general public	Build communication activities with stakeholders to increase awareness, and improve under-standing, of the role of the proposed to-be-formed "*Geotourism Advisory Forum*"
		Interact with entities (for example, Rupert Foundation, De Beers) as the geotourism product is a combination of every element of the visitors' experiences and therefore partnerships need to extend as widely as possible.
		Link persons from different disciplines together in the network while each partner retains its independence
		Create a winning-situation for each partner (financial and/or intellectual profit).
		Facilitate geotourism planning for geotourism and ensure that it is considered in strategic planning processes and initiatives for the development of geotourism
	Objective 5: Geotourism intelligence	Support a knowledge-driven and learning geotourism sector
	Objective 6: Educate people involved in geotourism regarding aspects of sustainability to and then apply this knowledge	Ensure viable, long-term economic geotourism operations, providing socio-economic benefits to all stakeholders that are equably distributed, including stable employment and income-earning opportunities with social services to host communities

	Objective 7: Human capital investment	Build a competent and stable "*Geotourism Advisory Forum*) with the Department of Tourism, the management authority of the geosite/area to be developed and the tourism industry
	Objective 8: Financial sustainability	Utilise and manage financial resources for optimal delivery of the "*Geotourism Advisory Forum's"* responsibility

Because geotourism is a relatively unknown concept to South Africa, one of the priority steps will be to make it known to the general public, communities and tourists through awareness, information, marketing and promotion campaigns that are both extensive and intensive (c.f. 5.7.2, 5.7.2.1). These promotions should be an on-going process. Education should be given at geological museums at geosites, geotrails, open-air geological museums, information centres and during guided excursions. The target groups will be scholars, students, the public and tourists. Thus, interpretative provision at geosites must be planned carefully so visitors can readily understand it. These aspects are summarised in Table 7.3.

TABLE 7.3: GOALS, OBJECTIVES AND ACTIONS STEPS TO DEVELOP A GEO-TOURISM AWARENESS AND MARKETING CAMPAIGN

GOAL THREE	OBJECTIVE	ACTION STEPS
Develop a geo-tourism awareness and marketing campaign	Objective 1: Introduce geotourism as a new market niche experience	Start an extensive awareness campaign to emphasise the importance of geosites/geo-areas Make communities sufficiently aware of and propagate an understanding of the relatively-new concept of geotourism
	Objective 2: Emphasise the unique, diverse rock formations and landscapes of the country's geoheritage. Draw attention to the country's geoheritage	Institute awareness campaigns to promote geotourism
	Objective 3: Increase awareness among well-defined target groups in prioritised external markets.	Raise the awareness of South Africa's geoheritage in the minds of the local/international traveller

	Objective 4: Maximise use of technology to attract visitors through an excellent Internet experience. Objective 5: Destination marketing Objective 6: Undertake aggressive marketing must so that the layman understands the concept of geotourism and its benefits (c.f. 5.7.2.1)	Encourage public awareness, understanding and enjoyment of the georesources Position, market and develop geotourism destinations as exhilarating and exclusive, with a strong and distinctive brand for geotourism at each geosite/geo-area Promote a sustainable approach to development, management and use of geosites/areas to ensure that the natural resource is maintained and enhanced for the benefit of future generations Make use of the following tools: • Site interpretation boards • Books, interpretation leaflets, maps, postcards • Displays of fossil and mineral specimens • Field guides • Geological pedestrian trail that is self-guided or guide-led • Expert-led 'hands-on geological activities' such as fossil or mineral collecting • Geological highway guides or road trails • Geological train trails • Audio-visual presentations that can be shown at many visitor centres • Publicise and encourage TV programs with a geo-tourism application such as "*Walking with dinosaurs*" • Websites and CD-ROMs

Obviously, there will be no geotourism without geoconservation. To protect the geoheritage is the objective of geoconservation. This is being done in Europe through a number of programs and through the activities of many individuals. These geoconservation programs

seek to identify geosites/areas, educate the public about their value and to develop management plans or strategies that will not only protect, but also enhance this value (c.f. 3.6, 3.6.1, 3.6.2). Geoparks in Europe and China, and the National Parks in the USA are effectively being utilised to protect geoheritage (c.f. 4.5, 4.5.1, 4.5.2). These aspects are summarised in Table 7.4.

TABLE 7.4: GOALS, OBJECTIVES AND ACTIONS STEPS TO CONSERVE GEOHERITAGE ASSETS

GOAL FOUR	OBJECTIVE	ACTION STEPS
Conserve geoheritage assets	Objective 1: Preservation of geological and mining heritage necessary for future generations	Examine all legal aspects such as ownership, leases and national geomonuments (c.f. 5.6. 5.6.1, 5.6.2, 5.6.3, 2.3). Involve the Department of Tourism to promulgate geoheritage legislation
	Objective 2: Conservation of geosites/geo-areas (3.6, 3.6.1, 3.6.2)	Apply geoconservation legislation through the management authority of the geosite/area to be developed
	Objective 3: Achieve geotourism that helps to protect geodiversity and conserve the environment (3.6.1, 3.6.2)	Institute joint action, with appropriate inputs, from Governments, site managers, local communities and other stakeholders Implement geoconservation principles for geosites/areas Conserve these treasures for aesthetic, educational and scientific reasons
	Objective 4: Establish geoparks in South Africa (c.f. 4.5, 4.5.1, 4.5.2)	Protect geoheritage, and establish geoconservation principles and management in these parks

When a new geotourism product, is developed, the following guidelines would be central to a geotourism development strategy:

- Geotourism development (developing new activities and attractions, improving service, offering value for money products, increasing income and economic activity attributable to geotourism) must be an integral part of the overall tourism value chain and would be aimed at producing a total experience that is most appealing (of most value) to the target audiences. This implies that the approach to geotourism

development must be based on programmes and initiatives that are related to current and potential market trends and requirements

- Geotourism development must be integrated with broader government economic initiatives (www.capegateway.gov.za/Text/2004/1/whitepapertourism.pdf:44)
- South Africa could set an international example for geotourism development, management and utilisation, while realising an appropriate return to the country, and also the geoconservation of the resources
- The geotourism industry would supplement and enhance other existing tourism products/industries
- Maintaining a research base for the country's geotourism industry

(c.f. 5.9. 5.9.1).

These aspects are summarised in Table 7.5.

TABLE 7.5: GOALS, OBJECTIVES AND ACTIONS STEPS TO DEVELOP GEOSITES/AREAS

GOAL FIVE	OBJECTIVE	ACTION STEPS
Develop geosites/areas	Objective 1: Achieve sustainable geotourism because it must adhere to environmental, economical and social principles	Use and apply existing sustainable practices in order to ensure the future of geotourism
	Objective 2: Implement the action plan with the co-ordinated effort and commitment of a wide range of organisations and individuals	Develop a co-ordinated approach for strategy implementation. A case study (2006) from The Network History of the Earth to the Geopark Schwäbian Geopark (Germany) is an example to achieve this (c.f. 5.2.1) Encourage maximum co-operation between the many interests and users of the geoheritage product
	Objective 3: Develop and enhance a strategic infrastructure to support geotourism	Facilitate the development of existing infrastructure Create quality geodestinations
	Objective 4: Develop geotourism destinations and products (c.f. 5.9, 5.9.1)	Work to ensure that South Africa has quality geotourism products that match the need and expectations of markets and help to disperse the visitors geographically and seasonally

	Objective 5: Geotourism business development Objective 6: Community based geotourism development	Support the establishment of sustainable geotourism enterprises Support the participation and inclusion of communities in the geotourism industry

Geosites/areas and future geoparks should be responsibly managed, according to sound business practices (c.f. 5.7.1). To be successful as a geotourism destination, actions should be taken by management to establish strong leadership, a shared vision, clear roles and responsibilities, a practical realistic approach and the ability to compromise. These aspects are summarised in Table 7.6.

TABLE 7.6: GOALS, OBJECTIVES AND ACTIONS STEPS TO MANAGE GEOSITES/AREAS

GOAL SIX	OBJECTIVE	ACTION STEPS
Manage geosites/areas responsible	Objective 1: Manage existing geo-assets responsibly, according to sound business principles	Adapt the management of geosites (that are already in place) to incorporate geotourism
	Objective 2: Manage future geosites, geo-attractions and geodestinations	Manage them according to sound sustainable geotourism practices Make each site accessible to a wider range of users Pass them on intact to future generations Build and maintain effective partnerships with industry and industry organisations
	Objective 3: Minimise the damage caused by existing geotourism to sensitive sites	Direct new geotourism (and if possible to redirect existing geotourism) to less sensitive sites
	Objective 4: Achieve successful destination management	Establish actions for: • Strong leadership • A shared vision • Clear roles and responsibilities • A practical realistic approach • Ability to compromise

The ultimate aim must be that geotourism should be utilised by scholars, students, the general public, and tourists for education, learning, enjoyment and enhancement of the geotourism experience (c.f. 4.6, 4.6.1, 4.6.2, 4.6.3, 4.6.4, 4.7, 4.7.1, 4.7.2, 4.7.3, 4.7.4). These aspects are summarised in Table 7.7.

TABLE 7.7: GOALS, OBJECTIVES AND ACTIONS STEPS TO UTILISE GEO-ATTRACTIONS AND GEODESTINATIONS

GOAL SEVEN	OBJECTIVE	ACTION STEPS
Utilise geo-attractions and geodestinations	Objective 1: Utilise geotourism for the education of scholars, students, the general public, and tourists	Create new geotourism experiences that will attract visitors Train suitable geoguides Establish a code of ethics
	Objective 2: Educate geoscientists and geomanagement	Enhance the visitor experience through geo-education and geo-interpretation. Educate the lay-visitor about geotourism. Attend international conferences (c.f. 4.6.3)
	Objective 3: Public enjoyment/ enhancement of the visitor experience through effective interpretation (c.f. 4.7, 4.7.1, 4.7.2, 4.7.3, 4.7.4)	Establish geo-exhibitions (c.f. 4.6.4) Enhance the geotourism experience through better interpretation Improve public enjoyment/visitor experience by providing positive experiences for all who interact with geotourism Maintain a high level of sustainable geotourism and geotourist satisfaction to ensure a meaningful experience for geotourists by raising their awareness of sustainability issues and by promoting sustainable tourism practices amongst them

7.5.4 STRATEGY

The resulting strategy should be based on, refined and adapted from the objectives, goals and actions that have been described above:

1. To develop authentic geotourism destinations and products
2. To plan for sustainable geotourism development
3. To set up a geotourism awareness and marketing campaign
4. To conserve geoheritage assets
5. To develop geosites/areas
6. To manage geosites/areas responsible, and
7. To utilise geo-attractions and geodestinations.

A case study in 2006 from The Network History of the Earth of the Geopark Schwäbian Geopark (Germany) (c.f. 5.2.1) is an example of a strategy that could be used in South Africa:

- **A bottom-up strategy** will be used to start the development of a geosite/geo-area/geopark. Different stakeholders should be brought together, such as:
  - The head of the organisation and administrative staff who will coordinate all efforts
  - NGOs for research, advice and general applicable knowledge;
  - Central, Provincial and local Governments to sort out legal matters and infrastructure provision
  - Financial institutions for funding
  - The tourism sector to attract visitors
  - Nature conservation bodies for geoconservation.
- **A starter project strategy**
  - A common language should be created between the different stakeholders such as academia, tourism, government authorities, private enterprises and nature conservation bodies. This will facilitate communication, exchanging expertise and achieving efficient ways of co-operating on joint projects.
- **A promoter strategy**
  - The network moderator will act as the network promoter. One of the most important tasks will be to promote various mutually beneficial scenarios to the different partners. By doing so, the enthusiasm of the stakeholders will be stimulated.

OTHER STRATEGIES:

- Create and publicise an awareness campaign promoting geotourism as a new niche market
- Offer only the highest quality experiences to visitors
- Develop partnerships
- Packaging and promotion endeavours must be developed and aggressively promoted

- Develop geoparks in South Africa.

The "*White Paper on the Development and Promotion of Tourism*" sets out a range of roles and responsibilities of local government if it is to fulfil the function of 'local tourism'. The institutional guidelines provided by the Department of Environmental Affairs and Tourism (DEAT) (1999) elaborated on the division of role and responsibilities between the different levels of government. The White Paper, and DEAT guidelines, identifies the following categories of functions to be delivered by local government:

- Destination planning and policymaking
- Destination development and management
- Tourism product development
- Tourism training and capacity-building
- Coordination in respect of tourism matters
- Tourism research
- Provision of tourist infrastructure and services
- Tourism marketing strategy, planning, facilitation and implementation
- Tourism information provision
- Regulation and monitoring

(www.capetown.gov.za/en/tourism/Documents/Policies%20and%20Publications/Tourism_business_plan.pdf:5).

Although the above discussion elaborates on various categories of functions to be delivered at a local level, these should first be achieved at a national level. The various role players must come together to discuss the goals, objectives and actions in order to achieve them as a basis for future geotourism strategy for the country. The new Department of Tourism should handle the legislation. The role players that were identified have been described above under goal two (c.f. 7.5.3).

Government should be actively engaged with industry stakeholders, providing coordinated and strategic leadership, to ensure the continued growth and vitality of future geotourism in South Africa. The geotourism strategy should envisage a unified approach to the development of the geotourism industry. By working together within a common framework, stakeholders can achieve much more than if each acts unguided and alone.
The strategy should be focussed on solutions that are designed to respond to the challenges facing the industry. This requires the active involvement of all stakeholders – government can provide leadership in a variety of areas, but government alone is not able to be the source of every solution.

Actions intended to define a geotourism strategy are:

- Use the "*South African National Geological Site and Monuments*" report for GSSA

by Toens (1995) to implement the joint GSSA-CGS geosite inventory urgently. Particular issues that need to be addressed are the principles of inventory development, site classification and database development

- Draw up a geoconservation plan with specific regard to:
  - The extent to which an area or site represents an important geological phenomena;
  - The value of the area to science
  - The value of the area to education
  - The rarity of geological/geomorphological phenomena within an area
  - The degree of disturbance and potential threats
  - The size of the area under review.
- Achieve conservation outcomes by a mutually beneficial alliance between geotourism and geoconservation. This can be achieved through understanding and enjoyment to engender greater appreciation, empathy, advocacy and protection for the georesource
- Use geoscientists at universities and other research institutions to help with research
- Avoid a geoscientific mindset; rather adopt the role of project management. The involvement of geographers, landscape architects, business people and marketers in the process will lead to a multi-disciplinary approach. Networking principles will need to be applied for the successful conclusion of the project (c.f. 5.2.1, Figure 5.2)
- Support information and education programmes intended to promote action in the field of geoheritage conservation
- Establish an integrated policy
- Develop a co-ordinated approach to strategy implementation
- Engage and develop a wide range of partnerships
- Identify solutions for geosite development and management
- Establish guidelines for more sustainable management plans
- Understand and target the necessary market. Understanding the broad market trends and the needs of specific segments is critical. This will involve the development of specialised products based on the inherent attributes of an area
- Management and marketing of individual geosites should be undertaken according to sound business principles
- The marketing of geotourism should begin with an awareness campaign in newspapers, magazines, radio and also on television, about geosites, geoconservation and geoparks
- Enhance the geotourism experience
- Add value to existing attributes to achieve a richer tourism experience that helps also to diversify the local economy. This could include accommodation, sales outlets, conference facilities and dining, all in association with established industries, or with industries that could be established to cater to the specific needs, providing mutual benefits to visitors and hosts alike
- Tourism is not encouraged merely for its own sake. It is an economic and community development tool, and must therefore take into account the benefits that both the host community and the visitor seek

- Build local capacity by involving the community. Collaborate with other businesses and stakeholders
- Hold regular meetings with all the relevant stakeholders
- Keep regular and cordial contact with staff of the Department Tourism Visit geoparks in Europe to see what they are achieving , how they are managed and how they are financed. Examine sustainable development and geo-education in these geoparks
- Invite a small number of knowledgeable geoscientists from Europe (Germany, France, Switzerland, Greece, the UK and Austria) to examine the South Africa offering and make informed input into its future direction as a geotourism destination
- Locate a few possible geosites in a specific area with the existing infrastructure that could be included in a geopark. Aspects such as accessibility, accommodation, future development, management and site condition monitoring should all be addressed. Begin with Vredefort, Barberton, Witwatersrand, Pilanesberg, Pilgrim's Rest, Drakensberg, Golden Gate, Pretoria-Cullinan, Table Mountain, Kimberley, Richtersveld and Cango Caves as potential future geoparks
- Develop a national strategy and guidelines for the conservation of a geopark. A geopark must be managed by a clearly defined structure able to enforce protection, enhancement and sustainable development policies within its territory. This could best be done according to the following strategic framework (Schutte, 2000)
    - Achieve authenticity
    - Evaluate progress
    - Adapt the plan when necessary
    - Evaluate success

(Schutte: 2000a, 2000b, 2006a, 2006b, 2007a, 2007b) (c.f. 2.3, 5.3, 7.5.3).

7.5.5 IMPLEMENTATION AND EVALUATION (c.f. 5.8, 7.5.3)

To implement the geotourism plan, the following guidelines should be implemented:

- Use the findings of the SWOT analysis from the case studies as a basis for geotourism development (c.f. 7.5.3)
- Make optimal use of environmental resources that constitute key elements in geotourism development, maintaining essential ecological processes and helping to conserve natural heritage and geodiversity
- To achieve sustainability, the following actions should be undertaken:
    - Sustainability issues should be examined in detail
    - Apply overseas research/experience in geotourism development as necessary but tempered with the realisation that the principle of sustainability is not yet well understood in third world countries
    - Better awareness and knowledge of geotourism should be achieved for visitors in all the areas or places
    - The augmentation and integration of economic, social and environmental principles is a prerequisite

Even with a well-prepared sustainable geotourism strategy, a sustainable geotourism development is a new challenge for all cases. Even though each example may have a sufficient number of stakeholders, much more can be still be done so that they all work together by means of networking

- Apply the findings about sustainability (from the case studies) in practice

(c.f. 7.5.3).

Sustainable geotourism can be attained by:

- Making optimal use of the environmental resources that constitute a key element in tourism development, while maintaining essential ecological processes and helping to conserve natural heritage and geodiversity
- Respecting the socio-cultural authenticity of host communities, conserving their built and living cultural heritage and traditional values, and so contributing to inter-cultural understanding and tolerance
- Ensuring viable, long-term economic operations, providing socio-economic benefits to all stakeholders that are equitably distributed, including stable employment and income-earning opportunities and social services to host communities, and contributing to poverty alleviation
- Sustainable tourism development requires the informed participation of all relevant stakeholders, as well as strong political leadership to ensure wide participation and consensus building. Achieving sustainable tourism is a continuous process and it requires constant monitoring of impacts, if necessary, introducing preventive and/or corrective measures
- Sustainable tourism must also maintain a high level of tourist satisfaction, thus ensuring a meaningful experience to the tourists, raising their awareness about sustainability issues and promoting sustainable tourism practices amongst them (Sustainable Development of Tourism Conceptual Definition (WTO, 2004)).
- Applying the practical example of the South Australian Tourism Plan 2003-2008 where sustainability and its relationship to the triple bottom line (TBL) were described (c.f. 5.5.1, 5.7, Figure 5.11 and Figure 2.3). It could well be used for geotourism in South Africa. When referring to environmental objectives, "biodiversity" must, of course, be replaced with "geodiversity". To implement the action plan which follows will require the co-ordinated effort and commitment of a wide range of organisations and individuals (c.f. 2.2, 2.3, 2.4, 7.5.3).

The following should be implemented to manage geosites in South Africa:

- Because geotourism is a new tourism product, geosites must be managed according to sound business principles. Attention must also be given to resource management, performance and the management of geosite attractions
- The growth of geotourism must be managed in such a way as to prevent unsustainable pressures that damages or destroys geodiversity and ecosystem processes.
- Geotourism must be managed with care

- Interpretation is a very important component of geotourism, that is,. to explain, perhaps visually, how the rocks were formed
- Maps of geosites and 'related aspects' such as locality, history, photos of geosites, interpretations and education posters for visitors, and present activities should be compiled - both at small scales for overview and presentation purposes, and at larger scales, for practical applications and for discussions with the local regional key players
- All the visual results should be presented in publications, at oral and at poster presentations.

Marketing principles will be applied with the emphasis on education, communication and the sales dimensions. Aggressive marketing with brochures, articles in journals and TV programs being produced, all focussed on the attraction of more tourists to geosites/areas, is a pre-requisite. Attention must also be given to resource management, performance and the management of geo-attractions (c.f. 5.7.1, 7.5.3).

The following should be borne in mind when marketing geotourism in South Africa:

- Strategic marketing principles should be applied. An awareness campaign to emphasise the importance of geology would be the starting point
- Some geosites can be developed into geo-attractions, while only a few can become geodestinations
- Educational aspects to be looked at include curriculum guidelines for geotourism management education, museums at geosites, geotrails, open-air geological museums, information centres, guided excursions and formal education
- Because the target groups will be scholars, students, the general public and tourists, interpretative provision at geosites must be planned carefully so all visitors can appropriately understand the information provided
- Geosites should be utilised for maximum pleasure, enjoyment and education
- Geosites will be the primary attraction, while the surrounding tourist destinations will be "*add-ons*"
- Sustainable tourism is possible when these criteria are met (c.f. 5.7.2. 5.7.2.1).

Interpretation directed at visitors should be carried out and made available:

- It is an education-based activity that reveals meanings behind historic sites, their people and their stories
- It takes several forms including plays and exhibits, printed brochures and maps, signs, audio presentations and guided tours. Interpretation has the ability to direct people away from sensitive areas and educate them about the need to behave respectfully
- It is essentially a process of communication or explanation for visitors of the significance of the place they are visiting. Personal interpretation is the most effective means of interaction. It also educates and entertains visitors in a manner that causes them to reflect about environmental values (c.f. 7.5.3).

7.6 RECOMMENDATIONS FOR FURTHER GEOTOURISM RESEARCH IN SOUTH AFRICA

Further issues that need to be researched in the future are given below.

7.6.1 IDENTIFY OTHER AREAS FOR UNESCO WORLD GEOPARKS IN SOUTH AFRICA (c.f. 7.5.2.1, 7.5.3)

The following should be examined:

- The relationship between World Heritage Sites and geoparks to see which is most appropriate for the country
- Determination of the feasibility of future geoparks
- Preparation of well-conceived management plans for every new geosite/area to be developed in a geopark
- The application and integration of geoconservation sites into geoparks.

Themes that should be addressed with regard to sustainable geotourism development are:

- The role of communication in planning and implementing sustainable tourism policies and strategies
- Communication for community involvement in sustainable tourism development.
- The role of communication in promoting corporate social responsibility in sustainable tourism development
- The role of communication in linking sustainable tourism products to markets
- Interpreting tourism destinations and orienting visitors.

The multiple approaches that communication can bring to successful and sustainable tourism development should be researched. Possible sub-themes could be:

- The involvement of stakeholders (including local communities) in decision-making
- The facilitation of networking and the sharing of information and knowledge
- The catalysation of collaborative action
- How are private sector investments to be encouraged?
- What advocacy is necessary to achieve policy change?
- How can skills and capacity best are built?
- How can expectations be controlled?
- What support will foster the adoption of standards?
- How can a demand for sustainable products be developed?
- What links tourism products to markets?
- The explanation of cultural norms to visitors
- The enhancement of visitor experiences

(www.usaid.gov/our_work/agriculture/landmanagement/pubs/commun_sust_tourism.pdf).

Other aspects that should be researched are:

- The roles of interpretation
- The interpretive planning process, and
- The challenges managers face in delivering interpretation.

The researcher is of the opinion that "*Geoheritage interpretation is necessary because geoheritage underpins the landscapes and geodiversity that exists. The most critical aspect is interpretation for visitors and tourists. The benefits are that interpretation is an effective way of adding value to the experience, employing more locals and creating a cultural connection for visitors. It has the ability to direct people away from sensitive areas and educate them about the need to behave respectfully. It also educates and entertains visitors that cause them to reflect about environmental values. The role of interpretation is to make people more aware of what they visit, to provide knowledge which increases their understanding, and to promote interest which leads to greater understanding enjoyment and responsibility*" (c.f. 4.8). These results can be used as a further background for interpretation as a communication tool (c.f. 4.7, 4.7.1, 4.7.2, 4.7.3, 4.7.4).

7.6.2 INTERPRETATION AS A COMMUNICATION TOOL FOR GEOTOURISM

Interpretation is a communication process that is designed to reveal the meanings and relationships of cultural and natural heritage, through involvement with objects, artefacts, landscapes and sites.

Interpretation can viewed from a visitor's perspective as a means of value adding to the visit experience because of the added interest created when more is known and understood about an attraction or experience. Another point of view places the responsibility back with the visitor to arrive at their own understanding based on their collective experiences.

Freeman Tilden (1977) proposed six interpretation principles:

1. Interpretation should relate to what is being displayed or described to something within the personality and life experience of the visitor
2. Information itself is not interpretation because the latter is revelation based on information. It is therefore critical to provide visitors with new information and transmit it in a way that inspires
3. Interpretation is an art that brings together many other arts, whether the materials that are being presented are historical, architectural or scientific
4. The primary objective of interpretation is not instruction but rather provocation
5. Interpretation should be more holistic rather than be made up of simple parts, and
6. Interpretation addressed to different visitor groups should follow a fundamentally different approach.

The above-mentioned criteria can form the basis to research the objectives.

For the communication to be interpretive, it must:

- Provoke curiosity, attention and interest in the audience
- Relate the message to the everyday life of the visitor
- Reveal why the message is important for the visitor
- Have message unity in terms of the right colours, designs and music
- Address the whole or have a single take home message for the visitor.

Two questions should be consistently addressed when communication techniques are designed:

1. "*Why would the visitor want to know that*?"
2. "*How is the visitor expected to use the information interpreted to them*?"

(www.petrifiedforest.gr/NEW%20pf/2008-Intensive-Course-Lesvos-Greece-1stCircular-Dec.pdf).

7.6.3 PERCEPTIONS OF COMMUNITIES OF GEOTOURISM DEVELOPMENT

Milne (1988) states that communities exist at all levels, from a neighbourhood to an international free-trade territory, so it is important to establish the appropriate geographical scale for planning, whether this be local, regional or national. Where the concept is defined, researchers usually refer to a group of people living in the same locality, with some also including a notion of an ecosystem or habitat, in their definitions. Another view is that the community is an aggregation of people at a particular locale, and 'community' which is characterised by social interaction, involving intimacy, emotional depth, moral commitment, social cohesion and continuity in time (Bernard, 1973, as quoted by Milne 1988).

Azura and Salimbangon (1998) believe that tourism is an exhaustive interrelation among different industries and sectors such as accommodation, transportation and Food and Beverage among others. It also involves the movement of the tourists from their point of origin to their selected destination. In this process, tourists come across different organisations or individuals that provide them with various tourism services and products. At the destination itself, the tourists expect the best quality of tourism services and products they can get. Thus, it is important that the host community should be appreciative and supportive of tourism development in their locality. Their attitudes toward tourism and perceptions of its impact on the community life must be continually assessed. Tourism development can bring about different changes and these can be perceived by the residents as either having positive or negative influences upon them. Therefore, investigating residents' perceptions of tourism development is an effective method of analysing the impacts of tourism in a locality (http://tourismtalks.blogspot.com/2007/12/chapter-1-residents-perception-on.html)

The following should be researched with regard to geotourism development in an area:

- Determine communities perceptions on development

- Determine the current status of development and identify the residents' perception on the impacts of these developments
- Determine how the successful development of the local tourism industry requires effective planning that both recognises tourists' demands and emphasises the values of the local host community
- Determine how the leaders and residents of the community can foster pride and establish responsibility for the process of development. Thus, how can the community utilise local resources, as well as local organisations, to create tourism as a supplement to geotourism?
- how community-based development empowers people to be more aware of the value of their community assets - their culture, heritage, cuisine and lifestyle
- Determine how the local community can contribute to tourism that generally plays an important role in improving the living standards of the host communities
- Identify the positive and negative impacts of development - what is most crucial is the issue of alleviating possible negative consequences
- Involve local residents in the planning of development - all tourism planning should be based on the goals and priorities of the residents
- Initiating tourism development without proper planning and integration with local values and the environment can bring social, cultural, environmental, and economic damage to host communities
- Determine how decision makers can better utilise resident perspectives to enable appropriate community planning and greater consensus on the direction that future development should take
- Focus on resident perceptions in relation to tourism development
- Determine if residents, who depend most upon tourism, express the most favourable attitudes
- Determine if, as distance from the tourist zone increases, the impact of tourism is perceived less favourably
- Should the community consider the local, regional and international markets all at once, as one begins a serious tourism development effort?
- Establish a distinct geotourism icon for a place
- Determine what the major positive contributions of tourism (creation of jobs and business opportunities, increased availability for recreation, shopping and entertainment, and promotion of community pride, tolerance and a stronger sense of cultural identity within the host community) are?
- Establish excellent interpretation facilities
- Begin an awareness campaign
- Determine what communities do best rather than trying to replicate other tourist attractions.

To come to a conclusion, research should identify how the concerns and sentiments of residents can serve as useful guide to the development, for they encompass community values. Furthermore, it should be determined how friction between visitors and residents could be minimised and a mutually beneficial partnership between the host community and the tourism industry thereafter be created.