WORLD HERITAGE NOMINATION – IUCN TECHNICAL EVALUATION

THE DRAKENSBERG PARK / ALTERNATIVELY KNOWN AS OKHAHLAMBA PARK (SOUTH AFRICA)

1. DOCUMENTATION

i) **IUCN/WCMC Data Sheet:** (13 references).

ii) **Additional Literature Consulted:** Armstrong, A. J. 200. Faunal Diversity and Importance. Highlights. Internal Report. KwaZulu Nature Conservation Service; Botha, G. 2000. **Geology and Geomorphlogy of the oKhahlamba Drakensberg Park**. Council for Geoscience Report. 2000-0009; Cowling, N. J. and Hilton-Taylor, C. 1994. Patterns of plant diversity and endemism in southern Africa: an overview. In Huntley, B. 1994. **Botanical Diversity in Southern Africa**, National Botanical Institute, Pretoria. Strelitzia 1 31-52; Davis, S. D. and Heywood, V. H. 1994. **Centre of Plant Diversity: A Guide and Strategy for their Conservation**. WWF/IUCN 1994; Henwood, W. D. 1988. An overview of protected areas in the temperate grasslands biome. **PARKS**. 1998. Vol. 8. No. 3; Killick; D. J. B. 1994. Drakensberg alpine region. In Davies, S. D. and Heywood, V. H. 1994. Oxford University Press, Oxford; Killick; D. J. B. 1997. Alpine tundra of southern Africa. In Wielgolaski, F. E. (ed.). **Ecosystems of the World 3: Polar and alpine tundra**. Elsevier, Amsterdam pp. 199-209; MacRae, C. 1999. **Life etched in stone**. Geological Society of South Africa; Statlersfield, A. J., *et. al.* 1998 **Endemic Bird Areas of the World. Priorities for Biodiversity Conservation**. BirdLife International, Cambridge.

iii) **Consultations:** 7 external reviewers. Relevant officials from federal and provincial park agencies. Local communities and interested groups.

iv) **Field Visit:** David Sheppard, February, 2000.

2. SUMMARY OF NATURAL VALUES

The Drakensberg Park (DP), alternatively known as oKhahlamba Park, is the largest protected area established on The Great Escarpment of the southern African subcontinent. It is located in an inland mountain range in KwaZulu-Natal province in South Africa, along the eastern border of Lesotho (see Map 1). DP covers an area of 242,813ha and comprises a northern and a significantly larger southern section (see Map 2). The mountainous area between these two sections, known as the Mnweni area, is tribal land. DP can be divided into two distinct physiographic regions. The foothills, of "Little Berg" are steep sided spurs, escarpments and valleys which occur below 2,000m elevation, while the high main escarpment rises to more that 3,400m. There is considerable variation in topography, including vast basalt and sandstone cliffs, deep valleys, intervening spurs and extensive plateau areas. This topographical variation contributes to the outstanding scenic value of DP. The climate of the Drakensberg region is dominated by the influence of subtropical anticyclones. In winter, the subsistence of air causes atmospheric stability and thus a distinct dry season. In summer, (November to March), the subsidence inversion may rise above the escarpment resulting in an influx of humid air from the Indian Ocean by south-easterly winds. Precipitation in the summer months accounts for 70% of the annual total rainfall. The Drakensberg is one of the best watered, least drought prone areas of southern Africa. DP has particular significance for catchment protection and the provision of high quality water supplies for surrounding communities; a number of rivers in the region originate from DP.

The geology of the Drakensberg is characterised by a thick sedimentary succession, capped by an accumulation of basalt, comprising the upper part of the Karoo Supergroup succession which has a composite thickness of up to 7,000m in this area. The most distinctive physiographic feature of the Drakensberg foothills is the high cliffs formed of fine grained sandstone comprising the Clarens Formation. The Molteno-Elliot-Clarens transition illustrates a palaeoclimatic transformation during the latter part of a ~250 million year latitudinal drift of

Gondwana from a subpolar position towards the current subtropical location of this part of Africa. This succession also preserves an almost complete fossilised record of 80 million years of reptile evolution.

The vegetation in DP is influenced by topography and the effects of climate, soil, geology, slope, drainage and fire. The vegetation is attitudinally zoned, forming three belts coinciding with the main topographical features, namely the river valley system, the spurs and the summit plateau. These are the low altitude belt (1,280-1,830m) with Podocarp forest, the mid altitude belt (1,830-2,865m) with Fynbos vegetation and the high altitude belt (2,865-3,500m) with alpine tundra and heath. A total of 2,153 species of plants been described in DP, including a large number of internationally and nationally threatened species. A significant feature is the high level of plant species endemism. The Park also includes significant grassland communities.

The fauna of DP includes a total of 48 mammal species, 296 bird species, 48 reptiles, 26 amphibians and 8 fish species. The invertebrate fauna is poorly known but includes many species endemic to the region. A number of globally threatened faunal species occur in DP, including the Long-Toed Tree Frog, the Yellow-Breasted Pipit and the Natal Midlands Dwarf Chameleon.

DP is an area of exceptional natural beauty and aesthetic importance, with the key scenic feature being its spectacular mountain range with its high escarpment walls of dark basalt, ridges and intervening spurs.

3. COMPARISONS WITH OTHER AREAS

DP has been nominated under all four natural criteria and three cultural criteria. There are a number of other mountain protected areas within The Afromontane biogeographical province, as well as a number of World Heritage sites, including Mt. Kilimanjaro; Rwenzori; and Mont Nimba. The DP is distinctive on floristic grounds. Floristically, The Park occurs within a unique floristic region, the Drakensberg Alpine Region of Southern Africa (Davis and Haywood, 1994). This floristic region covers the park and a large percentage of the land area of Lesotho. The Drakensberg Alpine Region in South Africa and Lesotho has been identified in a global review of Centres of Biodiversity (WWF/IUCN) as one of global importance. Additionally, WWF's Global 200 Ecosystems, identifying biologically outstanding regions most representative of the world's biodiversity, includes South African Montane/Grassland, of which Drakensberg is a part. Particularly significant within DP is the high level of floristic endemism and the unique high altitude montane grassland and alpine tundra vegetation with its associated endemic palaeo –invertebrate fauna. DP has outstanding species richness with 2,153 plant species within the park, including 109 which are globally threatened. There is no other World Heritage site within this floristic region. There are other World Heritage sites which protect grassland communities, such as the Manas and Kaziranga World Heritage sites in India which protect unique tall grassland communities. However, the grassland communities within DP, reflecting sharp altitudinal and topographic gradients, are not replicated within other World Heritage sites. This is important in the context of the low level of grassland protection globally, less that 1%, and also specifically within World Heritage sites.

The conservation status within the Drakensberg Alpine Region would also be enhanced through the proposed transboundary expansion of DP, to include adjoining areas in Lesotho (refer Section 4.2). This would significantly increase the overall conservation status within the Drakensberg Alpine Region. DP is also identified as occurring within one of the globally important endemic bird areas of the world: the Lesotho Highlands. DP is noted as having significance for the occurrence of the Yellow-Breasted Pipit, the Drakensberg Siskin and the Orange-breasted Rockjumper. (Stattersfield *et. al.*, 1998). Overall, the DP includes 119 bird species which are globally threatened.

Geologically, DP differs from other mountain ranges, such as the Andes, Rockies and the Himalayas, particularly in terms of the composition of geological sequences and processes of formation. There are similarities with the Simen World Heritage site in Ethiopia, which is part of the Simen Massif, and includes the highest peak in Ethiopia, Ras Dashan Terara (4,620m). This massif was formed some 25 million years ago and, as with the Drakensberg, comprises igneous basalts which have been eroded to form precipitous cliffs and deep gorges. However, there are differences between these two sites in terms of geomorphology, biodiversity and size. There are a number of World Heritage sites inscribed for their superlative natural phenomena of natural beauty. These include sites such as The Wet Tropics of Queensland (Australia), Belize Barrier Reef Reserve System (Belize) and Los Glaciares (Argentina). DP, with its spectacular escarpment walls of dark basalt lying above the light coloured clarens sandstone, compares favourably with these sites.

In summary, DP is distinctive for its floristic diversity and endemism, its montane grassland and alpine tundra communities, and for its features of outstanding aesthetic value.

4. INTEGRITY

The area has a long history of effective conservation management, dating back to 1927 when the first component area of DP (Cathedral Peak State Forest) was proclaimed. The Park is largely unaffected by human development activities. The area is large enough to survive as a natural area and to maintain natural values, even though there are outside influences. The following issues relating to the long term integrity of DP are highlighted.

4.1 Boundary Issues

The DP currently comprises a northern section and a much larger southern one (see Map 2). The intervening area along the escarpment is part of the Mnweni Community Land. The nomination document stressed that "the need to establish a conservation area in the Mnweni region that would join the two sections of the DP has long been recognised". Planning mechanisms currently restrict development above the 1,650m contour to maintain ecological integrity. As a further step to conserve the area a cooperative agreement between the Mnweni Community Trust and KwaZulu-Natal Nature Conservation Service is envisaged. Planning programmes have also identified privately-owned land along the escarpment to the south of the site which could also become a future conservation area to further extend DP.

There is also an important transboundary proposal involving DP and the adjoining area in Lesotho (the Sehlabethebe National Park). The Drakensberg – Maloti Transfrontier Conservation and Development Programme is being developed jointly by the National Environment Secretariat of Lesotho, the KwaZulu Nature Conservation Service and the Global Environment Facility. This builds on the Giants Castle Declaration, which involved key stakeholders from Lesotho and KwaZulu-Natal, and which endorsed the concept of a transfrontier conservation and development area embracing the Lesotho Maloti Highlands and the KwaZulu-Natal Drakensberg mountains in South Africa. This would establish a transboundary protected area between the two countries – an important initiative which would promote more effective biodiversity conservation, as well as enhanced cooperation between South Africa and Lesotho.

4.2 Legal and Planning Framework

i) Legal

The Park is under an effective legal regime, with the key laws being the KwaZulu-Natal Nature Conservation Management Act and the Republic of South Africa National Forest Act. The Nature Conservation Management Act provides an excellent framework for conservation management. The control and management of those areas within DP proclaimed under the National Forest Act lies with the Minister of Water Affairs and Forestry. Management of these areas has been assigned to the Nature Conservation Service and it is important that this arrangement continues, to ensure integrated management of all 12 protected areas comprising the nominated site. Ideally, control and management of all areas within DP should fall under the Nature Conservation Management Act.

ii) Management Plan

There are currently management plans for all of the individual component areas of DP. An overall master management plan for DP is being prepared and it is recommended that this be finalised as quickly as possible, to ensure integrated, effective long-term conservation management through all areas of the site.

(iii) Staff and budget

The DP is adequately staffed (604 permanent and part-time employees in 1999) and the budget available is adequate for effective conservation management.

4.3 Regional Planning and Integration

Existing land uses in the region outside DP include agriculture, plantation forestry and ecotourism. All of these activities have potential to impact on the natural values of DP, particularly if poorly planned and implemented. It

is thus positive to note the Special Case Area Plan (SCAP) being developed through the KwaZulu-Natal Minister of Local Government and Housing for special natural environments, where restrictions on development need to be applied so as not to destroy special features. Studies associated with the SCAP in this region recognise the unique natural values of DP and the need for complementary regional planning. The study has drawn on the provisions of the Seville Strategy for Biosphere Reserves (UNESCO/MAB). These efforts are to be commended and there is potential to nominate all or parts of the SCAP region as an International Biosphere Reserve, with DP as the core zone. It is important that developments outside DP should be sympathetic to, and minimise impact on, the natural values of DP. It is also important that the KwaZulu-Natal Nature Conservation Service play an active role in the development of the Special Case Area Plan.

4.4 Local Community Issues

The KwaZulu-Natal Nature Conservation Service fosters a good neighbour relations policy with communities adjacent to its borders. This involves the development of community based programmes and "partnership forums" which assist local development objectives. These are important in developing a more positive image of DP on the part of local communities. It is important that such programmes build ownership, awareness and support for the protection of the natural values of DP. These local community programmes also include provision for sustainable harvesting of various grasses and collecting seed for medicinal plants within DP. It is important that the long term impact of such programmes on natural values be carefully monitored.

4.5 Management Issues

The management of invasive species and fire are major management challenges for DP. Currently 1% of DP is covered with alien vegetation, including existing plantations and wattle infestations. This poses a threat to the ecological integrity of the Park as well as to the yield of water from its wetlands and river systems. Park management is actively addressing the removal of alien vegetation and these efforts should be continued and, ideally, accelerated. The interaction between the management of invasive species and the management of fire should be carefully considered. For example, increasing fire frequency will favour the expansion of invasive species which are fire tolerant. The general management of fire within DP is comprehensive. However, monitoring the ecological impact of fire, particularly in relation to fire sensitive fauna such as endemic frogs, should be expanded. Management of fire and invasive species needs to be addressed jointly by Lesotho and KwaZulu-Natal, ideally within the framework established for transboundary protected area cooperation.

4.6 Tourism and Infrastructure Development

There are a number of tourism developments within DP and these make a major contribution to visitor appreciation of natural values and to overall park revenue. Some 1,024ha of DP (0.4% of the total area) has been transformed by infrastructure developments. It is important to ensure that any further development does not compromise natural values and that limits of acceptable change are clearly defined. This should be clearly addressed within the integrated master plan for DP.

5. ADDITIONAL COMMENTS

DP is nominated under natural and cultural criteria. The IUCN assessment of whether the site meets natural criteria is set out in section 6.

6. APPLICATION OF WORLD HERITAGE CRITERIA

DP has been nominated under all four World Heritage natural criteria. The IUCN assessment is as follows:

Criterion (i): Earth's history and geological features

The nomination also makes a case for inscription under criterion (i). There are excellent examples within DP of different geological sequences and processes of formation. However, this is not a rarity amongst mountains in general. It is also noted that similar geological processes and characteristics are better represented on the World Heritage list through the Simen Mountains in Ethiopia. IUCN does not consider that the nominated site meets this criterion.

Criterion (ii): Ecological processes

The nomination also makes a case for nomination under criterion (ii): Ecological and Biological Processes. DP represents an important African example of on-going ecological and biological process. It is an important example of an African montane grassland area large enough for ecological and biological processes to operate without interference. It is also significant as the upper watershed area for the immediate and downstream regions and thus is of national importance. IUCN does not consider that the nominated site meets this criterion.

Criterion (iii): Superlative natural phenomena or natural beauty and aesthetic importance

DP has outstanding aesthetic value. Soaring basaltic buttresses, incisive dramatic cutbacks and golden sandstone ramparts all contribute to a spectacular environment. Other features which contribute to the exceptional natural beauty of DP are the rolling high altitude grasslands and the pristine steep sided river valleys and rocky gorges. DP includes areas that are essential for maintaining the beauty of the site. IUCN considers that the nominated site meets this criterion.

Criterion (iv): Biodiversity and threatened species

DP contains significant natural habitats for *in-situ* conservation of biological diversity. It has outstanding species richness, particularly of plants. It is recognised as a Global Centre of Plant Diversity and endemism, and occurs within its own floristic region – the Drakensberg Alpine Region of South Africa. It is also within a globally important endemic bird area and is notable for the occurrence of a number of globally threatened species, such as the Yellow-breasted Pipit. The diversity of habitats is outstanding, ranging across alpine plateaux, steep rocky slopes to river valleys. These habitats protect a high level of endemic and threatened species. IUCN considers that the nominated site meets this criterion.

7. RECOMMENDATION

The Bureau recommended to the Committee that the Drakensberg Park, alternatively known as the oKhahlamba Park, be **inscribed** on the World Heritage List under natural criteria (iii) and (iv). The Bureau noted that the site has exceptional natural beauty with soaring basaltic buttresses, incisive dramatic cutbacks and golden sandstone ramparts. Rolling high altitude grasslands, the pristine steep sided river valleys and rocky gorges also contribute to the beauy of the site. The site's diversity of habitats protects a high level of endemic and globally threatened species especially of birds and plants.

The Bureau encouraged the State Party to consider the following:

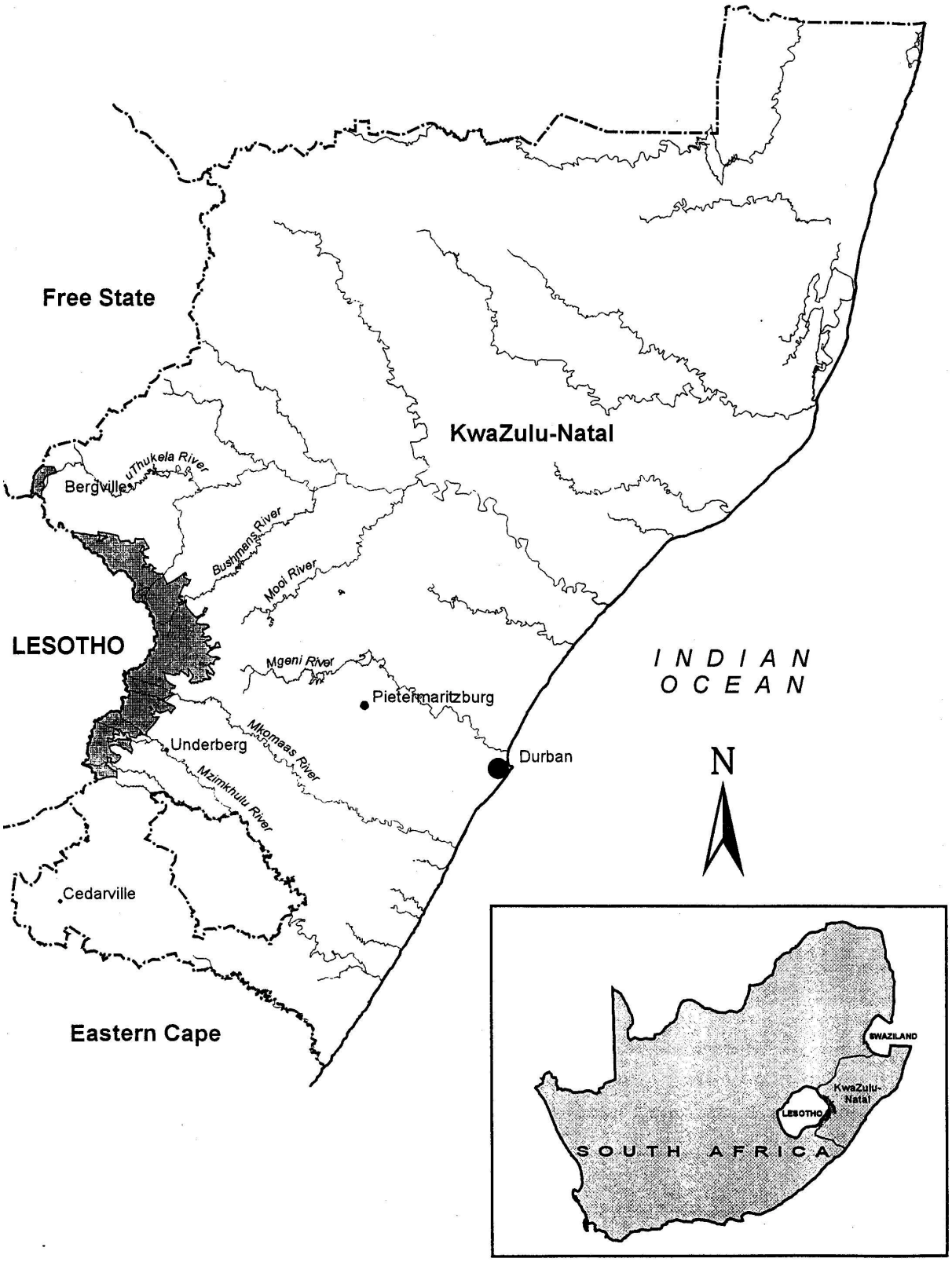
- the overall integrated master management plan for DP be completed as quickly as possible and that it give priority to the management of fire and invasive species as well as visitor management;

- the stated intention to work towards establishing additional conservation areas to give continuity to the site along the escarpment be pursued;

- efforts to establish the Drakensberg-Maloti Transfrontier Protected Area be strengthened and consideration be given to transboundary extension to the World Heritage site, should Lesotho becomes a State Party to the World Heritage Convention; and

- that efforts to establish a Special Case Area Plan (SCAP) covering DP and adjoining areas be continued.

IUCN noted that consideration should be given to the future nomination of all or part of the SCAP as a Biosphere Reserve.



Map 1: Location Map – The Drakensberg Park/oKhahlamba Park

Map 2: Site Map – The Drakensberg Park/oKhahlamba Park