Ramsar Information Sheet

Published on 26 September 2016

Eswatini

Van Eck Dam

Designation date	12 June 2013
Site number	2123
Coordinates	26°46'29"S 31°55'21"E
Area	187,00 ha

Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

1 - Summary

Summary

Van Eck Dam was constructed in 1970 for irrigation of sugarcane fields in the Big Bend area. This dam is situated within Mhlosinga Nature Reserve, on its north-eastern boundary. This reserve is privately owned (by Ubombo Sugar) and covers 1,833 ha. When water levels are low, the dam is a major magnet for waterfowl and other waterbirds. Van Eck Dam is within Mhlosinga Nature Reserve in the Lubombo district, about 1 km north-west of Big Bend. The underlying geological formation of the site is basalt. The soils are typically black-clay and duplex. Water levels in the dam do fluctuate, mostly related to irrigation needs of the sugarcane fields. The climate is typical for the "Lowveld" of Swaziland with hot wet summers, and warm dry winters. Mean annual rainfall is 500-600 mm, average monthly temperature in summer is 26° and in winter 18°.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Compiler 1

Name: Ara Monadjem

Institution/agency: Department of Biological Sciences University of Swaziland, Kwaluseni Swaziland

Postal address:
Ara Monadjem, Department of Biological Sciences
University of Swaziland, Kwaluseni
Swaziland

E-mail: ara@uniswa.sz

Phone: +26825184011

2.1.2 - Period of collection of data and information used to compile the RIS

From year: 2013

To year: 2014

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish): Van Eck Dam

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image
<3 file(s) uploaded>

Former maps: 0

Boundaries description

The boundary of the site follows the shoreline of Van Eck Dam, which itself is situated within the Mhlosinga Nature Reserve.

2.2.2 - General location

a) In which large administrative region does the site lie? Lubombo district

b) What is the nearest town or population centre? Big Bend

2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries? Yes ○ No ◉

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes ○ No ◉

2.2.4 - Area of the Site

Official area, in hectares (ha): 187

Area, in hectares (ha) as calculated from GIS boundaries: 187.72

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
WWF Terrestrial Ecoregions	Zululand Lowveld Savanna

Other biogeographic regionalisation scheme

Mucina & Rutherford (2006)

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

<no data available>

☑ Criterion 2 : Rare species and threatened ecological communities

☑ Criterion 3 : Biological diversity

Justification: The lowveld of Swaziland is relatively arid with few naturally occurring wetlands other than riparian strips along rivers. The waterbird community of this region, therefore, relies heavily on a handful of artificially created wetlands. Van Eck Dam is one such site, and plays an important role in maintaining waterbird abundance and diversity within the Swaziland lowveld region. This wetland regularly supports in excess of 20 waterbird species.

3.2 - Plant species whose presence relates to the international importance of the site

Scientific name	Common name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Disa versicolor		☐	☑	☐		☐		
Disperis tysonii	terrestrial or ground orchid	☐	☑	☐		☐		
Drimiopsis maculata	little white soldiers	☐	☑	☐		☐		
Eriospermum cooperi		☐	☑	☐		☐		
Eucomis pallidiflora pole-evansii		☐	☑	☐		☐		
Eulophia parvilabris	African Orchids	☐	☑	☐		☐		
Habenaria cornuta		☐	☑	☐		☐		
Kniphofia multiflora		☐	☑	☐		☐		
Neobolusia tysonii		☐	☑	☐		☐		
Satyrium cristatum		☐	☑	☐		☐		
Satyrium macrophyllum		☐	☑	☐		☐		
Satyrium trinerve		☐	☑	☐		☐		
Schizochilus zeyheri		☐	☑	☐		☐		

3.3 - Animal species whose presence relates to the international importance of the site

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
Birds																		
CHORDATA/ AVES	*Accipiter tachiro*	African Goshawk	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		
CHORDATA/ AVES	*Ardea alba*	Great Egret	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		
CHORDATA/ AVES	*Ardeola ralloides*	Squacco Heron	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		
CHORDATA/ AVES	*Butorides striata*	Striated Heron	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		
CHORDATA/ AVES	*Haliaeetus vocifer*	African Fish Eagle	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		
CHORDATA/ AVES	*Nectarinia famosa*	Malachite Sunbird	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		
CHORDATA/ AVES	*Nycticorax nycticorax*	Black-crowned Night Heron; Black-crowned Night-Heron	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		
CHORDATA/ AVES	*Polemaetus bellicosus*	Martial Eagle	☑	☐	☐	☐	☐	☐	☐	☐				VU	☐	☐		
CHORDATA/ AVES	*Scopus umbretta*	Hamerkop	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		
Fish, Mollusc and Crustacea																		
CHORDATA/ ACTINOPTERYGII	*Chiloglanis swierstrai*		☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		
CHORDATA/ ACTINOPTERYGII	*Clarias gariepinus*		☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		
CHORDATA/ ACTINOPTERYGII	*Marcusenius macrolepidotus*		☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		
CHORDATA/ ACTINOPTERYGII	*Petrocephalus catostoma*		☐	☐	☐	☐	☑	☐	☐	☐					☐	☐		
CHORDATA/ ACTINOPTERYGII	*Schilbe mystus*		☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		
CHORDATA/ ACTINOPTERYGII	*Synodontis zambezensis*		☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		
Others																		
CHORDATA/ REPTILIA	*Amblyodipsas polylepis*		☐	☐	☐	☐	☑	☐	☐	☐					☐	☐		
CHORDATA/ MAMMALIA	*Aonyx capensis*	African Clawless Otter	☐	☐	☐	☐	☑	☐	☐	☐				NT	☐	☐		
CHORDATA/ AMPHIBIA	*Cacosternum boettgeri*		☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		
CHORDATA/ REPTILIA	*Crocodylus niloticus*		☑	☐	☐	☐	☐	☐	☐	☐					☑	☐		
CHORDATA/ REPTILIA	*Crotaphopeltis hotamboeia*		☐	☐	☐	☐	☑	☐	☐	☐					☐	☐		

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA/ AMPHIBIA	*Hadromophryne natalensis*		☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		
CHORDATA/ MAMMALIA	*Hippopotamus amphibius*	hippopotamus	☑	☐	☐	☐	☐	☐	☐	☐				VU	☐	☐		
CHORDATA/ REPTILIA	*Philothamnus hoplogaster*		☐	☐	☐	☐	☑	☐	☐	☐					☐	☐		
CHORDATA/ REPTILIA	*Python natalensis*		☐	☐	☐	☐	☑	☐	☐	☐					☐	☐		
CHORDATA/ REPTILIA	*Python sebae*		☐	☐	☐	☐	☑	☐	☐	☐					☐	☐		
CHORDATA/ AMPHIBIA	*Pyxicephalus adspersus*		☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		

1) Percentage of the total biogeographic population at the site

A number of globally threatened and near-threatened species have been recorded at Van Eck Dam, including: Martial Eagle (Polemaetus bellicosus), and African White-backed Vulture, both of which have bred on or very close to Mhlosinga Nature Reserve (Monadjem & Garcelon, 2005; Monadjem & Rasmussen, 2008). Several other raptor species regularly breed at Mhlosinga including: African Fish Eagle (Haliaeetus vocifer) and African Goshawk (Accipiter tachiro). Nile Crocodile (Crocodylus niloticus) and South African Rock Python (Python natalensis), both of which are listed as threatened nationally in Swaziland (Monadjem et al., 2003) occur at Van Eck Dam. The globally threatened Hippopotamus (Hippopotamus amphibius) also occurs at Van Eck Dam (Monadjem, 1998).

3.4 - Ecological communities whose presence relates to the international importance of the site

<no data available>

4 - What is the Site like? (Ecological character description)

4.1 - Ecological character

The main (dominant in terms of size) feature of this site is the area covered by the reservoir which covers 100 ha. The shoreline extends over an area of roughly 3 km, and is relatively wide due to the shallow nature of the reservoir and the fact that water levels fluctuate widely. When water levels are low, the shoreline is mostly mud, with grasses and herbs covering the higher parts. When water levels are high, the water inundates the exposed mud and much of the grass-covered shoreline, leaving a narrow strip to where the natural savanna vegetation commences. The two seasonal streams flow from the west to the east, entering the reservoir on its western boundary. There is a well-developed riparian strip along these streams. In one of these streams water only flows for a short time after exceptionally heavy rains. The second of the two streams (the northern one) flows for most of the year; its water source being run-off and drainage from the newly developed sugar cane fields on the western boundary of Mhlosinga. Irrigation canals extend from the dam wall away into the sugarcane fields.

4.2 - What wetland type(s) are in the site?

Inland wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Fresh water > Flowing water >> N: Seasonal/ intermittent/ irregular rivers/ streams/ creeks		2		

Human-made wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
6: Water storage areas/Reservoirs		1		
9: Canals and drainage channels or ditches		4		

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Scientific name	Common name	Position in range / endemism / other
Andropogon appendiculatus		
Brunsvigia natalensis		
Helictotrichon imberbe		
Hyparrhenia dregeana		
Pennisetum macrourum		
Pennisetum sphacelatum		
Pennisetum thunbergii		
Setaria rigida		

4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	%occurrence	Position in range /endemism/other
CHORDATA/AVES	*Ardea purpurea*	Purple Heron				
CHORDATA/AVES	*Ardeola rufiventris*	Rufous-bellied Heron				
CHORDATA/AVES	*Cinnyris chalybeus*	Southern Double-collared Sunbird				
CHORDATA/ACTINOPTERYGII	*Barbus toppini*					
CHORDATA/ACTINOPTERYGII	*Barbus trimaculatus*					
CHORDATA/ACTINOPTERYGII	*Hydrocynus vittatus*					
CHORDATA/MAMMALIA	*Aepyceros melampus*	impala				
CHORDATA/MAMMALIA	*Dasymys incomtus*					
CHORDATA/MAMMALIA	*Giraffa camelopardalis*	giraffe				
CHORDATA/MAMMALIA	*Redunca arundinum*	southern reedbuck				
CHORDATA/AMPHIBIA	*Strongylopus fasciatus*					
CHORDATA/MAMMALIA	*Tragelaphus strepsiceros*	greater kudu				

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
C: Moist Mid-Latitude climate with mild winters	Cwa: Humid subtropical (Mld with dry winter, hot summer)

The climate is typical for the “Lowveld” of Swaziland with hot wet summers, and warm dry winters. Mean annual rainfall is 500-600 mm, average monthly temperature in summer is 26° and in winter 18°.

4.4.2 - Geomorphic setting

a) Maximum elevation above sea level (in metres): 140

- [ ] Entire river basin
- [ ] Upper part of river basin
- [x] Middle part of river basin
- [ ] Lower part of river basin
- [ ] More than one river basin
- [ ] Not in river basin
- [ ] Coastal

4.4.3 - Soil

- [x] Mineral
- [ ] Organic
- [ ] No available information

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes ○ No ◉

Please provide further information on the soil (optional)

The underlying geological formation of the site is basalt. The soils are typically black-clay and duplex. Water levels in the dam do fluctuate, mostly related to irrigation needs of the sugarcane fields

4.4.4 - Water regime

Water permanence

Presence?
Usually permanent water present

Source of water that maintains character of the site

Presence?	Predominant water source
Water inputs from surface water	☑

Stability of water regime

Presence?
Water levels largely stable

Please add any comments on the water regime and its determinants (if relevant). Use this box to explain sites with complex hydrology.

The main purpose and function of the Van Eck Dam is to provide water for the irrigation of sugarcane fields belonging to Ubombo Sugar. At 30% depletion the drawing of water for irrigation ceases and the remaining water is kept for factory and domestic use. In the event of extreme drought the dam could be completely emptied though this has not happened since 1983.

4.4.5 - Sediment regime

- [ ] Significant erosion of sediments occurs on the site
- [ ] Significant accretion or deposition of sediments occurs on the site
- [ ] Significant transportation of sediments occurs on or through the site
- [ ] Sediment regime is highly variable, either seasonally or inter-annually
- [x] Sediment regime unknown

4.4.6 - Water pH

- [ ] Acid (pH<5.5)
- [ ] Circumneutral (pH: 5.5-7.4)
- [ ] Alkaline (pH>7.4)
- [x] Unknown

4.4.7 - Water salinity

- [ ] Fresh (<0.5 g/l)
- [ ] Mixohaline (brackish)/Mixosaline (0.5-30 g/l)
- [ ] Euhaline/Eusaline (30-40 g/l)
- [ ] Hyperhaline/Hypersaline (>40 g/l)
- [x] Unknown

4.4.8 - Dissolved or suspended nutrients in water

Eutrophic ☐
Mesotrophic ☐
Oligotrophic ☐
Dystrophic ☐
Unknown ☑

4.4.9 - Features of the surrounding area which may affect the Site

Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the site itself: i) broadly similar ○ ii) significantly different ◉

Surrounding area has greater urbanisation or development ☐
Surrounding area has higher human population density ☐
Surrounding area has more intensive agricultural use ☑
Surrounding area has significantly different land cover or habitat types ☐

Please describe other ways in which the surrounding area is different:

The boundaries of Mhlosinga Nature Reserve have changed in the recent past. The area to the west of the Van Eck Dam has been removed from the reserve and sugarcane pivots have been installed (i.e. the savanna habitat has been totally transformed). The area to the south of Van Eck Dam was previously used as a cattle ranch, but has now been incorporated into the reserve.

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	Low

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Water sports and activities	High
Recreation and tourism	Nature observation and nature-based tourism	High
Recreation and tourism	Recreational hunting and fishing	High

Other ecosystem service(s) not included above:

• Irrigation of sugarcane fields
• Fishing (sport)
• Water sports
• Birding

b) in the surroundings/catchment:

• Wildlife viewing
• Birding
• Cattle ranching
• Sugarcane agriculture

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes ○ No ○ Unknown ◉

4.5.2 - Social and cultural values

i) the site provides a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland ☑

Description if applicable

Van Eck Dam has been in existence for only 4 decades and therefore has not been around long enough for the development of cultural or religious ties to it. As mentioned earlier, the reservoir was constructed to hold water for sugarcane irrigation. The site is also used for sport fishing (Bills et al, 2004), sailing and other outdoor water sports. The Van Eck Boating and Angling Club is situated on the south-western shore of the dam and attracts small numbers of visitors especially on weekends and during the holiday season.

ii) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland ☐

iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples ☐

iv) relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland ☐

4.6 - Ecological processes

<no data available>

5 - How is the Site managed? (Conservation and management)

5.1 - Land tenure and responsibilities (Managers)

5.1.1 - Land tenure/ownership

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Commercial (company)	☑	☑

Provide further information on the land tenure / ownership regime (optional):

a) within the Ramsar site:
The dam and water within the reservoir are owned by the Ubombo Sugar.

b) in the surrounding area:
The surrounding area is the privately-owned Mhlosinga Nature Reserve which is also owned by Ubombo Sugar.
Ubombo Sugar, which is a private company.

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site: Ubombo Sugar, which is a private company.

Provide the name and title of the person or people with responsibility for the wetland: M Dago Camille Frédéric Groga-Bada Chef du Service Suivi-Evaluation

Postal address:
M Dago Camille Frédéric Groga-Bada
Chef du Service Suivi-Evaluation
Direction de la Faune et Ressources Cynégétiques
Ministère des Eaux et Forêts
Cité Administrative Tour C 7e étage
BPV 178 Anidjan Abidjan
Côte d'Ivoire

E-mail address: grogabadacamille@yahoo.fr

5.2 - Ecological character threats and responses (Management)

5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Canalisation and river regulation	High impact		☑	☐

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Annual and perennial non-timber crops	unknown impact		☑	☐
Livestock farming and ranching	High impact		☑	☐

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Dams and water management/use	Medium impact		☑	☐

Please describe any other threats (optional):

a) within the Ramsar site:
The Van Eck Dam site is relatively safe since its existence depends on continued commercial sugarcane farming in the area, and there is no reason to believe that this activity will cease any time soon.

b) in the surrounding area:
The boundaries of Mhlosinga Nature Reserve have changed in the recent past. The area to the west of the Van Eck Dam has been removed from the reserve and sugarcane pivots have been installed (i.e. the savanna habitat has been totally transformed). The area to the south of Van Eck Dam was previously used as a cattle ranch, but has now been incorporated into the reserve.

5.2.2 - Legal conservation status

<no data available>

5.2.3 - IUCN protected areas categories (2008)

Ia Strict Nature Reserve ☐

Ib Wilderness Area: protected area managed mainly for wilderness protection ☐

II National Park: protected area managed mainly for ecosystem protection and recreation ☐

III Natural Monument: protected area managed mainly for conservation of specific natural features ☐

IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention ☐

V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation ☐

VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems ☐

<no data available>

5.2.4 - Key conservation measures

Human Activities

Measures	Status
Regulation/management of recreational activities	Implemented
Communication, education, and participation and awareness activities	Implemented
Research	Implemented

5.2.5 - Management planning

Is there a site-specific management plan for the site? No

Has a management effectiveness assessment been undertaken for the site? Yes ○ No ◉

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning processes with another Contracting Party? Yes ○ No ◉

Please indicate if a Ramsar centre, other educational or visitor facility, or an educational or visitor programme is associated with the site:

Biannual waterbird surveys were conducted continuously at this site from 1997 to 1999, and again in 2001, and 2004 to 2007.

Current communications, education and public awareness (CEPA) activities related to or benefiting the site:
e.g. visitors' centre, observation hides and nature trails, information booklets, facilities for school visits, etc.
Mhlosinga Nature Reserve is open daily to the public; visitors may drive or walk through the reserve. Organised school visits to Mhlosinga Nature Reserve take place on an ad hoc basis.

Current recreation and tourism:
State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

There are activities such as launching of boats, fishing and game-viewing or bird watching. Camping and accommodation is available for hire at the Van Eck Boating and Angling Club which is situated on the south-western shores of Van Eck Dam.

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? Please select a value

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Birds	Implemented

Biannual waterbird surveys were conducted continuously at this site from 1997 to 1999, and again in 2001, and 2004 to 2007.

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

-Bills, R., Boycott, R.C., Fakudze, M., Khumalo, N., Msibi, J., Scott, L., Terry, S. & Tweddle, D. 2004. Fish and fisheries survey of Swaziland (2002-2003). South African Institute for Aquatic Biodiversity. Investigative Report 70. Grahamstown, South Africa.
-Dodman, T., de Vaan, C., Hubert, E. & Nivet, C. 1998. African Waterfowl Census 1997. Wetlands International, Wageningen, The Netherlands.
-Hughes, R H & Hughes, J.S. 1992. A Directory of African Wetlands IUCN, Gland, Switzerland and Cambridge, UK /UNEP, Nairobi, Kenya / WCMC, Cambridge, UK, xxxiv +820 pp., 48 maps.
-Monadjem, A. 1998. Mammals of Swaziland. Conservation Trust of Swaziland & Big Game Parks, Mbabane.
-Monadjem, A. & Garcelon, D. 2005. Nesting distribution of vultures in relation to land use in Swaziland. Biodiversity & Conservation 14: 2079-2093.
-Monadjem, A. & Rasmussen, M. 2008. Nest distribution and conservation status of eagles, selected hawks and owls in Swaziland. Gabar 19: 1-22.
-Monadjem, A., Boycott, R.C., Parker, V. & Culverwell, J. 2003. Threatened vertebrates of Swaziland. Swaziland Red Data Book: fishes, amphibians, reptiles, birds and mammals. Ministry of Tourism, Environment and Communications, Mbabane.
-Mucina, L. & Rutherford, M.C. (eds). 2006. The vegetation of South Africa, Lesotho and Swaziland. Strelitzia 19. South African National Biodiversity Institute, Pretoria.
-Taylor, V. 1993. African Waterfowl Census 1993. IWEB, Slimbridge,

6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)
<no file available>

ii. a detailed Ecological Character Description (ECD) (in a national format)
<no file available>

iii. a description of the site in a national or regional wetland inventory
<no file available>

iv. relevant Article 3.2 reports
<no file available>

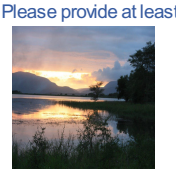
v. site management plan
<no file available>

vi. other published literature
<no file available>

<no data available>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:



Van Eck Dam at Sunset (
Gumedze S., 18-01-2008)

6.1.4 - Designation letter and related data

Designation letter
<1 file(s) uploaded>

Date of Designation	2013-06-12