

Biodiversity

FACT SHEET

Introduction

A wide diversity of fauna and flora grow and live within Palabora Mining Company and its activities. Constantly aware of its neighbouring proximity to the Kruger National Park (KNP), Palabora is concerned with its natural environment and those living organisms within it. In order to conserve the precious relationship Palabora has with its fauna and flora and as part of its Environmental Management Plan Commitments, a number of environmental programmes inclusive of a Biodiversity Action Plan or Management Plan (BAP) have been introduced to protect and monitor the environments.



Flora

The veld type at Palabora is predominantly Mopane bushveld vegetation with some Lowveld veld type in between. This combination of bushveld is rich in species diversity and consists of tall, tufted grasses, scattered trees and shrubs and a wide variety of forbs and herbs. This vegetation is tolerant to the relatively low rainfall and hot climate experienced in the region.

Near watercourses, however, the vegetation changes remarkably. The density of tree and shrub-species increases to form dense thicket and composition of the species are more varied. The veld in the region of the mine is classified as Arid Lowveld.

Tree species noted as typical of this kind of vegetation are *Acacia nigrescens*, *Atortilis* and *Sclerocarya birrea*, *Colospermum mopane*, *Combretum apiculatum* and *Combretum imberbe* are also common. Some of the dominant grasses are *Digitaria eriantha* and *Themeda triandra*. Under grazing pressure, wiry grasses such as *Aristida congesta*, *Eragrostis trichophora*, *perotis patens* and *Schmidtia papporphorides* become more common. Natural vegetation is lost in some areas of the mine due to mining activities. This is of major concern to Palabora, not only because of the loss of natural vegetation, but also because of the risk of increased erosion and dust. A rehabilitation programme was therefore started to ameliorate these losses with commercially available indigenous species. From this a natural colonisation by local indigenous species may be encouraged.

Alien Plant Control

Due to the spread of alien plants, mainly along river courses, a number of alien plant species have migrated into the area. Among these are *Lantana camara* (Lantana), *Tecoma stans* (Yellow Bells), *Ricinus communis* (castor oil bush), *Xanthium strumarium* (large cocklebur) and *Flaveria bidentis* (smelter bush). Unless controlled, these weeds can become a source of seed for the invasion of other areas and the KNP. Palabora is therefore committed to implement a programme to control these plants. They are either chemically destroyed or physically removed from the area and burned.



Fauna

Palabora abounds with a variety of animal life, including numerous large mammals and bird species, which migrate to and from neighbouring reserves. The main attraction for most fauna is the abundance of water, in particular during the drier months. Many species have been breeding and are permanent residents on the mine property. Among the large game occurring on the mine are elephant, buffalo, hippopotamus, zebra, kudu, waterbuck, giraffe and impala. Predators such as lion, leopard, hyena, caracal, African wild dog and black backed jackal have also been observed.

The bird population on the mine is diverse and thriving, with 287 different species occurring, including flamingos, woodland kingfishers, sunbirds, hornbills, bee-eaters and fish eagles to name but a few. The local Phalaborwa bird club assists with regular bird surveys recording various information on birds sighted on the property.



Aquatic Biota

Palabora has two main water resources on its southern boundary, namely the Olifants and Selati Rivers. This environment has had certain ecological indicators described and are regularly assessed to measure any industrial impacts on this environment. Some of the important indicators are the habitat, water quality, aquatic macroinvertebrates, fish health and vegetation.



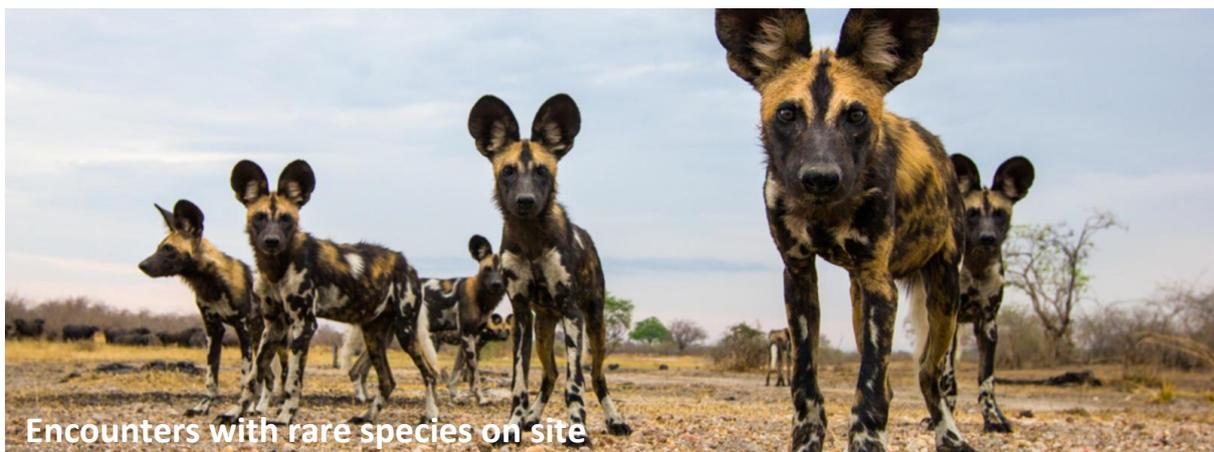
Looking at indicator species

Ecological Status

Palabora has a semi open system where the movement of wildlife between Palabora and neighbouring reserves makes it important to understand the interaction between animals, vegetation, climate and the operation. Conducting regular assessments together with data gathering generates a valuable database from which management decisions can be made on the presence of certain bulk grazers, i.e. elephant, buffalo and hippo that frequent the property. In some instances the relocation of some animals at critical times has been invaluable in sustaining a balance in the ecosystem found at Palabora. The current biodiversity status at Palabora compares favourably with surrounding game reserves with similar ecosystems even with disturbances.

Rare Species Protection

Another environmental concern is the protection of threatened, rare and endangered species. Although a number of species do occur in the general area, there have been a few tree species found on Palabora's property that are classified as protected species. The chance that future mining operations could threaten rare or endangered plant species is therefore regarded as small.



Encounters with rare species on site

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