



Biodiversity assessment in South Africa completed

Phase 2 of AngloGold Ashanti's biodiversity assessment of its South African West Wits and Vaal River operations was completed in 2007. Comprising verification of the data collated in the desktop study conducted in 2005, the second phase has been important in terms of identifying and determining the extent of terrestrial and aquatic fauna and flora at the two operating areas. This has enabled researchers to map out areas of land at both operations into designated biodiversity management units, which are to be managed by each operating area's various business units, headed by their respective environmental co-ordinators.

The baseline assessment established that, while the findings at both operating areas are similar, West Wits has greater biodiversity than Vaal River because of its landscape features.

"Kraalkop nature reserve falls within the West Wits mine lease area and there is also a rocky ridge which is home to a number of plant and animal species. Another contributing factor is that the area is host to more wetland areas than Vaal River," explains Tembeka Dambuza, biodiversity co-ordinator at AngloGold Ashanti's South Africa operations.

The assessment lists the expected and actual findings of biodiversity. A summary of, for example, terrestrial and aquatic fauna findings at both operating areas is as follows (right):

Explains Dambuza: “The discrepancies between numbers expected and those observed in the mammal, reptile and invertebrate categories indicate they are more difficult to track down and not that they are not present, so monitoring will continue.” No threatened species were encountered in either of the operational areas.

Further information was accorded each category with regards to vegetation type (e.g. river, grassland, thicket etc.); habitat preference (e.g. wetlands, burrows, reed beds etc.); and status (threatened, near-threatened, vulnerable and endangered).

Near-threatened species that the study determined could be expected (but have not been observed) include the giant bullfrog, greater flamingo, brown hyena, spotted-necked otter, honey badger and water rat. One of the vulnerable species is the common African python and on the endangered species list is the white-tailed mouse. Not threatened are a number of frog species found at West Wits including the guttural toad (*Bufo gutturalis*), raucous toad (*Bufo Rangeri*), bubbling Kassina/running frog (*Kassina senegalensis*) and common platanna (*Xenopus laevis*).

Four exotic fish species have been identified in the two operational areas. Because their large numbers are threatening the indigenous fish species, AngloGold Ashanti will be looking at a strategy to reduce their population.

“This could be achieved by removing the dams or hosting an open fishing day,” says Dambuza. Public awareness campaigns continue in efforts to protect the endangered yellowfish, found in stretches of the mine lease along the Vaal River. (*See Report to Society 2004: Yellowfish project – a partnership with concerned fishermen.*) The campaigns are proving to be fairly successful among the local fishermen, who are returning these fish to the river if caught.

With respect to vegetation, a large number of alien vegetation species has been identified – 74 at Vaal River and 75 at West Wits – including, for example, prickly pear, eucalyptus, wattle and yellow bell. Although an alien eradication programme has already been in existence for some time, Dambuza intends to focus on streamlining this activity in 2008. This could take the form of establishing more firebreaks under the current veld fire management plan, or donating chopped wood to local communities to curb their indiscriminate removal of vegetation. Researchers have also identified tracts of land that they recommend should not be disturbed. “This may not always be possible,” admits Dambuza, “but the information at least ensures that we establish the correct mitigation measures should development take place.”

West Wits		
Species type	Species expected	Species observed
Bird	277	289
Fish	6	4
Frog	11	6
Mammal	90	13
Reptile	57	9
	Expected taxa	Observed taxa
Invertebrates	61	20

Vaal River		
Species type	Species expected	Species observed
Bird	263	132
Fish	12	8
Frog	8	5
Mammal	67	15
Reptile	47	10
	Expected taxa	Observed taxa
Invertebrates	61	24

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The rare plant species, the *Ebracteola wilmaniae*, belonging to the Mesembryanthemum genus, which was found last year and sent to the South African National Biodiversity Institute (SANBI) has now been classified but its status, threatened or not, has not yet been determined. (See *Report to Society 2006: Biodiversity assessment in South Africa*.) One of the challenges of the assessment has been a lack of pictorial references to assist in the identification of plant and animal species, says Dambuza. "This would be especially useful for mine personnel and the local community, on whom we rely to preserve rare and endangered plant and animal species."

Although potential mining impacts have already been established and mitigation measures are in place, a rating is now being accorded to activities that may detrimentally affect the biodiversity profile at demarcated biodiversity management units. Says Dambuza: "Each business unit will then take responsibility for dealing with any environmental issue which falls in its area of jurisdiction."

The completion of the most comprehensive and structured biodiversity assessment to date paves the way for a biodiversity management strategy which will be developed in 2008.

