



## **Biodiversity mainstreaming at SANRAL**

The South African National Roads Agency (SOC) Limited, generally known as SANRAL, is an independent, statutory company registered in terms of the Companies Act. The South African government, represented by the Minister of Transport, is the sole shareholder and owner of SANRAL. SANRAL has a distinct mandate to finance, plan, develop, and maintain the national road network in a sustainable manner, and within the framework of government policy.

### **What is the business case for biodiversity at SANRAL?**

Through its long-term strategy Horizon 2030 and its updated Environmental Policy, SANRAL reaffirms its commitment to compliance to legislation and to sound environmental management, and acknowledges its impacts and dependencies on natural resources and the environment in general. Through these key documents SANRAL emphasises compliance with the requirements of relevant authorities including the Department of Environmental Affairs; the Department of Mineral Resources and the Department of Water and Sanitation, which provide the necessary authorizations and permits. SANRAL also emphasises eco-efficiency and the need for alternatives to natural resources; resilience to Climate Change, as well as the need to undertake research to inform strategies, targets and/or required action plans.

Apart from the obvious obligation to comply with all environmental laws, SANRAL recognises that biodiversity degradation and loss can lead to other impacts such as accelerated soil erosion, which can in turn undermine road infrastructure.

Biodiversity is therefore managed as a business imperative, from restoration of areas affected by construction activities, to regular maintenance activities. Road reserves are also increasingly becoming vestiges of biodiversity and a corridor for seed dispersal, especially in areas transformed by agriculture and other developments. A case in point is the National Route N7 as reported by respected journalist Greg Nicholson, who found that

*“The road reserve along much of the route still supports patches of relatively undisturbed vegetation and during the spring months parts of it provide fine displays of wildflowers that no longer survive beyond the fence line in cultivated land.”*

Another example is the N2 stretch between the Bloukrans River and the Clarkson/Palmietvlei off-ramp, where studies undertaken in partnership with the Nelson Mandela Metropolitan University showed the road reserve to be providing

habitats for several plant species that are of high conservation value. As the wild populations of many of these species are rapidly declining in the wild, the road reserve was found to be valuable for conservation. One of the highlights of this study was the first recorded occurrence of a rare orchid, *Disperis woodii* in the Cape Floristic Region. The study undertaken in support of a specialist academic qualification, and to produce a fynbos-specific guideline document for the management of this section of road.

### **What biodiversity strategy and action plan has SANRAL adopted?**

SANRAL recognises the value of Environmental Impact Assessment (EIA) in “mainstreaming” biodiversity into development projects and has already made it central to its activities. Through EIAs SANRAL and conservation authorities evaluate development proposals against environmental objectives and integrate such objectives into the planning, construction, rehabilitation and maintenance phases of projects as appropriate.

In undertaking environmental impact assessments and implementing its environmental management plans, SANRAL is committed to conducting its planning and design, construction, operation and maintenance, in accordance with the guidance of the competent authority and the requirements of the NEMA EIA regulations, notably the full implementation of the impact mitigation hierarchy (i.e. from impact avoidance to offset measures).

#### *Construction*

The ‘Search and Rescue’ of plants of conservation value has become standard practice on environmentally sensitive SANRAL projects. This process occurs before construction commences and varies in focus and extent depending on the project locality and species-richness in the construction area. On the N1 Musina Ring Road in Limpopo, for example, SANRAL relocated several large baobab trees from areas directly affected by construction, thus preserving not only the biodiversity, but the ‘sense of place’ of the area. Another example where the focus was on a single species is the proposed P166 where SANRAL in partnership with conservation authorities is conducting propagation trials on the Critically Endangered Aloe *simii* not only to protect the population that will be directly affected by construction, but to also to improve the conservation status of the species in the wild.

There are also projects in sensitive biodiversity areas, where the species-richness of the area informs the basis of the biodiversity management process. Examples are the N7 Kalbaaskraal and the N2 Wild Coast greenfield project where intensive search and rescue operations including seed collection were undertaken, for later replanting in areas outside of the road footprint. In both these projects SANRAL has also undertaken to offset the impact of the projects on biodiversity, thus ensuring a net positive impact and formally securing biodiversity conservation in the long-term.

## *Maintenance*

Through the routine road maintenance contracts, the national road reserve receives on-going vegetation management for reasons ranging from road safety, protection of infrastructure, compliance with legislation, to alien vegetation control and of course, the introduction of indigenous tree and shrub species where applicable. For example, along the R21 towards the O.R. Tambo International Airport SANRAL removed some pine trees that were clogging drains, with the intention of replacing them with Karee trees which are indigenous, fast-growing and do not have aggressive root systems. In the North West Sanral took pro-active measures to plant indigenous trees at traffic circles on the R24. Different species that thrive in the generally dry climate were selected, including mountains aloe, white stinkwoods and the forest bushwillows.

Mother Nature plays a huge role in re-establishing tree, shrub, groundcover and bulbous species within the road reserve. However, re-establishment has been encouraged through change in maintenance practices over the years where, for example responsible grass-cutting practices and changes in the cutting programme has led to plant species germinating and growing with limited threat from intervention. Planting programmes are focused on those areas where no successful germination has taken place of localised species or where a desired growth pattern is required. Examples of this are in centre medians wide enough to safely accommodate shrubs and trees, along fence lines as possible fence-replacements in areas of high community cattle grazing and in areas of new development where some screening of the road is desired.

SANRAL encourages planting partnerships in its quest to re-populate the road reserve to a similar or better state than it was before the construction of the road. Conservancies and the Wildlife and Environmental Society of South Africa are just two examples of planting partners. Corporate companies are also encouraged to participate in the planting programme when developing adjacent to the national road.

SANRAL's standard practice is not to burn vegetation in the road reserve, but in areas susceptible to fire, some burning of fire-breaks may be undertaken in partnership with adjacent landowners and Fire Protection Agencies as well as relevant authorities. SANRAL has also taken a keen interest in the management of fynbos found along some sections of national roads such as the N2 and the N7. Fynbos is naturally adapted to fire regimes and requires burning for the vegetation type to persist, so in this regard SANRAL takes guidance from experts for maintenance and tries to understand the diversity of the species and its complex relationship with fire.

Extensive weed control programmes continue to be implemented by SANRAL. Large areas that were once dominated by alien vegetation have been cleared and are now indigenous havens encouraging diversity of species. Through routine control, emerging weed species are kept under control. Guidance is provided in the Routine Road Maintenance Manual. In addition, SANRAL submitted a plan for Monitoring and Control of Alien and Invasive Species in response to the Alien and Invasive Species Regulations, 2014.

## *Monitoring and Reporting*

SANRAL reports on relevant legislative requirements and achievements on material environmental topics including biodiversity in internal and external publications, and in its Integrated Report.

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