Mining and Biodiversity Guideline
Mainstreaming biodiversity into the mining sector

This poster accompanies the Mining and Biodiversity Guideline, which aims to improve the use of biodiversity information in decision making throughout the mining cycle. It explains six principles that should be applied at any stage in the mining cycle and emphasizes the use of the mitigation hierarchy to avoid, minimise, rehabilitate and offset significant residual biodiversity impacts.

The Guideline is primarily aimed at:
- Company environmental, exploration, project, and mine managers.
- National and provincial government officials of the Departments of Mineral Resources, Environmental Affairs, and Water Affairs, and conservation authorities.
- Environmental Assessment Practitioners and Environmental Control Officers.

Biodiversity priority areas and their risk for mining:
Four categories of biodiversity priority areas have been defined in terms of their biodiversity importance and their risk and implications for mining. These are illustrated in the large map and summarized in the colour-coded tables, which link to the categories on the map. For more detailed information, higher resolution maps and the underlying data, please visit the SANBI’s Biodiversity GIS website (http://bgis.sanbi.org).

### Six principles for good decision making regarding biodiversity that need to be applied at each stage in the mining cycle:

1. **Avoid or prevent**
   - Refers to considering options in project location, siting, scale, layout, technology and phasing to avoid impacts on biodiversity, associated ecosystem services, and people. This is the best option, but is not always possible. Where environmental and social factors give rise to unacceptable negative impacts mining should not take place. In such cases it is unlikely to be possible or appropriate to rely on the latter steps in the mitigation.

2. **Minimise**
   - Refers to considering alternatives in the project location, siting, scale, layout, technology and phasing that would minimise impacts on biodiversity and ecosystem services. In cases where there are environmental and social constraints every effort should be made to minimise impacts.

3. **Offset**
   - Refers to measures over and above rehabilitation to compensate for the residual negative effects on biodiversity, after every effort has been made to minimise and then rehabilitate impacts. Biodiversity offsets can provide a mechanism to compensate for significant residual impacts on biodiversity.

4. **Rehabilitate**
   - Refers to rehabilitation of areas where impacts are unavoidable and measures are provided to return impacted areas to near-natural state or an agreed land use after mine closure. However, rehabilitation may fall short of replicating the diversity and complexity of a natural system.

5. **Legally protected - Mining prohibited**
   - Mining activities are prohibited in legally protected areas. These areas are the highest risk for mining and authorisations may well not be granted. If granted, the authorisation may set limits on the scale, layout and potential strategic importance of the minerals to the country.

6. **Safeguard biodiversity plans**
   - Where there is a high conservation value and potential for biodiversity, associated ecosystem services, and people. This is the best option, but is not always possible. Where environmental and social factors give rise to unacceptable negative impacts mining should not take place. In such cases it is unlikely to be possible or appropriate to rely on the latter steps in the mitigation.

### Biodiversity priority areas:

**Legally protected - Mining prohibited**
- National Parks, Nature Reserves, Heritage Sites, Protected Areas
- Areas declared under Section 15 of the National Environmental Management: Biodiversity Act (No. 10 of 2004)

**High biodiversity importance - High risk for mining**
- Critical Biodiversity Areas
- Freshwater Ecosystems
- High water yield areas
- Other identified priorities into licence agreements and/or authorisations.

**Moderate biodiversity importance - Moderate risk for mining**
- Ecological support areas
- Vulnerable ecosystems
- Similar ecosystems
- Other biodiversity features

**Low biodiversity importance - Low risk for mining**
- Endangered ecosystems
- Ecological support areas
- Other biodiversity features

**Map showing biodiversity priority areas in South Africa**