

Using Protocols to strengthen biodiversity specialist assessments in EIAs

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Introduction

South Africa's National Department of Environmental Affairs (DEA) has in the last 10 years begun to advance environmental management beyond environmental impact assessments (EIAs). They are in the process of developing an array of environmental management instruments that will supplement Impact Management but that will also support project level (EIA) decision making. Two tools that have specifically been developed to influence the EIA process, and that have the potential of improving biodiversity specialist assessments in EIAs are the National Environmental Screening Tool (hereafter referred to as the "Screening Tool") and Protocols. Currently there is no standardized approach and requirements for specialist studies in EIAs in South Africa. The only regulated requirements are in Appendix 6 of the EIA Regulations (2014 as amended), but these are vague and do not identify what should be assessed. There are a number of guidelines and tools (provincial guidelines for biodiversity assessments in EIAs and Ecosystem Guidelines, etc.) that advise on terms of reference for biodiversity assessments but these are developed and applied differently across the various EIA Authorities. Often the implementation of these guidelines are not mandatory so neither of the EIA stakeholders are obliged to mainstream biodiversity assessment minimum requirements from these guidelines into EIAs. In instances where conservation authorities have developed more detailed requirements that relate to biodiversity, relevant EIA Authorities can require EAPs and specialists to implement these in addition to the relevant Protocol requirements. These shortcomings make it difficult for EIA Authorities to know if they are making the correct decisions when reviewing EIA reports and specialist studies. In an effort to begin to address this issue DEA has decided to use the Protocol Methodology.

The link between the Screening Tool and Protocols

The Screening Tool is a web based tool (<https://screening.environment.gov.za/screeningtool>) that supports prescreening of environmental sensitivities (inclusive of biodiversity sensitivities) in the landscape for assessment in the EIA process. It is intended to assist a developer by flagging the environmental sensitivities at a particular site in relation to a number of environmental themes.

The "mitigation hierarchy" is a fundamental tool used in the EIA Process to minimize impacts on biodiversity (BBOP 2009). The application of the Screening Tool lends itself towards the implementation of the mitigation hierarchy by allowing applicants to manipulate their development footprint to avoid sensitive environments. If avoidance is not possible, then applicants have to carefully plan mitigation, rehabilitation and offset measures to ensure that residual negative impacts on biodiversity will be carefully managed and that it is reduced. The Screening Tool, then allows the applicant to maneuver the location of the development on the site in order to minimise the impact on areas of medium to very sensitivity, thereby reduces the number of the protocol requirements that will be triggered at that

specific site. If high sensitivity areas cannot be avoided and the applicant decides to locate their proposed development within “medium” to “very high” sensitive areas then the Screening Report¹ generated by the Screening Tool will identify a list of specialist assessments that would need to be implemented as part of the EIA Process as well as a link to the respective Protocols. Regulation 16(1)(v) of the Environmental Impact Assessment Regulations, 2014 (“the EIA Regulations”) in South Africa requires that a screening report be generated and appended to an application for Environmental Authorization.

The Screening Tool consists of a number of themes including agriculture, avifauna, terrestrial and aquatic biodiversity, plant and animal species, noise, defense and civil aviation. Further themes will be added to the Screening Tool as it becomes necessary. Each of the themes consists of spatial datasets that correspond to the respective theme. Each dataset within the respective theme has been assigned a sensitivity level. Most of the themes within the Screening Tool make use of a four-tier sensitivity system, where delineated areas and features are assigned a sensitivity level of either “low (L)”, “medium (M)”, “high (H)” or “very high (VH)”. Figure 1 describes the four sensitivity classes and their definition.

Assessment	Description
Very High	Area is rated as being extremely sensitivity to development and the risk of finding sensitive biodiversity features at the site is very high. Consequently, the area will either have very high conservation or socio-economic value.
High	Area is rated as being highly sensitivity to development and the risk of finding sensitive biodiversity features at the site is high. Consequently, the area will either have high conservation or socio-economic value
Medium	Area is rated as being of medium sensitivity to development and there is a medium to moderate risk of finding sensitive biodiversity features at the site. Consequently, the area will either have medium conservation or socio-economic value
Low	Area is considered to have low levels of sensitivity and there is low risk of finding sensitive biodiversity features at the site. Consequently, the area has low conservation or socio-economic value

Figure 1: Sensitivity assigned to various data sets in the screening tool

A number of datasets were used for the biodiversity related themes. Table 1 identifies the datasets that underpin the various biodiversity related themes in the Screening Tool. For the Aquatic and Terrestrial Biodiversity Themes, all features that have known mapped features of sensitive biodiversity features are assigned a “very high” sensitivity. Where there is no known sensitive biodiversity features, a “low” sensitivity is assigned. A two-tier sensitivity system has been applied to data layers underpinning the Aquatic and Terrestrial Biodiversity Themes, namely “very high” and “low”, based on the presence or absence of known sensitive biodiversity features respectively. In essence the “very high” and “low” sensitivity ratings should be interpreted as there being a greater and lower risk of finding important biodiversity in these areas respectively. It is important to note that all the “very high” delineated areas and features are sensitive but the degree to which these areas can be impacted upon is different for the

different “very high” delineated areas and features, depending on the development type. The degree of impact on these areas can only be assessed with the EIA process.

Table 1. Datasets that underpin the respective biodiversity related themes in the Screening Tool.

Terrestrial Biodiversity Theme datasets with the associated sensitivity ratings	Aquatic Biodiversity Theme datasets with the associated sensitivity ratings	Plant and/or Animal Species Theme datasets with the associated sensitivity ratings
<ul style="list-style-type: none"> • Protected Areas (VH) • Critical Biodiversity Areas (CBAs) (VH) • Ecological Support Areas (ESAs) (VH) • Strategic Water Source Areas (Terrestrial component) (VH) • National Freshwater Ecosystem Priority Areas (FEPA) Catchments (Terrestrial component)(VH) • Priority Areas for Protected Area Expansion (VH) • Indigenous Forest (VH) 	<ul style="list-style-type: none"> • Aquatic Critical Biodiversity Areas (VH) • Aquatic Ecological Support Areas (VH) • Strategic Water Source Areas (Aquatic component) (VH) • National Freshwater Ecosystem Priority Areas (NFEPA) Catchments (Aquatic component) (VH) • Rivers (VH) • Wetlands (VH) • Estuaries (VH) 	<ul style="list-style-type: none"> ▪ Critical habitat for range restricted species of conservation concern that have a global range of less than 10 km2 (VH) ▪ Confirmed habitat for species of conservation concern (H) ▪ Suspected habitat for species of conservation concern based either on there being records for this species collected in the past prior to 2002 or being a natural area included in a habitat suitability model (M) ▪ Areas where no natural habitat remains (L)

Also, that the “low” sensitivity areas have not been surveyed to the extent that the “very high” sensitivity areas have been surveyed so there is a greater likelihood that important biodiversity could be encountered in “very high” sensitivity areas. Four tier sensitivity system have been applied to the data layers underpinning the Plant and Animal Species Themes, namely, “low”, “medium”, “high” and “very high”. Species data have been separated from ecosystem/ landscape level data to provide for huge complexities in the species data, in addition to the high numbers of threatened species within South Africa that would need to be processed for inclusion into the screening tool because the Screening Tool. It was best to keep the species data separate for simpler integration within the Screening Tool. It should also be noted that the species guilds that will be covered in the Animal Species Protocol include mammals, reptiles, amphibians, butterflies and birds for now.

Protocol Implementation

Protocols are implemented in the EIA Process and are flagged by the screening tool. Section 24 (5) (a) and (h) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) allows for the Minister and MEC with concurrence ,to may make Regulations that are consistent with “*laying down the procedure to be followed in applying for, the issuing of, and monitoring compliance with, environmental authorisations*” and where “*prescribing minimum criteria for the report content for each type of report and for each process that is contemplated in terms of the regulations in order to ensure a consistent quality and to facilitate efficient evaluation of reports.*” This provision allows for the making of regulations which constitutes the procedure to be followed referred to above, which includes specialist review of Protocol requirements for the respective themes. Protocol implementation becomes mandatory within the EIA Process once a notice has been placed in the government gazette. They are

essentially additional minimum assessment criteria that must form the basis of specialist assessments in EIAs. Protocol requirements must be implemented in addition to the requirements found in Appendix 1, 2, 3 and 6 of the EIA Regulations (2014) which cover generic requirements relative to the basic assessment process, the scoping process, the environmental impact assessment process and specialist reports respectively. The respective Protocols will eventually replace Appendix 6 requirements in instances where the data pertaining to a respective theme is available through the screening tool. Otherwise, Appendix 6 will still have to be adhered to.

Protocols support project level decision making and are theme based tools that are not triggered based on development type or location. More stringent specialist assessment requirements will have to be adhered to for “very high”, “high” and “medium” sensitivity areas and a compliance statement is required in “low” sensitivity areas.

An initial site sensitivity verification process should be undertaken to identify if there are any discrepancies with the identified environmental sensitivity as depicted on the screening tool and what is present on site. If there are any inconsistencies found between what has been found on site and what is in the screening report then this has to be documented as part of the work done in accordance with the relevant Protocols, to the EIA Authorities. For example, if important biodiversity is found in a “low” sensitivity area for the Aquatic and Terrestrial Biodiversity Theme, then evidence of this should be provided to the respective EIA Authorities and the protocol for “very high” sensitivity areas or features should be implemented as part of the EIA process. Similarly, if the biodiversity features identified by the Screening Tool are not present, the EAP/applicant is required to provide evidence that the feature is not present (for e.g. by means of geo-tagged photographs of the site, soil samples collected in wetlands, specialist report, etc.), and a compliance statement should be completed. Once the on-site sensitivities have been verified then the requirements of the protocol will have to be complied with

Several Protocols inclusive of biodiversity related Protocols are in the process of being finalized by the DEA. The overarching benefit of guiding specialist assessments through protocols is that a standardized approach to specialist assessments will be provided for. Once the Protocols are gazetted for implementation, all specialists will be required to follow a similar output and include the same level of detail in their assessments. This will assist in addressing the shortcomings in the current approach as described in the introduction. In the absence of a protocol for a specific theme in the screening tool applicants will be required to implement the minimum requirements from the relevant aforementioned appendixes until such time that the appropriate theme has been gazetted for implementation. Protocols will also add value to the review of EIAs done by EIA Authorities. They will be able to review these specialist assessments more objectively because the assessment criteria will be known upfront and will be standardized in terms of the content requirements. Protocols and the Screening Tool give strength to the mitigation hierarchy as impact avoidance is considered upfront through the appropriate placement of development, in the first instance encouraging applicants to avoid developing in highly sensitive environments. Finally, the burden of thorough biodiversity assessments will be reduced throughout South Africa to only those areas whose sensitivity ranges from “medium” to “very high”. “Low” sensitivity areas will have to comply with less onerous assessment criteria.

Conclusion

The Screening Tool and Protocols are at an infancy stage, and will be gazetted for implementation in 2019. The development and use of these tools provides a significant step forward in the approach used in South Africa for EIAs and biodiversity specialist assessment. They have the potential to address

current shortcomings where the absence of a standardized system compromises comprehensive environmental assessment and good decision making by authorities on land use change proposals and the resultant biodiversity impacts.

References

1. BBOP (Business and Biodiversity Offsets Programme).2009. The Relationship Between Biodiversity Offsets and Impact Assessment: A BBOP Resource Paper. Washington, D.C.: BBOP. Available from <http://bbop.forest-trends.org/guidelines/eia.pdf>