

## **Prioritisation tools for the Ezemvelo KZN Wildlife Protected Areas**

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The Ezemvelo KZN Wildlife Protected Areas have been profoundly affected by invasive alien plant species. There are numerous documented reports on the impact of invasive alien species on biodiversity and ecosystem functioning, and in 2001/2002, an assessment of all the Protected Areas within the KZN, rated alien plants as the single greatest threat to biological diversity in KwaZulu-Natal. In the hope of curbing this problem, large amounts of funds have been allocated for the clearing of alien plant species within Protected Areas. However, although it is very glamorous to be given large amounts of funding for clearing operations, unless the correct planning; based on recognised conservation and alien plant clearing principles are followed; these funds can easily be wasted or even result in exacerbating the invasive alien plant species problem. One of the fundamental steps in order to ensure this funding is used wisely is priority setting, as this will help to ensure the best returns on investments, which in this case is the best returns for money spent on clearing operations. Consequently, Ezemvelo KZN Wildlife has developed two prioritisation planning tools to guide priority planning at two different scales.

The first tool addresses which Protected Areas should be given priority over other Protected Areas in terms of resource allocations, as although large amounts of funding have been set aside for clearing operations, these amounts are nowhere near what is actually required to clear and maintain all the Protected Areas with KZN. Thus decisions needed to be made as which Protected Areas will receive money, and which ones will only receive money at a later stage once more resources become available. To aid with this, the Prioritisation Scoring System (PSS) was therefore developed. The PSS provides a formal and tangible measure for which decisions regarding which Protected Areas should receive funding can be based. It consists of 10 assessment criteria which assess each Protected Area in terms of:

- The biodiversity assets in each Protected Area;
- The pressure from existing alien plants in each Protected Area;
- The threat from emerging plants and/or current alien plant infestation in each Protected Area; and
- The feasibility of control in each Protected Area.

The PSS is applied by scoring each Protected Area with each of the assessment criteria. Various statistical calculations are applied to these results and the end product is a total prioritisation score for each Protected Area. Each Protected Area is then be ranked according to its total prioritisation score, with those having a high score, being scheduled for clearing before those with a low score.

However, the PSS does not consider the importance of Protected Areas in terms of other factors such as tourism, social implications or flagship parks. Thus a few additional factors such as these are also individually and systematically considered when final decisions are made regarding the allocation of funds for the Ezemvelo KZN Wildlife Protected Areas.

The next level of prioritisation was to establish which areas inside a particular Protected Area need to be scheduled to be cleared first, and which areas could be scheduled for clearing at a later stage. For this level of prioritisation, it was decided that a step by step procedural approach would be the most practical. This included managers and relevant ecological staff being asked to divide their Protected Areas into smaller manageable Alien Control Units (ACU), and gather the following information for each ACU:

- alien plant species;
- density;
- size class;
- treatment stage (initial or follow-up);
- susceptibility to invasion (high susceptibility, medium susceptibility, low susceptibility); and
- the presence of any Extraordinary Conservation Value (ECV) assets.

With this information in hand, the number of shifts per hectare could be calculated and by following the step by step procedures, each ACU could be allocated a priority ranking according to its characteristics identified above. For example ACUs that contained: ECV assets; where of a maintenance level ( $< 0.5$  shifts/ha) or were follow-up treatment sites were considered to be of top priority to receive treatment. It is essential that these areas did receive treatment, as insufficient funds to cover these ACUs will ineffectively result in a state of regression (rate of spread exceeding rate of control). Thereafter species density and susceptibility of invasion of the remaining initial treatment sites were prioritised, along with the consideration of other factors such as:

- areas with a high level of priority emerging alien species;
- areas with newly/rapidly expanding infestation (e.g. construction sites);
- areas that can easily be maintained over the long term once cleared;
- areas that have weed infestations that could significantly exacerbate the potential fire areas that contain infestation that may result in the risk of damage to property or life;
- areas that are important in terms of tourists;
- areas that are important in terms of public awareness (e.g. roadsides, public areas such as picnic sites or viewing points);
- areas that contain weed species for which there are effective biocontrol agents available.

With the implementation of the above two prioritisation planning tools set in place, it is believed that Ezemvelo KZN Wildlife's clearing operations are one step closer to effectively managing the threat posed by invasive alien plant species within its Protected Areas. In addition to these planning tools helping Ezemvelo KZN Wildlife, it is thought that these tools can easily be modified to assist in prioritising clearing operations elsewhere in South Africa. For more information contact Wayne Lotter at [lotterw@kznwildlife.com](mailto:lotterw@kznwildlife.com).