SUSTAINABILITY

ALIEN INVASIVE SPECIES v INDIGENOUS SPECIES

The conservation of biodiversity is our duty as custodians of the land we want to pass on to future generations. By managing our natural resources we can reconcile our human needs with the requirements of other organisms and the capacity of our environment. At De Zalze, one of the integrated strategies is to conserve our natural environment by promoting indigenous biodiversity. One of the ways of doing this is by removing alien invasive species and replacing these with indigenous species.

Invasive alien plants (IAPs) pose a direct threat not only to South Africa's biological diversity, as they typically outcompete indigenous plants for space and resources but also to water security, the ecological functioning of natural systems and the productive use of land. They intensify the impact of fires and floods and increase soil erosion. IAPs can divert enormous amounts of water from more productive uses and invasive aquatic plants, such as the water hyacinth, effect agriculture, fisheries, transport, recreation and water supply.

Which plants?

Government Gazette 32090 published on 3 April 2009 contains a list of alien plants as required in terms of the National Environmental Management: Biodiversity Act.[1] These regulations have not been finalised yet and as a result have not been implemented.

At present the provisions of Regulation 15 and 16 of the Conservation of Agricultural Resources Act (CARA)[2] still finds application. CARA classifies declared weeds (category 1 plants) and invaders (category 2 & 3 plants) in Regulation 15, while bush encroachers, which are indigenous plants that require management to prevent them from becoming problematic are classified under Regulation 16. For a full list of these plants, please refer to

Category 1 declared weeds are plants that are not allowed at all. They may not be planted or propagated, traded, transported or be allowed to disperse. The reason for this is that these plants may cause a health risk, transform natural plant communities, use more water than natural plant communities or may be very difficult to control. These plants all have in common that their harmfulness outweighs any usefulness they may have. These plants consist of trees, shrubs, succulents, herbaceous plants, grasses, reeds and aquatic plants.[3]

Category 2 plants have a proven ability to become invasive, but, because they have beneficial properties, it warrants their continued presence. These plants may be kept in special demarcated areas set aside for that purpose. These plants must serve a commercial or useful purpose such as a shelter belt, building material, medicinal

[1] Act 10 of 2004
[2] Act 43 of 1983 and www.arc.agric.za
[3] Legal obligations regarding invasive alien plants in South Africa www.agric.za [downloaded 4/9/12]

consumption or as soil stabilisers. The conditions under which they are cultivated must be controlled.[4]

Category 3 plants have the proven potential of becoming invasive, but most of them are popular plants or shade trees that will take a long time to replace. They are only allowed in biological control reserves, unless they were aready in existence before 2001. If they were in existence before this, they must still be controlled, for instance be kept from spreading. They may also not grow within 30m from the 1:50 year floodline of watercourses or wetlands.[5] An example of this is the Blue Jacaranda, for which Pretoria, the Jacaranda city, has become known. This tree was declared a category 3 invader. The existing trees may be kept, but no more Jacaranda's may be planted.

Moreover, some plants are category 1 weeds only in certain provinces, but because they are popular ornamental or utility plants elsewhere, where they are not such a big threat. For instance, in the Western Cape, some plants are Category 1, but Category 2 or 3 elsewhere. Some category 2 and 3 plants are also not allowed in the Western Cape because of their invasive properties in this area.

Control Methods

The purpose of control is to ideally reach a point where the listed plants no longer occur in the area, or no longer grow, produce viable seeds or spread into other areas. If this is not possible, the plants must be contained and their multiplication limited as far as possible. The method to be used must be appropriate to that specific species as well as for the ecosystem in which they occur. A few examples could be by uprooting, felling, treatment with registered herbicides or biological control. It goes without saying that damage to the environment must be kept to the minimum. Although the Act does not specify the types of environmental damage that may be caused by control methods, examples could be the irresponsible use of fire, unnecessary disturbance of the soil such as on riverbanks and slopes or any action that could upset the ecological balance of the environment.[6]

Bush encroachment concerns landowners in rural areas, where there is the possibility that indigenous plants can become abnormally abundant when the area is degraded by for instance overgrazing or injudicious fires. Management practices are prescribed to prevent and combat bush encroachment. This can be done by felling, cutting and livestock reduction.[7]

How is this legislation enforced?

CARA is administered by the National Department through its directorate: Land Use and Soil Management. Resource Auditors are the law enforcement officers, who may delegate their powers to employees of a local authority who are then municipal weed inspectors. These persons may visit any property to inspect for the presence of

[4] Note 3
[5] As above
[6] As above
[7] Note 3

declared weeds or invader plants. Should these be found, the land user will be informed of the offence and of the steps that must be taken to correct it.[8]

Indigenous Species

Indigenous plants are plants that occur naturally in a particular area, have evolved over thousands of years and have adapted to the hydrology, geography and climate of that region. It has not been assisted in its travels by people, but could have been distributed by strong winds or naturally transported by ocean currents.

10 Reasons to plant indigenous[9]

1. It creates the type of habitat to attract the widest variety of birds, butterflies and other wild creatures;
2. While some exotic plants do supply food and nesting for some bird species, only indigenous plants fulfil all their needs for feeding, nesting and resting;
3. Indigenous plants are water-wise;
4. They are adapted to the soil conditions (locally indigenous);
5. Indigenous plant require fewer pesticides and no fertiliser;
6. They are low-maintenance;
7. Alien bird species, such as Indian Mynahs and feral pigeons are usually not attracted to indigenous vegetation;
8. They help reduce air-pollution;
9. These plants promote biodiversity and stewardship of our natural heritage;
10. They save money!

Indigenous Plants Suitable for planting at De Zalze

Please refer to the list elsewhere on website.

[8] Note 3
[9] *'Why indigenous plants?'* www.indigenousflora.co.za; *Why plant indigenous?'* www.nature-first.net