



**Workshop Proceedings:
Revision of the National List of Protected Trees as per
Section 12, National Forests Act of 1998**

**6-8 March 2002
Roodeplaat, Pretoria**



Albertya magna (Natal Flamebush) Photo: National Botanical Institute

**Department of Water Affairs & Forestry, Directorate:
Forest Regulation (Scientific Services)**

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SUMMARY

*An expert workshop, hosted by the Department of Water Affairs & Forestry (DWAF), was held from 6–8 March 2002 at Roodeplaat, Pretoria. The objective of the workshop was to review the list of tree species proposed to be listed as protected under Section 12 of the National Forests Act of 1998, and to produce a list of species that can be published in the Government Gazette and newspapers for comment. A methodology was developed to review a preliminary list of species proposed to be represented on the National List of Protected Trees, in an objective and consistent manner. As such, a definition of a tree species was adopted by the expert panel. A set of criteria (legislation, ecological and socio-economic criteria) and a scoring system were used to compile a final list. A total of 35 species are represented on the final list, about 50% species fewer than on the 1976 list. Only 13 species from the 1976 list are retained in the final list. Arborescent species, from the genus *Protea*, are currently under review by the National Botanical Institute, in addition to some other species. Based on the review, these species may well be considered for inclusion on the National List of Protected Trees.*

INTRODUCTION

An expert workshop, hosted by the Department of Water Affairs & Forestry (DWAF), held from 6–8 March 2002 at Roodeplaat, Pretoria. The objective of the workshop was to review the list of tree species proposed to be listed as protected under Section 12 of the National Forests Act of 1998, and to produce a list of species that can be published in the Government Gazette and newspapers for comment.

The existing list is more than 25 years old, not having been revised since 1976 (Government Gazette 6 August 1976, No. 5242, p. 17) (Appendix 1). Fifty-six species, in addition to all the tree-like species of the genus *Encephalartos* (cycads) were listed, bringing the total number of species on the list to approximately 85. The list included an undescribed species (*Fagaria* sp. nov.). Species occurring in Namibia, such as *Pachypodium lealii*, were also listed because Namibia was managed as a territory of South Africa at the time.

Additional problems with the 1976 list (Appendix 1) are as follows:

1. ‘True trees’ are not distinguished from arborescent species that resemble trees (‘tree-like’).
2. The names of some tree species have undergone taxonomic changes and many names are no longer in use or are invalid as determined by scientific authorities. Updating these names will avoid confusion and will promote a common understanding of the tree species that are protected.
3. In the light of new findings, it has been recommended through specialist consultations that certain tree names should be removed from the existing list and others incorporated, primarily because:
 - 3.1 certain species are already represented in other pieces of legislation and thus do not require duplication in terms of being represented in a new proposed list for protected tree species;

3.2 new distribution records indicate that certain species are widespread, abundant and have a good regeneration capacity, and do not pose a concern at present or over an indefinite time-frame. This new information should be reflected in a new proposed list for protected tree species;

3.3 certain species are utilised to such an extent that it should be reflected in the new proposed list;

3.4 ecological studies indicate that certain species are important for the critical role they play in sustaining biodiversity (keystone species) and this should be reflected in the new proposed list;

3.5 sociological studies and observations indicate that certain species are important because of their spiritual, cultural and aesthetic value and this should be reflected in the new proposed list.

METHODS

Approach

A preliminary list of tree species to be reviewed was compiled by DWAF in consultation with the National Botanical Institute, provincial authorities and other dendrological experts (Appendix 2). The preliminary list included all the species from the 1976 list of the National Forest Act (Appendix 1), as well as proposals for additions. The preliminary list totalled *ca* 300 species, and formed the basis of the workshop.

Firstly, taxonomic changes were noted and incorporated.

Objective approaches were used to refine the preliminary list, and a methodology that was consistent and repeatable was required to review the preliminary list.

Each species was evaluated against the following measurable criteria (see Appendix 3):

- (i) **Red List status/biodiversity status:** the extent to which the species is considered threatened or potentially threatened with extinction according to the World Conservation Union (IUCN) Red List system of categories and criteria (see Hilton-Taylor 1996; IUCN 1994)
- (ii) **Importance as a keystone species:** the importance of the species in relation to ecosystem functioning, particularly fragile ecosystems, or the extent to which important fauna and other flora are dependent on the species
- (iii) **Sustainability of use:** the commercial significance of the species in relation to formal and informal economies, and whether the species is being utilised in a sustainable manner

- (iv) **Cultural/spiritual value:** the social importance of the species in relation to sustaining spiritual or cultural values, and the importance of the aesthetic value in landscapes
- (v) **Legislative provisions:** the extent to which the species is adequately protected in terms of national legislation and provincial ordinances.

Determining the importance of species

A scoring system was used to rank species in order of importance in relation to the criteria. First, the criteria were divided into sub-criteria (Appendix 4). Designated scores were assigned to each species on the preliminary list based on the knowledge of the expert panel, as well as on support material from reports, data sets, books and so forth (Appendix 4, Appendix 5). None of the criteria were weighted (the criteria were treated as being equal in importance), and this was based on the assumption that the criteria are mutually exclusive entities. The rationale for assigning scores is provided (Appendix 3). In the context of this expert workshop, scores were assigned by an evaluation panel in a participatory manner.

The expert panel examined the scores in a two-dimensional manner. The total scores associated with *Red List status*, *Keystone species*, *Sustainability of use* and *Cultural/spiritual value* were examined separately and are here referred to as the *Value-index* (i.e. an index that deals with the value or importance of a tree species). The *Value-index* is thus the sum of all the scores associated with *Red List status*, *Keystone species*, *Sustainability of use* and *Cultural/spiritual value*.

The score associated with *Adequacy of legislation* is referred to as the *Legislation-index* (i.e. an index that deals with the adequacy of legislation provisions). Thus, the maximum score associated with the *Value-index* is 5 (i.e. of high importance) and the minimum is 0 (i.e. of low importance). Similarly, the maximum score associated with the *Legislation-index* is 2 (i.e. inadequate legislation) and the minimum is 0 (i.e. adequate legislation).

The *Value-index* and the *Legislation-index* allowed the expert panel to evaluate the importance of the species in relation to whether it was adequately protected under the legal provisions. A high *Value-index* is a sure indication of the need to protect a species; a low *Value-index* did not necessarily disqualify a species for the new list. A high rating for one criterion, such as *Red List status* or *Sustainability of use*, could be sufficient to list a species for protection under the National Forests Act.

Elimination from the preliminary list

The first stage in the process of elimination was to remove all species that were not considered to be trees by the expert panel. A decision was therefore adopted to define a tree species, and consensus was reached that a tree is “a woody plant, self-supporting with a diameter at breast height (DBH) greater than 10 mm and a height greater than 3 m (single-stemmed), and if multi-stemmed, then a height greater than 5 m”. As such, all species of the genera *Aloe*, *Cyathea*, *Dracaena*, *Drosera*, and *Euphorbia* were automatically excluded. In other cases, only certain species of a genus were considered a tree (e.g. *Bersama* and *Eugenia*), and they were included on the

preliminary list. Note that because of the importance for increased conservation of the genera *Encephalartos* and *Protea*, an exception was made to review these tree-like species by the National Botanical Institute. The National Botanical Institute has since recommended that *Encephalartos* species should not be placed on the list; feedback is currently being awaited regarding *Protea* species.

The second stage in the process of elimination was that the assigned scores were used to remove species from the preliminary list and to justify the retention of other species. Species that had a low score for both the *Value-index* and the *Legislation-index* were eliminated first (Appendix 6). Conversely, those with both high scores for the *Value-index* and the *Legislation-index* were considered strong candidates for the final list. However, the expert panel found that the process of eliminating highly ranked species was easy but it became progressively more difficult to retain objectivity for intermediately ranked species. For example, species that had a high *Value-index* but a low *Legislation-index* were especially problematic. To overcome these problems associated with compromising objectivity, the panel used decision rules to eliminate species from the preliminary list (Appendix 6). Species that did not have a relatively important ecological, commercial or social value were removed from the list, irrespective of the *Legislation-index* (see Rules 1, 2 and 4; Appendix 6), and if a species was adequately protected under the legislative provisions (i.e. *Legislation-index* = 0), then the species was eliminated from the list (Rules 1, 3 and 6; Appendix 6).

A final list was produced (Appendix 7).

RESULTS & DISCUSSION

Final tree list

A total of 35 species are represented on the final list, about 50% species fewer than on the 1976 list. Only 13 species (taxa) from the 1976 list are retained in the final list. They are *Acacia erioloba*, *Breonadia salicina*, *Ceriops tagal*, *Erythrophysa transvaalensis*, *Newtonia hildebrandtii* var. *hildebrandtii*, *Ocotea bullata*, *Podocarpus elongatus*, *P. falcatus*, *P. henkelii*, *P. latifolius*, *Sclerocarya birrea* subsp. *caffra*, *Sideroxylon inerme* and *Widdringtonia cedarbergensis* (Appendix 7). This strongly suggests that the vast majority of species represented on the 1976 list should perhaps not have been listed, and this possibly reflects that the list was not objectively determined in the context of ecological, socio-economic, and legislative considerations.

To determine whether a species qualified for the proposed short list of protected tree species, the evaluation panel made use of the following:

- An agreed definition of the term ‘tree’
- Evaluation criteria that were developed at two consecutive workshops with the inputs of various stakeholders
- Existing legal provisions, and ecological, socio-economic criteria were considered
- A scoring system that was developed by the evaluation panel
- A set of ground rules to screen the species on the basis of the final scores and criteria, developed by the evaluation panel

- Available data on individual species from research documents, books, personal knowledge and experience of panel members, and the relevant schedules of national and provincial legislation applicable to plant protection.

The methodology and the final list itself were thus determined through an extensive participatory process.

- The final list consists only of tree species, as per the definition of a tree that was adopted by the expert panel, and it is also taxonomically updated.
- Secondly, the list reflects new findings and field observations of tree species that have not been considered since 1976.
- Lastly, the methodology used to determine the final list was objective and consistent. As such, proposals for making changes to the final list can be screened using the methodology used here.

Arborescent species from the genus *Protea*, are currently being reviewed, and some species (including *Albizia adianthifolia*, Appendix 7) may be considered for inclusion on the National List of Protected Tree Species. The fact that the methodology developed can be repeated, allows for application elsewhere, possibly for developing protected species lists associated with provincial ordinances or components of other national legislation.

ACKNOWLEDGEMENTS

The evaluation panel is acknowledged for supporting and providing guidance to the process of revising the 1976 list. The evaluation panel consisted of the following individuals: Syndy Boqo (DWAF), Dr Coert Geldenhuys (Forestwood cc), Dr Hugh Glen (National Botanical Institute), Janice Golding (National Botanical Institute), Marie Jordaan (National Botanical Institute), Mervyn Lotter (Mpumalanga Parks Board), Elsabé Powell (Northern Cape Nature Conservation); Izak van der Merwe (DWAF) and Tom Vorster (DWAF).

REFERENCES USED

- HILTON-TAYLOR, C. (1996) Red Data List of southern African plants. *Strelitzia* 4. National Botanical Institute, Pretoria. 117 pp.
- IUCN. (1994) *IUCN Red List categories*. Prepared by the Species Survival Commission. IUCN, Gland, Switzerland. 21 pp.

Appendix 1 Protected tree list of the National Forests Act (1976). *Scientific names are updated in this list and it should be used in conjunction with the original schedule of 1976. (Please note that Protea multibracteata, once believed to be a separate species with limited distribution, was later considered to be part of the very common Protea caffra. The new scientific name is listed here, but it was not the intention of the original schedule to protect Protea caffra).*

BOTANICAL NAME	COMMON NAME	NAT. TREE NR
Acacia erioloba	Camel thorn / Kameeldoring	168
Adansonia digitata	Baobab / Kremetart	467
Alberta magna	Natal flame bush / Breekhout	701
Aloe dichotoma	Quiver tree / Kokerboom	29
Aloe pillansii	Giant quiver tree / Reuse kokerboom	30
Aloe dichotoma var. ramosissima (= Aloe ramosissima)	Maiden's quiver tree / Nooienskokerboom	30.2
Atalaya capensis	Cape krantz ash / Kaapse kranses	428
Blighia unijugata	Triangle-tops / Driehoekstolletjies	436
Borassus aethiopum (= Borassus flabillifer var. aethiopum)	Broadleaf fan palm / Breëblaarwaaierpalm	25
Breonadia salicina (= Adina microcephala)	Matumi / Mingerhout	684
Capparis tomentosa	Hairy caperbush / Wolhaarkapperbos	129.1
Cavacoa aurea	Natal hickory / Natalokkerneut	332
Celtis gomphophylla (= Celtis durandii)	Rough-leaved white stinkwood / Growweblaar witstinkhout	40
Celtis mildbraedii	Natal white stinkwood / Natalse witstinkhout	41
Ceriops tagal	Indian mangrove / Indiese wortelboom	525
Coffea racemosa	Wild coffee/ Wildekoffie	715.1
Craibia zimmermanii	Sandforest craibia / Sandertjehout	229
Cyathea capensis (= Alsophila capensis)	Forest tree fern / Bosboomvaring	2
Cyathea dregei (= Alsophila dregei)	Grassland tree fern / Grasveld-boomvaring	1
Encephalartos spp.	Cycad spp. / Broodboom spp.	3 – 14
Erythrophysa transvaalensis	Bushveld red balloon / Bosveldrooiklapperbos	436.2
Faidherbia albida (= Acacia albida)	Ana tree / Anaboom	159
Faurea macnaughtonii	Terblanz beech / Terblanz	74
Ficus bizanae	Pondo-fig / Pondovy	46
Jubaeopsis caffra	Pondo-palm / Pondopalm	27
Leucadendron argenteum	Silver tree / Silberboom	77
Morus mesozygia	African mulberry / Afrika-moerbeï	44
Myrsine pillansii	Cape myrtle / Grootblaarmirting	577.1
Newtonia hildebrandtii var. hildebrandtii	Lebombo wattle / Lebombo wattel	191
Ocotea bullata	Stinkwood / Stinkhout	118
Ocotea kenyensis	Northern stinkwood / Noordelike stinkhout	119
Olinia radiata	Forest hard-pear / Boshardepeer	515
Pachypodium lealii	Bottle-tree / Bottelboom	648
Pachypodium namaquanum	Elephant's trunk / Halfmens	649
Philenoptera sutherlandii (=Milletia sutherlandii)	Forest apple-leaf / Bosappelblaar	228
Philenoptera violacea (= Lonchocarpus capassa)	Apple-leaf / Appelblaar	238
Podocarpus elongatus	Breede River yellowwood / Breëriviergeelhout	15
Podocarpus falcatus	Outeniqua yellowwood / Outeniekwa geelhout	16
Podocarpus henkelii	Henkel's yellowwood / Henkel-geelhout	17
Podocarpus latifolius	Real yellowwood / Opregte geelhout	18
Protea caffra (=Protea multibracteata; SA no. 92)	Common sugarbush / Gewone suikerbos	87
Protea laetans	Blyde protea / Blyde protea	90.4

Protea nitida (=Protea arborea)	Wagon-tree / Waboom	86
Pseudobersama mossambicensis	False white ash / Valswitessenhout	302
Pseudosalacia streyii	Pondo rock-lemon / Pondokliplemoen	419.2
Pterocarpus luscens subsp. antonesii	Small-leaved kiaat / Kleinblaarkiaat	326.1
Rhynchochalyx lawsonioides	Natal privet / Natalliguster	523.1
Schinziophyton rautanenii (= Ricinodendron rautanenii)	Manketti tree / Mankettiboom	337
Sclerocarya birrea subsp. caffra (= Sclerocarya caffra)	Marula / Maroela	360
Sideroxylon inerme	White milkwood / Witmelkhout	579
Sterculia alexandri	Cape star-chestnut / Kaapse sterkastaing	473
Trilepisium madagascariensis (= Bosqueia phoberos)	Venda fig / Vendavy	45
Umtiza listeriana	Umtiza / Umtiza	205
Widdringtonia cedarbergensis	Clanwilliam cedar / Clanwilliamseder	19
Widdringtonia nodiflora	Mountain cypress / Bergsipes	20
Widdringtonia schwarzii	Willowmore cedar / Baviaanskloofseder	21
Xanthoxercis zambesiaca	Nyala tree / Nyalaboom	241
Zanthoxylum lepreurii (= Fagara lepreurii)	Sand knobwood / Sandperdepram	255.1

Appendix 2 Preliminary list of species that were reviewed by the expert panel.

Species currently listed as protected in terms of the National Forests Act of 1998 (as contained in the Schedule of 1976)

△ Species proposed in 1984 for a new revised schedule

<i>Acacia erioloba</i>	168	△
<i>Acacia haematoxylon</i>	169	△
<i>Acacia xanthophloea</i>	189	
<i>Adansonia digitata</i>	467	△
<i>Azelia quanzensis</i>	207	
<i>Alberta magna</i>	701	△
<i>Albizia adiantifolia</i>	148	
<i>Albizia sulensis</i>	156	△
<i>Aloe alooides</i>	28.3	
<i>Aloe angelica</i>	28.4	
<i>Aloe comosa</i>	28.7	
<i>Aloe dichotoma</i> var. <i>dichotoma</i> (= <i>Aloe dichotoma</i>)	29	△
<i>Aloe dichotoma</i> var. <i>ramosissima</i> (= <i>Aloe ramosissima</i>)	30.2	△
<i>Aloe excelsa</i>	28.8	
<i>Aloe khamiensensis</i>	29.3	
<i>Aloe pillansii</i>	30	△
<i>Aloe plicatilis</i>	29.6	
<i>Aloe thraskii</i>	30.7	
<i>Apodytes abottii</i>	422.1	
<i>Apodytes dimidiata</i>	422	
<i>Apodytes geldenhuysii</i>	422.2	
<i>Atalaya capensis</i>	428	△
<i>Atalaya natalensis</i>	429	△
<i>Avicennia marina</i>	669	△
<i>Balanites manghamii</i>	251	
<i>Barringtonia racemosa</i>	524	△
<i>Berberia zeyheri</i>	450	△
<i>Bersama</i> spp (6)	439- 443	△
<i>Bersama luscens</i>	439	△
<i>Bligbia unijugata</i>	436	△
<i>Bolusanthus speciosus</i>	222	
<i>Borassus aethiopicum</i> (= <i>Borassus flabellifer</i>)	25	△
<i>Boscia albitrunca</i>	122	
<i>Boscia foetida</i> subsp. <i>longipedicellata</i>	124.1	△
<i>Bowkeria citrina</i>	672.1	△
<i>Brachylaena discolor</i>	724	△
<i>Brackenridgea zanguebarica</i>	483.1	△
<i>Breonadia salicina</i>	684	△
<i>Bruqiera gymnorhiza</i>	527	△
<i>Calpurnia reflexus</i> (= <i>Calpurnia robinoides</i>)	220.1	△
<i>Capparis tomentosa</i>	130.1	△
<i>Cassipourea</i> spp. (8)	528 - 531.1	△
<i>Cassipourea flanaganii</i>	528	△
<i>Cassipourea mossambicensis</i>	531	△

<i>Cassipourea swaziensis</i>	531.3 △
<i>Catha edulis</i>	404 △
<i>Caracoa aurea</i>	332 △
<i>Celtis gomphophylla</i>	40 △
<i>Celtis mildbraedii</i>	41 △
<i>Ceriops tagal</i>	525 △
<i>Chionanthus battiscombei</i>	614 △
<i>Chionanthus peglerae</i>	616 △
<i>Cleisthantus schlechteri</i> var. <i>schlechteri</i>	320
<i>Coffea racemosa</i>	715.1 △
<i>Colubrina nicholsonii</i>	453.8
<i>Combretum collinum</i> subsp. <i>taborense</i>	541.3 △
<i>Combretum imberbe</i>	539
<i>Combretum petrophilum</i>	542.1 △
<i>Combretum vendae</i>	540.3 △
<i>Craibia zimmermanii</i>	229 △
<i>Cryptocarya angustifolia</i>	112 △
<i>Cryptocarya latifolia</i>	113 △
<i>Cryptocarya liebertiana</i>	113.1 △
<i>Cryptocarya myrtifolia</i>	115 △
<i>Cryptocarya transvaalensis</i>	114 △
<i>Cryptocarya woodii</i>	116 △
<i>Cyathea capensis</i>	2 △
<i>Cyathea dregei</i>	1 △
<i>Cryptocarya nyleii</i>	117 △
<i>Curtisia dentata</i>	570
<i>Dahlgrenodendron natalense</i>	117.1 △
<i>Dracaena</i> ssp.	30.8 –30.10 △
<i>Drypetes arguta</i>	313 △
<i>Elaeodendron transvaalensis</i>	416 △
<i>Encephalartos</i> spp. (28)	3 – 14.9 △
<i>Erythrophleum lasianthum</i>	196
<i>Erythrophyssa transvaalensis</i>	436.2 △
<i>Eugenia capensis</i>	553.1 △
<i>Eugenia erythrophylla</i>	553.3 △
<i>Eugenia natalitia</i>	553.2 △
<i>Eugenia umtamvunensis</i>	553.6 △
<i>Eugenia zeyheri</i>	553 △
<i>Eugenia woodii</i>	553.4 △
<i>Eugenia zuluensis</i>	554 △
<i>Eugenia verdoorniae</i>	554.1 △
<i>Faidherbia albida</i>	159 △
<i>Faurea macnaughtonii</i>	74 △
<i>Ficus bizanae</i>	46 △
<i>Ficus bubu</i>	56
<i>Ficus trichopoda</i>	54 △
<i>Guetarda speciosa</i>	715.3
<i>Gymnosporia bachmannii</i> (= <i>Maytenus bachmannii</i>)	398.2 △
<i>Gymnosporia devenishii</i>	399.5
<i>Gymnosporia macrocarpa</i>	401.8
<i>Gymnosporia oxycarpa</i>	401.9
<i>Hybanche globosa</i>	319 △
<i>Hyphaene coriacea</i>	23
<i>Jubaeopsis caffra</i>	27 △
<i>Lasiodiscus pervillei</i> subsp. <i>pervillei</i>	453.6

<i>Leucadendron argenteum</i>	77	△
<i>Lumnitzera racemosa</i> var. <i>racemosa</i>	552	
<i>Lydenburgia abbottii</i> (= <i>Catba abbottii</i>)	407	
<i>Macaranga capensis</i> var. <i>capensis</i>	335	△
<i>Manilkara nicholsonii</i>	586.1	△
<i>Maprounea africana</i>	343.1	△
<i>Maurocenia frungularia</i>	417	△
<i>Maytenus abbottii</i>	398.1	△
<i>Memecylon bachmannii</i>	560.1	△
<i>Memecylon sousae</i>	560.2	
<i>Metarungia pubinervia</i>	681.3	
<i>Millettia grandis</i> (= <i>Millettia sutherlandii</i>)	227	△
<i>Millettia stuhlmannii</i>	228.1	
<i>Mimusops caffra</i>	583	
<i>Morus mesozygia</i>	44	△
<i>Myrsine pillansii</i>	577.2	△
<i>Newtonia hildebrandtii</i> var. <i>hildebrandtii</i>	191	△
<i>Ocotea bullata</i>	118	△
<i>Ocotea kenyensis</i>	119	△
<i>Oldenburgia grandis</i>	737	△
<i>Olea capensis</i> subsp. <i>macrocarpa</i>	618.2	
<i>Olea europaea</i> subsp. <i>africana</i>	617	
<i>Olinia micrantha</i>	514.1	
<i>Olinia radiata</i>	515	△
<i>Oxyanthus pyriformis</i> subsp. <i>pyriformis</i>	696.2	△
<i>Ozoroa concolor</i>	369.1	△
<i>Ozoroa namaquensis</i>	373.2	
<i>Pachypodium lealii</i>	648	△
<i>Pachypodium namaquanum</i>	649	△
<i>Passerina paludosa</i>	(?)	
<i>Philenoptera bussei</i> (= <i>Lonchocarpus bussei</i>)	238.1	△
<i>Philenoptera sutherlandii</i> (= <i>Millettia sutherlandii</i>)	228	
<i>Philenoptera violacea</i> (= <i>Lonchocarpus capassa</i>)	238	△
<i>Pittosporum viridiflorum</i>	139	
<i>Podocarpus elongatus</i>	15	△
<i>Podocarpus falcatus</i>	16	△
<i>Podocarpus henkelii</i>	17	△
<i>Podocarpus latifolius</i>	18	△
<i>Protea</i> spp. (30)	86	
	-98.2	△
<i>Prunus africana</i>	147	△
<i>Pseudobersama mossambicensis</i>	302	△
<i>Pseudosalacia streyi</i>	419.2	△
<i>Pseudoscolopia polyantha</i>	499	△
<i>Pterocarpus angolensis</i>	236	△
<i>Pterocarpus lucens</i> subsp. <i>antonesii</i>	236.1	△
<i>Pterocelastrus rostratus</i>	408	
<i>Rapanea melanophloeos</i>	578	
<i>Raphia australis</i>	26	△
<i>Raspalia trigyna</i>	141.1	
<i>Rhizophora mucronata</i>	526	△
<i>Rhynchosyris lawsonioides</i>	523.1	△
<i>Schinziophyton rautanenii</i> (= <i>Riciodendron rautanenii</i>)	337	△
<i>Rinorea domatiosa</i>	489.1	△
<i>Sclerocarya birrea</i> subsp. <i>caffra</i>	360	△
<i>Scolopia oreophila</i>	496.1	△

<i>Scolopia stolzii</i> var. <i>stolzii</i> (= <i>Scolopia stolzii</i> var. <i>riparia</i>)	496.2	△
<i>Sideroxylon inerme</i>	579	△
<i>Spirostachys africana</i>	341	△
<i>Sterculia alexandri</i>	473	△
<i>Syzygium gerrardii</i>	556	
<i>Syzygium legatii</i>	558	
<i>Syzygium pondoense</i>	558.1	△
<i>Tapura fischeri</i> var. <i>pubescens</i>	304	△
<i>Tephrosia pondoensis</i>	226.1	△
<i>Thespesia acutiloba</i> (<i>Thespesia populnea</i> var. <i>acutiloba</i>)	465	
<i>Thespesia populnea</i>	465.1	
<i>Trilepisium madagascariense</i> (<i>Bosquiea phoberos</i>)	45	△
<i>Umiza listeriana</i>	205	△
<i>Vangueria soutpansbergensis</i>	703.1	△
<i>Voacanga thouarsii</i>	646	
<i>Warburgia salutaris</i>	488	△
<i>Widdringtonia cedarbergensis</i>	19	△
<i>Widdringtonia nodiflora</i>	20	△
<i>Widdringtonia schwarzii</i> .	21	△
<i>Xanthocercis zambesiaca</i>	241	△
<i>Xylocarpus granatum</i>	294.5	△
<i>Zanthoxylum capense</i>	253	△
<i>Zanthoxylum davii</i>	254	△
<i>Zanthoxylum leprieurii</i>	255.1	△
<i>Zanthoxylum thorncroftii</i>	255.3	△

Appendix 3 Criteria for the selection of tree species from the preliminary list.

Criterion	RED LIST STATUS/BIODIVERSITY
Rationale	SA has national and international obligations towards biodiversity conservation and the protection of Red List species (see Hilton-Taylor, 1996; IUCN 1994). These obligations also apply to the mandate of the Dept of Water Affairs and Forestry to protect tree species under threat.
Categories and Measurables	<ul style="list-style-type: none"> • Critically endangered (species facing an extremely high risk of extinction in the wild) <ul style="list-style-type: none"> - reduction in population size (% reduction over last 10 years or 3 generations) - geographic range (extent of occurrence or area of occupancy with indications of fragmented locations, decline or extreme fluctuations in geographic range) - population size (number of mature individuals and % decline within certain number of years or certain number of generations, or continuing decline in mature individuals) - probability of becoming extinct in the wild (% probability of extinction within certain number of years) • Endangered (species facing a very high risk of extinction in the wild) • Vulnerable (species facing a high risk of extinction in the wild) • Near Threatened <ul style="list-style-type: none"> - close to qualifying for the three categories above • Least Concern (Lower risk) • Data Deficient <ul style="list-style-type: none"> - inadequate information

Criterion	KEYSTONE SPECIES IN SENSITIVE AND TREE-DOMINATED ECOSYSTEMS
Rationale	By protecting tree species that are key to the functioning of a particular ecosystem we can pro-actively conserve the species and hence the ecosystem generally.
Measurables	<ul style="list-style-type: none"> • Importance of species <ul style="list-style-type: none"> - in plant community or ecosystem functioning - in maintaining sensitive areas • Indirect values of keystone species <ul style="list-style-type: none"> - Number of fauna or flora species dependent on the species for survival - Degree of dependency on the keystone species (e.g. will a co-dependent species disappear completely if the tree species disappeared) - Threatened (or Red List) status of species dependent on the keystone species

Criterion	SUSTAINABILITY OF USE
Rationale	Protected status will promote and provide incentives for the sustainable use of species that may otherwise be unsustainably used
Measurables	<ul style="list-style-type: none"> • Commercial value <ul style="list-style-type: none"> - Type of use (food, medicine, timber etc.) - Products used (bark, roots, timber, fruit etc.) - Level of use (high, medium, low) - Economic value (turnover, number of jobs involved etc.) • Livelihood value <ul style="list-style-type: none"> - Type of use (food, medicine, timber etc.) - Products used (bark, roots, timber, fruit etc.) - Level of use (high, medium, low) - Economic value (turnover, number of jobs involved etc.) - Value to communities for livelihood and survival - Species protected by traditional laws and taboos (to protect species for their livelihood value) • Not resilient to use <ul style="list-style-type: none"> - Low reproductive potential and constraints to regeneration - Non-resilience to use

Criterion	CULTURAL/SPIRITUAL
Rationale	Species integral to the spiritual and cultural fabric of the various South African peoples should be preserved. Traditional protection of species for spiritual and cultural values may be enhanced or strengthened.
Measurables	<ul style="list-style-type: none"> • Is a species central to cultural and spiritual values (totem trees, tree products used in rituals, species believed to have magic properties or revered due to religious beliefs etc.)? • Is a species protected by communities for its cultural and spiritual values (traditional laws and taboos to protect species for their cultural/spiritual value)? • Does the species have a significant decorative or landscape value?

Criterion	OTHER LEGISLATIVE PROVISIONS
Rationale	Tree species that are of particular ecological or social value or that are vulnerable or under threat, should be protected under Section 12 of the NFA if not adequately protected by other legislative provisions
Measurables	<ul style="list-style-type: none"> • Is the protection of a species adequately covered by legislation other than Section 12 of the NFA? • Is the legislation applicable to a species adequately implemented?

Appendix 4 Scores associated with the criteria (criteria elaborated upon in *Appendix 3*).

• ***CRITERION 1: RED LIST STATUS/BIODIVERSITY***

2 POINTS : a) Critically endangered
 b) Endangered
 c) Vulnerable

1 POINT a) Near threatened
 b) Lower risk

0 POINTS a) Least concerned/ Low risk

• ***CRITERION 2: KEYSTONE SPECIES***

1 POINT a) Species important for ecosystem functioning or to maintain sensitive areas
 b) Significant number of fauna and flora species dependent on the tree species for survival, high degree of dependence and/or Red List status of dependent species

0 POINTS a) None of the above

• ***CRITERION 3: SUSTAINABILITY OF USE***

1 POINT: a) Significant commercial value
 b) Significant livelihood value for communities
 c) Non-resilience to use

0 POINTS a) No or insignificant unsustainable use

• ***CRITERION 4: CULTURAL/SPIRITUAL VALUE***

1 POINT: a) Species important to cultural or spiritual values of communities
 b) High landscape value

• ***CRITERION 5: LEGISLATIVE PROVISIONS***

0 POINTS: Adequate legislative protection in the distribution range of a species (and in some cases also in the provinces where protected species are imported, traded or exported)

1 POINT: Partial legislative protection of a species (inadequate implementation or species not protected throughout its distribution range)

2 POINTS: Serious inadequacy of legislative measures

Appendix 5 Scores assigned for each species on the preliminary list, for each criterion (see *Appendix 4* for the designated values attached to each criterion). Notes highlighting priorities for certain species are provided in the matrix. For the Total Score, the score on the left (X/X) refers to the *Value-index* and the score on the right refers to the *Legislation-index*.

	NAT. TREE NO.	RED LIST STATUS/ BIODIVERSITY	KEYSTONE SPECIES	SUSTAINABILITY OF USE	CULTURAL/ SPIRITUAL	LEGISLATIVE PROVISIONS	TOTAL SCORE
<i>Acacia erioloba</i>	168 △	1 1b	1 1a,b	1 1a,b	1 1b	2	4/2
<i>Acacia haematoxylon</i>	169 △	1 1b	1 1a	0	1 1b	2	3/2
<i>Acacia xanthophloea</i>	189	0	0	0 RESEARCH SUST. USE	1 1a,b	1	1/1
<i>Adansonia digitata</i>	467 △	0	1 1b	0	1 1a,b	0	2/0
<i>Afzelia quanzensis</i>	207	1 1a	0	1 1a,b,c	1 1b	2	3/2
<i>Alberta magna</i>	701 △	1 1a	0	0	0	0	1/0
<i>Albizia adianthifolia</i>	148	0	0	0 RESEARCH SUST. USE	1 1b	2	1/2
<i>Albizia suluensis</i>	156 △	2 2c	0	0	0	0 FURTHER INVESTIGATION/ EVALUATION	2/0
<i>Apodytes abottii</i>	422.1	0	0	0	0	0	0/0
<i>Apodytes dimidiata</i>	422	0	0	0	0	0	0/0
<i>Apodytes geldenhuyssii</i>	422.2	2 2c	0	0	0	0	2/0
<i>Atalaya capensis</i>	428 △	1 1a	0	0	0	0	1/0
<i>Atalaya natalensis</i>	429 △	1 1a	0	0	0	0	1/0
<i>Avicennia marina</i>	669 △	0	1 1a,b	1 1b	0	0	2/0
<i>Balanites maughamii</i>	251	0	0	1 1b	0	2 FURTHER INVESTIGATION/ EVALUATION	1/2
<i>Barringtonia racemosa</i>	524 △	0	1 1a,b	0	0	1	1/1
<i>Berchemia zeyheri</i>	450 △	0	0	0	0	1	0/1
<i>Bersama</i> spp. (6)	439-443 △	0	0	0	0	0	0/0
<i>Bersama luscens</i>	439 △	0	0	1 1b	0	0	1/0
<i>Blighia unijugata</i>	436 △	1 1b	0	0	0	0 FURTHER INVESTIGATION/ EVALUATION	1/0
<i>Bolusanthus speciosus</i>	222	0	0	0	0	2	0/2

<i>Borassus aethiopum</i> (= <i>Borassus flabellifer</i>)	25	△	1	1a	0		0		0		0	FURTHER INVESTIGATION/ EVALUATION	1/0
<i>Boscia albitrunca</i>	122		0		1	1a	1	1c	1	1b	2		3/2
<i>Boscia foetida</i> subsp. <i>longipedicellata</i>	124.1	△	1	1b	0		0		0		2		1/2
<i>Bowkeria citrina</i>	672.1	△	1	1b	0		0		0		1		1/1
<i>Brachylaena discolor</i>	724	△	0		0		0		0		2		0/2
<i>Brackenridgea zanguibarica</i>	483.1	△	1	1b	0		1	1a	0		0	FURTHER INVESTIGATION/ EVALUATION	2/0
<i>Breonadia salicina</i>	684	△	0		1	1a	0	RESEARCH SUST. USE	1	1b	1		2/1
<i>Bruguiera gymnorhiza</i>	527	△	1	1a	1	1a,b	1	1a,b RESEARCH SUST USE	0		0		3/0
<i>Calpurnia reflexus</i> (= <i>Calpurnia robinioides</i>)	220.1	△	1	1b	0	CHECK HABITAT	0		0		2	INVESTIGATE – QUALIFIES AS 'TREE' ?	1/2
<i>Cassipourea</i> spp. (8)	528 - 531.1	△	0		0		0		1	1b	0		1/0
<i>Cassipourea flanaganii</i>	528	△	1	1a	0		1	1b	0		0		2/0
<i>Cassipourea mossambicensis</i>	531	△	0		0		1	1b	0		0		1/0
<i>Cassipourea swaziensis</i>	531.3	△	2		0		1	1b	0		1		3/1
<i>Catha edulis</i>	404	△	1	1b	0		1	1b	0		2		2/2
<i>Cavacoa aurea</i>	332	△	0		0		1	1b	0		0		1/0
<i>Celtis gomphophylla</i>	40	△	1	1b	0		0		0		0		1/0
<i>Celtis mildbraedii</i>	41	△	1	1b	0		0		0		0		1/0
<i>Ceriops tagal</i>	525	△	1	1d	1	1a,b	1	1b	0		2		3/2
<i>Chionanthus battiscombei</i>	614	△	0		0		0		0		0		0/0
<i>Chionanthus peglerae</i>	616	△	0		0		0		0		0		0/0
<i>Cleistanthus schlechteri</i> var. <i>schlechteri</i>	320		0		0		1	1b,c	0		2		1/2
<i>Coffea racemosa</i>	715.1	△	0		0		0		0		2		0/2
<i>Colubrina nicholsonii</i>	453.8		2	2b	0		0		0		1		2/1
<i>Combretum collinum</i> subsp. <i>taborense</i>	541.3	△	1	1b	0		0		0		2		1/2
<i>Combretum imberbe</i>	539		1	1d	0		1	1a,b	0		2		2/2
<i>Combretum petrophilum</i>	542.1	△	1	1a	0		0		0		2		1/2
<i>Combretum vendae</i>	540.3	△	1	1b	0		0		0		2		1/2

<i>Craibia zimmermanii</i>	229	△	0		0		0		0	2	0/2	
<i>Cryptocarya angustifolia</i>	112	△	1	1b	0		0		0	2	1/2	
<i>Cryptocarya latifolia</i>	113	△	0		0		1	1b?	0	0	1/0	
<i>Cryptocarya liebertiana</i>	113.1	△	1	1b	0		1	1a	0	0	2/0	
<i>Cryptocarya myrtifolia</i>	115	△	1	1b	0		1	1a	0	0	2/0	
<i>Cryptocarya transvaalensis</i>	114	△	0		0		1	1a,c	0	0	1/0	
<i>Cryptocarya woodii</i>	116	△	0		0		0		0	0	0/0	
<i>Cryptocarya wyleii</i>	117	△	1	1b	0		0		0	0	1/0	
<i>Curtisia dentata</i>	570		1	1a	0		1	1a,b	0	0	2/0	
<i>Dahlgrenodendron natalense</i>	117.1	△	2	2b	0		0	INVESTIGATE LACK OF RECRUITMENT	0	0	2/0	
<i>Drypetes arguta</i>	313	△	0		0		0		0	0	0/0	
<i>Elaeodendron transvaalensis</i>	416	△	0		0		1	1a,b,c	1	1a	2/2	
<i>Encephalartos</i> spp. (28)	3 – 14.9	△	EVALUATE SPECIES WITH AID OF NBI (KIRSTENBOSCH)									
<i>Erythrophleum lasianthum</i>	196		0		0		0		1	1a	0	1/0
<i>Erythrophysa transvaalensis</i>	436.2	△	2	2c	0		0		0	2	2/2	
<i>Eugenia capensis</i>	553.1	△	0		1	1a	0		0	0	1/0	
<i>Eugenia erythrophylla</i>	553.3	△	0		0		0		0	0	0/0	
<i>Eugenia nataliia</i>	553.2	△	0		0		0		0	1	0/1	
<i>Eugenia umtamvunensis</i>	553.6	△	2	2c	0		0		0	0	2/0	
<i>Eugenia zeyheri</i>	553	△	1	1b	0		0		0	0	1/0	
<i>Eugenia woodii</i>	553.4	△	0		0		0		0	0	0/0	
<i>Eugenia zuluensis</i>	554	△	0		0		0		0	0	0/0	
<i>Eugenia verdoorniae</i>	554.1	△	0		0		0		0	0	0/0	
<i>Faidherbia albida</i>	159	△	0		0		0		0	2	0/2	
<i>Faurea macnaughtonii</i>	74	△	1	1b	0		1	1b	0	0	2/0	
<i>Ficus bizanae</i>	46	△	1	1b	1	1b	0		0	0	2/0	
<i>Ficus bubu</i>	56		0		1	1b	0		0	0	1/0	
<i>Ficus trichopoda</i>	54	△	0		1	1b	0		0	2	1/2	
<i>Guettarda speciosa</i>	715.3		1	1b	0		0		0	2	INVESTIGATE PROTECTION AS GROUP OF TREES UNDER NFA)	1/2
<i>Gymnosporia devenishii</i>	399.5		1	1b	0		0		0	2	1/2	

<i>Hyaenanche globosa</i>	319	△	1	1b	0		0		0		2		1/2
<i>Hyphaene coriacea</i>	23		0		0		1	1b	0		2		1/2
<i>Jubaeopsis caffra</i>	27	△	2	2c	0		0		0		0		2/0
<i>Lasiodiscus pervillei</i> subsp. <i>pervillei</i>	453.6		0		0		0		0		2		0/2
<i>Leucadendron argenteum</i>	77	△		EVALUATE TOGETHER WITH PROTEA SPECIES									
<i>Lumnitzera racemosa</i> var. <i>racemosa</i>	552		1		1	1a,b	1	1b	0		0		3/0
<i>Lydenburgia abbotii</i> (= <i>Catha abbotii</i>)	407		2	2c	0		0		0		0		2/0
<i>Lydenburgia cassinoides</i> (= <i>Catha transvaalensis</i>)	406		1	1b	0		1	1b	0		2		2/2
<i>Macaranga capensis</i> var. <i>capensis</i>	335	△	0		0		0		0		0		0/0
<i>Manilkara nicholsonii</i>	586.1	△	2	2b	0		0		0		0		2/0
<i>Maprounea africana</i>	343.1	△		INVESTIGATE – MARIE JORDAAN									
<i>Maurocena frangularia</i>	417	△	1	1b	0		0		0		0		1/0
<i>Maytenus abbotii</i>	398.1	△	2	2c	0		0		0		0		2/0
<i>Memecylon bachmannii</i>	560.1	△	0	MORE RESEARCH - PRESENCE AND ABUNDANCE	0		0		0		0		0/0
<i>Memecylon sousae</i>	560.2		1	1b	0		0		0		0		1/0
<i>Metarungia pubinervia</i>	681.3		1	1b MORE RESEARCH	0		0		0		0	INVESTIGATE – QUALIFIES AS 'TREE' ?	1/0
<i>Millettia grandis</i> (= <i>Millettia sutherlandii</i>)	227	△	0		0		1	1a,b MORE RESEARCH ON SUST. OF USE	0		0		1/0
<i>Millettia stuhlmannii</i>	228.1		1	1b	0		0		0		0		1/0
<i>Mimusops caffra</i>	583		0		1	1a,b	0		0		0		1/0
<i>Morus mesozygia</i>	44	△	1	1b	0		0	MORE RESEARCH ON SUST. OF USE	0		0		1/0
<i>Myrsine pillansii</i>	577.2	△	1	1b	0		0		0		2		1/2
<i>Newtonia hildebrandtii</i> var. <i>hildebrandtii</i>	191	△	1	1b	0		1	1a,b,c	1	1b	0	INVESTIGATE ADEQUACY OF IMPLEMENTATION – ALSO ITO S12 OF NFA	3/0
<i>Ocotea bullata</i>	118	△	1	1a	0		1	1a,b	0		0		2/0
<i>Ocotea kenyensis</i>	119	△	1	1b	0		0		0		0		1/0

<i>Olea capensis</i> subsp. <i>macrocarpa</i>	618.2	0		0		0		0		0		0/0	
<i>Olea europaea</i> subsp. <i>africana</i>	617	0		0		0		0		1		0/1	
<i>Olinia micrantha</i>	514.1		ASSESS – K BALLWELL (WITS)										
<i>Olinia radiata</i>	515	△	0		0		0		0		0	INVESTIGATE WITH RJ SEBOLA	0/0
<i>Oxyanthus pyriformis</i> subsp. <i>pyriformis</i>	696.2	△	1	1a	0		0		0		0		1/0
<i>Ozoroa concolor</i>	369.1	△	1	1b	0		0		0		2		1/2
<i>Ozoroa namaquensis</i>	373.2		2	2c	0		0		0		2		2/2
<i>Philenoptera bussei</i> (= <i>Lonchocarpus bussei</i>)	238.1	△	0		0		0		0		2		0/2
<i>Philenoptera sutherlandii</i> (= <i>Milletia sutherlandii</i>)	228		0		0		1	1a,b	0		0		1/0
<i>Philenoptera violacea</i> (= <i>Lonchocarpus capassa</i>)	238	△	0		1	1b	0		1	1a	2		2/2
<i>Pittosporum viridiflorum</i>	139		0		0		1	1a,b	0		2		1/2
<i>Podocarpus elongatus</i>	15	△	0		0		0		0		0		0/0
<i>Podocarpus falcatus</i>	16	△	0		1	1a,b	1	1a,b	1	1b	0		3/0
<i>Podocarpus henkelii</i>	17	△	0		0		1	1a,b	0		0		1/0
<i>Podocarpus latifolius</i>	18	△	0		0		1	1a,b	0		0		1/0
<i>Protea</i> spp. (30)	86		EVALUATE SPECIES WITH AID OF NBI (KIRSTENBOSCH)										
	-98.2	△											
<i>Prunus africana</i>	147	△	1	1b	0		0		0		0		1/0
<i>Pseudobersama mossambicensis</i>	302	△	1	1b	0		0		0		0		1/0
<i>Pseudosalacia streyi</i>	419.2	△	2	2b	0		0		0		0		2/0
<i>Pseudoscolopia polyantha</i>	499	△	2	2c	0		0		0		0		2/0
<i>Pterocarpus angolensis</i>	236	△	0		0		1	1a,b,c	1	1b	1		2/1
<i>Pterocarpus lucens</i> subsp. <i>antonesii</i>	236.1	△	1	1b	0		0		0		2		1/2
<i>Pterocelastrus rostratus</i>	408		0		0		1	1b	0		0		1/0
<i>Rapanea melanophloeos</i>	578		0		0		1	1a,b	0		1		1/1
<i>Rhizophora mucronata</i>	526	△	0		1	1a,b	1	1b	0		0		2/0
<i>Rhynchoscalyx lawsonioides</i>	523.1	△	2	2c	0		0		0		0		2/0
<i>Rinorea domatiosa</i>	489.1	△	0		0		0		0		0		0/0
<i>Sclerocarya birrea</i> subsp. <i>caffra</i>	360	△	0		0		1	1a,b,c	1	1a,b	2		2/2
<i>Scolopia oreophila</i>	496.1	△	2	2c	0		0		0		0		2/0

<i>Scolopia stolzii</i> var <i>stolzii</i> (= <i>Scolopia stolzii</i> var. <i>riparia</i>)	496.2	△	1	1b	0		0		0		2		1/2
<i>Sideroxylon inerme</i>	579	△	0		1	1a	0		1	1a	1		2/1
<i>Spirostachys africana</i>	341	△	0		0		1	1a	0		0		1/0
<i>Sterculia alexandri</i>	473	△	1	1b	0		0		0		0		1/0
<i>Syzygium gerrardii</i>	556		0		0		0		0		0		0/0
<i>Syzygium legatii</i>	558		1	1a	0		0		0		1		1/1
<i>Tapura fischeri</i> var. <i>pubescens</i>	304	△	1	1b	0		0		0		0		1/0
<i>Tephrosia pondoensis</i>	226.1	△	2	2c	0		0		0		2		2/2
<i>Thespesia acutiloba</i> (= <i>Thespesia populnea</i> var. <i>acutiloba</i>)	465		0		0		0		0		2		0/2
<i>Thespesia populnea</i>	465.1		2	2c	1	1a,b	0		0		0		3/0
<i>Trilepisium madagascariense</i> (= <i>Bosquiea phoberos</i>)	45	△	1	1b	0		0		0		0		1/0
<i>Umtiza listeriana</i>	205	△	1	1a	0		0		1	1a	0		2/0
<i>Vangueria soutpansbergensis</i>	703.1	△	1	1b	0		0		0		2	INVESTIGATE – QUALIFIES AS 'TREE' ?	1/2
<i>Voacanga thouarsii</i>	646		0		0		0		0		0		0/0
<i>Warburgia salutaris</i>	488	△	2	2b	0		1	1a,b	0		0		3/0
<i>Widdringtonia cedarbergensis</i>	19	△	2	2a	0		0		1	1b	0		3/0
<i>Widdringtonia nodiflora</i>	20	△	0		0		0		1	1b	1		1/1
<i>Widdringtonia schwarzii</i>	21	△	1	1a	0		0		1	1b	0		2/0
<i>Xanthocercis zambesiaca</i>	241	△	0		0		0		1	1b	1		1/1
<i>Zanthoxylum capense</i>	253	△	0		0		0		0		2		0/2
<i>Zanthoxylum davii</i>	254	△	0		0		0		0		0		0/0
<i>Zanthoxylum leprieurii</i>	255.1	△	0		0		0		0		2		0/2
<i>Zanthoxylum thorncroftii</i>	255.3	△	0		0		0		0		2		0/2

Appendix 6 Decision rules were based on scores to eliminate species from the preliminary list (preliminary list given in *Appendix 2*). For the decision rules, the score on the left (X/X) refers to the *Value-index* and the score on the right refers to the *Legislation-index*.

RULE 1: Eliminate all species that scored 0/0 (0 on the criteria and 0 on the adequacy of legislation)

These species do not have significant ecological, commercial or social value and do not face any significant threats, and are well protected by legislation (mainly the National Forests Act)

RULE 2: Eliminate all species that scored 0/1

These species do not have significant ecological, commercial or social value and do not face any significant threats, and are partially protected by legislation

RULE 3: Eliminate all species that scored 1/0

These species may have moderate ecological, commercial or social value or may face significant threats, but are well protected by legislation

RULE 4: Eliminate all species that scored 0/2

These species are not well protected by legislation, but do not have significant ecological, commercial or social value and do not face any significant threats

RULE 5: Eliminate all species that scored 1/1 (if the score was given on the basis of Red List Status or scenic value)

These species may have moderate ecological, commercial or social value or may face significant threats, but are partially protected by legislation. (species that score 1 on Red List Status are considered as near threatened, but not vulnerable or endangered. Landscape value is not considered as of equal importance to the other criteria)

RULE 6: Eliminate all species that scored 2/0

These species may have moderate to high ecological, commercial and/or social value or may face significant threats, but are well protected by legislation

RULE 7: Eliminate all species that scored 1/2 (if the score was given on the basis of Red List Status or scenic value)

These species may have moderate ecological, commercial or social value or may face significant threats, but are not protected by legislation (species that score 1 on Red List Status are considered as near threatened, but not vulnerable or endangered. Landscape value is not considered as of equal importance to the other criteria)

RULE 8: Retain all species that scored 2/1

These species have a high ecological, commercial or social value or may face significant threats, and are partially protected by legislation.

RULE 9: Retain all species that scored 3/0 and more

These species are well to poorly protected by legislation, but have a very high ecological, commercial or social value or may face significant threats (additional protection by listing the species may therefore be desirable)

RULE 10: Retain all species of commercial value that were eliminated on the scores, but of which the conservation status may change rapidly because of real or latent threats which may escalate.

Commercially important species that do not score high on any criteria, but may become threatened suddenly by commercial use.

Appendix 7 The final tree list. Species in bold are those that were also represented in the 1976 list (AS LISTED BY AN EVALUATION PANEL OF EXPERTS, INCLUDING OFFICIALS OF THE DEPARTMENT OF WATER AFFAIRS AND FORESTRY, THE NATIONAL BOTANICAL INSTITUTE, AND CERTAIN PROVINCIAL ADMINISTRATIONS). For the Final Score, the score on the left (X/X) refers to the *Value-index* and the score on the right refers to the *Legislation-index*.

Botanical Name	Common Names	SA Nr	Final Score	Ground Rule Applicable
Acacia erioloba	Camel thorn / Kameeldoring	168	4/2	Rule 9: <i>Species are well to poorly protected by legislation, but have a very high ecological, commercial or social value or may face significant threats.</i>
Acacia haematoxylon	Grey Camel thorn / Vaalkameeldoring	169	3/2	Rule 9: <i>Species are well to poorly protected by legislation, but have a very high ecological, commercial or social value or may face significant threats.</i>
Azelia quanzensis	Pod mahogany / Peulmahonie	207	3/2	Rule 9: <i>Species are well to poorly protected by legislation, but have a very high ecological, commercial or social value or may face significant threats.</i>
Balanites maughamii	Torchwood / Groendoring	251	1/2	Rule 7: <i>Species may have moderate ecological, commercial or social value or may face significant threats, but are not protected by legislation</i>
Barringtonia racemosa	Powder-puff tree / Poeierkwasboom	524	1/1	Rule 5: <i>Species may have moderate ecological, commercial or social value or may face significant threats, but are partially protected by legislation</i>
Boscia albitrunca	Shepherd's tree / Witgat	122	3/2	Rule 9: <i>Species are well to poorly protected by legislation, but have a very high ecological, commercial or social value or may face significant threats.</i>
Breonadia salicina	Matumi / Mingerhout	684	2/1	Rule 8: <i>Species have a high ecological, commercial or social value or may face significant threats, and are partially protected by legislation</i>
Bruguiera gymnorrhiza	Black mangrove / Swartwortelboom	527	3/0	Rule 9: <i>Species are well to poorly protected by legislation, but have a very high ecological, commercial or social value or may face significant threats.</i>
Cassipourea swaziensis	Swazi onionwood / Swazi uiehout	531.1	3/1	Rule 9: <i>Species are well to poorly protected by legislation, but have a very high ecological, commercial or social value or may face significant threats.</i>
Catha edulis	Bushman's tea / Boesmanstee	404	2/2	Rule 9: <i>Species are well to poorly protected by legislation, but have a very high ecological, commercial or social value or may face significant threats.</i>
Ceriops tagal	Indian mangrove / Indiese wortelboom	525	3/2	Rule 9: <i>Species are well to poorly protected by legislation, but have a very high ecological, commercial or social value or may face significant threats.</i>
Cleistanthus schlechteri var. schlechteri	Umzithi / Umzithi	320	1/2	Rule 7: <i>Species may have moderate ecological, commercial or social value or may face significant threats, but are not protected by legislation</i>
Colubrina nicholsonii	Pondo weeping thorn / Pondo treurdoring	453.8	2/1	Rule 8: <i>Species have a high ecological, commercial or social value or may face significant threats, and are partially protected by legislation</i>
Combretum imberbe	Leadwood / Hardekool	539	2/2	Rule 9: <i>Species are well to poorly protected by legislation, but have a very high ecological, commercial or social value or may face significant threats.</i>
Elaeodendron transvaalensis	Bushveld saffron / Bosveldsaffraan	416	2/2	Rule 9: <i>Species are well to poorly protected by legislation, but have a very high ecological, commercial or social value or may face significant threats.</i>
Erythrophysa transvaalensis	Bushveld red balloon / Bosveldklapperbos	436.2	2/2	Rule 9: <i>Species are well to poorly protected by legislation, but have a very high ecological, commercial or social value or may face significant threats.</i>

Ficus trichopoda	Swampfig / Moerasvy	54	1/2	Rule 7: <i>Species may have moderate ecological, commercial or social value or may face significant threats, but are not protected by legislation</i>
Lumnitzera racemosa var. racemosa	Spring-tide mangrove / Tongawortelboom	552	3/0	Rule 9: <i>Species are well to poorly protected by legislation, but have a very high ecological, commercial or social value or may face significant threats.</i>
Lydenburgia cassinoides	Sekhukhuni bushman's tea / Sekhukhune boesmanstee	406	2/2	Rule 9: <i>Species are well to poorly protected by legislation, but have a very high ecological, commercial or social value or may face significant threats.</i>
Newtonia hildebrandtii var. hildebrandtii	Lebombo wattle / Lebombo wattel	191	3/0	Rule 9: <i>Species are well to poorly protected by legislation, but have a very high ecological, commercial or social value or may face significant threats.</i>
Ocotea bullata	Stinkwood / Stinkhout	118	2/0	Rule 10: <i>Commercially important species that do not score high on any criteria, but may become threatened suddenly by commercial use</i>
Ozoroa namaquensis	Gariiep resin tree/ Gariiep harpuisboom	373.2	2/2	Rule 9: <i>Species are well to poorly protected by legislation, but have a very high ecological, commercial or social value or may face significant threats.</i>
Philenoptera violacea	Apple-leaf / Appelblaar	238	2/2	Rule 9: <i>Species are well to poorly protected by legislation, but have a very high ecological, commercial or social value or may face significant threats.</i>
Pittosporum viridiflorum	Cheesewood / Kasuur	139	1/2	Rule 7: <i>Species may have moderate ecological, commercial or social value or may face significant threats, but are not protected by legislation</i>
Podocarpus elongatus	Breede River yellowwood/ Breëriviergeelhout	15	0/0	Rule 10: <i>Commercially important species that do not score high on any criteria, but may become threatened suddenly by commercial use</i>
Podocarpus falcatus	Outeniqua yellowwood / Outniekwageelhout	16	3/0	Rule 9: <i>Species are well to poorly protected by legislation, but have a very high ecological, commercial or social value or may face significant threats.</i>
Podocarpus henkelii	Henkel's yellowwood / Henkelgeelhout	17	1/0	Rule 10: <i>Commercially important species that do not score high on any criteria, but may become threatened suddenly by commercial use</i>
Podocarpus latifolius	Real yellowwood / Opregte geelhout	18	1/0	Rule 10: <i>Commercially important species that do not score high on any criteria, but may become threatened suddenly by commercial use</i>
Pterocarpus angolensis	Wild teak / Kiaat	236	2/1	Rule 8: <i>Species have a high ecological, commercial or social value or may face significant threats, and are partially protected by legislation</i>
Rapanea melanophloeos	Cape beech / Kaapse boekenhout	578	1/1	Rule 5: <i>Species may have moderate ecological, commercial or social value or may face significant threats, but are partially protected by legislation</i>
Sclerocarya birrea subsp. caffra	Marula / Maroela	360	2/2	Rule 9: <i>Species are well to poorly protected by legislation, but have a very high ecological, commercial or social value or may face significant threats.</i>
Sideroxylon inerme	White milkwood / Witmelkhout	579	2/1	Rule 8: <i>Species have a high ecological, commercial or social value or may face significant threats, and are partially protected by legislation</i>
Tephrosia pondoensis	Pondo fish-poison pea/ Pondo visgifertjie	226.1	2/2	Rule 9: <i>Species are well to poorly protected by legislation, but have a very high ecological, commercial or social value or may face significant threats.</i>
Warburgia salutaris	Pepper-bark tree / Peperbasboom	488	3/0	Rule 9: <i>Species are well to poorly protected by legislation, but have a very high ecological, commercial or social value or may face significant threats.</i>
Widringtonia cedarbergensis	Clanwilliam cedar / Clanwilliamseder	19	3/0	Rule 9: <i>Species are well to poorly protected by legislation, but have a very high ecological, commercial or social value or may face significant threats.</i>