



SUMMARY REPORT
NON-DETRIMENT FINDINGS MADE BY THE SCIENTIFIC
AUTHORITY

31 MARCH 2017

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Introduction

In accordance with sections 61 and 62 of the National Environmental Management: Biodiversity Act (NEMBA) No. 10 of 2004, the Scientific Authority of South Africa is required to make non-detriment findings (NDFs) on the impacts of international trade on Threatened or Protected species and publish annual NDFs. The CITES Regulations furthermore requires the Scientific Authority to advise whether the export of a species listed on Appendix I or II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) will be detrimental to the survival of that species. In terms of Article IV of the Convention, an export permit may only be granted for an Appendix II species when a Scientific Authority of the State of export has advised that such export will not be detrimental to the survival of that species. For Appendix I species, specimens exported as hunting trophies as well as specimens artificially propagated or bred in captivity for commercial purposes also require NDFs to be made before export may be allowed.

Through its Scientific Authority office, the South African National Biodiversity Institute (SANBI) is co-ordinating the undertaking of complex NDFs for high priority CITES species, which include:

1. Threatened species with small populations traded in very high / high / moderate / low volumes
2. Threatened species traded in very high / high / moderate volumes
3. Near Threatened / Data Deficient / Rare / Declining species traded in very high / high volumes
4. Species not falling into one of the above categories but which are traded in very high volumes

Non-detriment findings approved by the Scientific Authority are summarized in section 1 (full documents can be obtained from the SANBI (M.Pfab@sanbi.org.za)). Progress with the publication process is also indicated in this section. Sections 2 and 3 list plant and animal species for which NDFs are currently underway. Prior to publication for implementation, provincial Scientific Authority members must advise on permit applications in accordance with the best available information as contained in the approved NDFs (Figure 1). In the absence of an approved NDF, the relevant provincial scientist must provide NDF advice on the proposed export of CITES species in consultation with the Scientific Authority through the provincial representative and/or the scientific co-ordinator (Michèle Pfab; M.Pfab@sanbi.org.za).

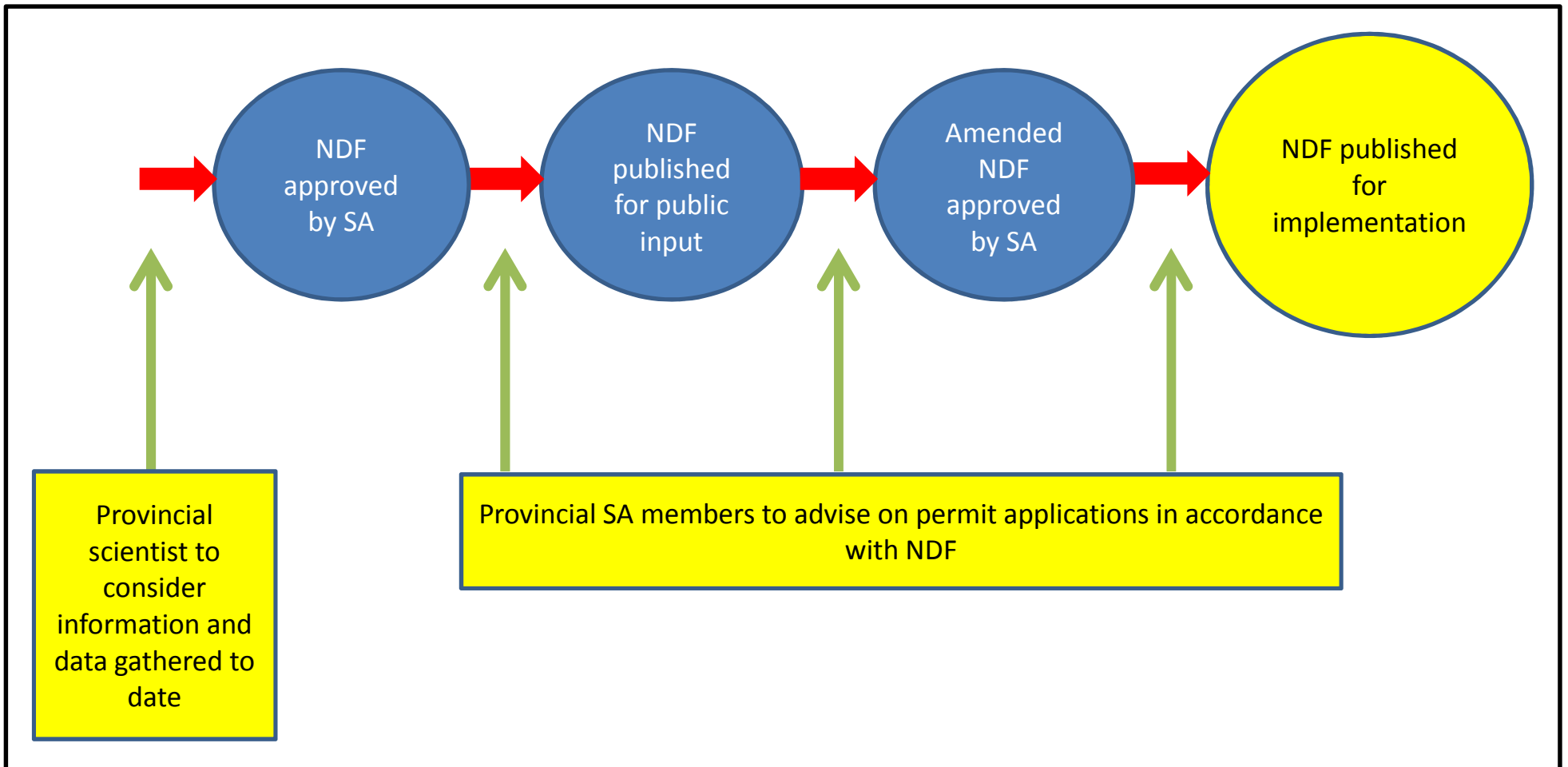


Figure 1. Steps in the process of making and publishing non-detriment findings (NDFs). The role of the provincial Scientific Authority (SA) representatives is indicated.

1. NDFs approved by the Scientific Authority

A. NDFs published for implementation

Ceratotherium simum simum (white rhinoceros) (May 2016)

Legal international trade in live animals and the export of hunting trophies poses a low risk to the survival of this species in South Africa and should be allowed to continue, provided that the amended norms and standards for the marking of rhinoceros and rhinoceros horn and for the hunting of rhinoceros for trophy hunting purposes (April 2012) are effectively enforced. In fact, continued legal hunting of white rhinoceros is essential for the conservation and protection of the species in South Africa. Currently legal and illegal harvests combined are still within sustainable levels. Between 73 and 91 white rhinos are currently legally hunted annually (0.4-0.5% of the national population), while approximately 5.7% of the national population is currently lost to poachers, remaining below the net 7.1% rate of increase in the white rhino population. The population is thus currently growing at about 1-2% per annum.

Encephalartos aemulans (Ngotshe cycad) (May 2016)

Current trade in artificially propagated specimens of *E. aemulans* is detrimental. The Scientific Authority is unable to state with any confidence that parental stock is cultivated (as defined in the CITES Resolution Conf. 11.11 (Rev. CoP15)) in all cases of export since (1) evidence of legal acquisition is dubious and (2) the data at hand suggest that some parental stock has been obtained in a manner detrimental to the wild population. It is therefore recommended that *E. aemulans* seedlings may only be exported if the nursery is registered in accordance with the CITES Resolution Conf. 9.19 (Rev. CoP15), and

- i. The seedlings are artificially propagated in accordance with the CITES Resolution Conf. 11.11 (Rev. CoP15), or
- ii. The seedlings have been grown from wild harvested seed in accordance with the conditions specified in the CITES Resolution Conf. 11.11 (Rev. CoP15) and within the framework of a Biodiversity Management Plan published in terms of section 43 of the NEMBA.

Each nursery applying for CITES registration must be audited in accordance with a decision tree to be developed by the Scientific Authority within 3 months of the publication of this NDF, and regular follow up audits must be conducted in order to monitor seedling propagation. All parental plants must

- i. Be accompanied by TOPS possession permits and affidavits from the owner stating that the plants are not of wild origin, and

- ii. Not exhibit any characteristics typical of wild origin. Guidelines for the identification of wild characteristics will be developed by the Scientific Authority within 3 months of the publication of this NDF.

The export of large artificially propagated specimens (with a stem diameter of more than 15 cm) is prohibited (Government Notice 371, May 2012).

Encephalartos cerinus (waxen cycad) (May 2016)

Current trade in artificially propagated specimens of *E. cerinus* is detrimental. The Scientific Authority is unable to state with any confidence that parental stock is cultivated (as defined in the CITES Resolution Conf. 11.11 (Rev. CoP15)) in all cases of export since (1) evidence of legal acquisition is dubious and (2) the data at hand suggest that some parental stock has been obtained in a manner detrimental to the wild population. It is therefore recommended that *E. cerinus* seedlings may only be exported if the nursery is registered in accordance with the CITES Resolution Conf. 9.19 (Rev. CoP15), and

- i. The seedlings are artificially propagated in accordance with the CITES Resolution Conf. 11.11 (Rev. CoP15), or
- ii. The seedlings have been grown from wild harvested seed in accordance with the conditions specified in the CITES Resolution Conf. 11.11 (Rev. CoP15) and within the framework of a Biodiversity Management Plan published in terms of section 43 of the NEMBA.

Each nursery applying for CITES registration must be audited in accordance with a decision tree to be developed by the Scientific Authority within 3 months of the publication of this NDF, and regular follow up audits must be conducted in order to monitor seedling propagation. All parental plants must

- i. Be accompanied by TOPS possession permits and affidavits from the owner stating that the plants are not of wild origin, and
- ii. Not exhibit any characteristics typical of wild origin. Guidelines for the identification of wild characteristics will be developed by the Scientific Authority within 3 months of the publication of this NDF.

The export of large artificially propagated specimens (with a stem diameter of more than 7 cm) is prohibited (Government Notice 371, May 2012).

Encephalartos cupidus (Blyde River cycad) (May 2016)

Current trade in artificially propagated specimens of *E. cupidus* is detrimental. The Scientific Authority is unable to state with any confidence that parental stock is cultivated (as defined in the CITES Resolution Conf. 11.11 (Rev. CoP15)) in all cases of export since (1) evidence of legal acquisition is dubious and (2) the data at hand suggest that some parental stock has been obtained in a manner

detrimental to the wild population. It is therefore recommended that *E. cupidus* seedlings may only be exported if the nursery is registered in accordance with the CITES Resolution Conf. 9.19 (Rev. CoP15), and

- i. The seedlings are artificially propagated in accordance with the CITES Resolution Conf. 11.11 (Rev. CoP15), or
- ii. The seedlings have been grown from wild harvested seed in accordance with the conditions specified in the CITES Resolution Conf. 11.11 (Rev. CoP15) and within the framework of a Biodiversity Management Plan published in terms of section 43 of the NEMBA.

Each nursery applying for CITES registration must be audited in accordance with a decision tree to be developed by the Scientific Authority within 3 months of the publication of this NDF, and regular follow up audits must be conducted in order to monitor seedling propagation. All parental plants must

- i. Be accompanied by TOPS possession permits and affidavits from the owner stating that the plants are not of wild origin, and
- ii. Not exhibit any characteristics typical of wild origin. Guidelines for the identification of wild characteristics will be developed by the Scientific Authority within 3 months of the publication of this NDF.

The export of large artificially propagated specimens (with a stem diameter of more than 7 cm) is prohibited (Government Notice 371, May 2012).

Encephalartos dolomiticus (Wolkberg cycad) (May 2016)

Current trade in artificially propagated specimens of *E. dolomiticus* is detrimental. The Scientific Authority is unable to state with any confidence that parental stock is cultivated (as defined in the CITES Resolution Conf. 11.11 (Rev. CoP15)) in all cases of export since (1) evidence of legal acquisition is dubious and (2) the data at hand suggest that some parental stock has been obtained in a manner detrimental to the wild population. It is therefore recommended that *E. dolomiticus* seedlings may only be exported if the nursery is registered in accordance with the CITES Resolution Conf. 9.19 (Rev. CoP15), and

- i. The seedlings are artificially propagated in accordance with the CITES Resolution Conf. 11.11 (Rev. CoP15), or
- ii. The seedlings have been grown from wild harvested seed in accordance with the conditions specified in the CITES Resolution Conf. 11.11 (Rev. CoP15) and within the framework of a Biodiversity Management Plan published in terms of section 43 of the NEMBA.

Each nursery applying for CITES registration must be audited in accordance with a decision tree to be developed by the Scientific Authority within 3 months of the publication of this NDF, and regular follow up audits must be conducted in order to monitor seedling propagation. All parental plants must

- i. Be accompanied by TOPS possession permits and affidavits from the owner stating that the plants are not of wild origin, and
- ii. Not exhibit any characteristics typical of wild origin. Guidelines for the identification of wild characteristics will be developed by the Scientific Authority within 3 months of the publication of this NDF.

The export of large artificially propagated specimens (with a stem diameter of more than 15 cm) is prohibited (Government Notice 371, May 2012).

Encephalartos dyerianus (Lowveld cycad / Lillie cycad) (May 2016)

Current trade in artificially propagated specimens of *E. dyerianus* is detrimental. The Scientific Authority is unable to state with any confidence that parental stock is cultivated (as defined in the CITES Resolution Conf. 11.11 (Rev. CoP15)) in all cases of export since (1) evidence of legal acquisition is dubious and (2) the data at hand suggest that some parental stock has been obtained in a manner detrimental to the wild population. It is therefore recommended that *E. dyerianus* seedlings may only be exported if the nursery is registered in accordance with the CITES Resolution Conf. 9.19 (Rev. CoP15), and

- i. The seedlings are artificially propagated in accordance with the CITES Resolution Conf. 11.11 (Rev. CoP15), or
- ii. The seedlings have been grown from wild harvested seed in accordance with the conditions specified in the CITES Resolution Conf. 11.11 (Rev. CoP15) and within the framework of a Biodiversity Management Plan published in terms of section 43 of the NEMBA.

Each nursery applying for CITES registration must be audited in accordance with a decision tree to be developed by the Scientific Authority within 3 months of the publication of this NDF, and regular follow up audits must be conducted in order to monitor seedling propagation. All parental plants must

- i. Be accompanied by TOPS possession permits and affidavits from the owner stating that the plants are not of wild origin, and
- ii. Not exhibit any characteristics typical of wild origin. Guidelines for the identification of wild characteristics will be developed by the Scientific Authority within 3 months of the publication of this NDF.

The export of large artificially propagated specimens (with a stem diameter of more than 15 cm) is prohibited (Government Notice 371, May 2012).

Encephalartos heenanii (woolly cycad) (May 2016)

Current trade in artificially propagated specimens of *E. heenanii* is detrimental. The Scientific Authority is unable to state with any confidence that parental stock is cultivated (as defined in the CITES Resolution Conf. 11.11 (Rev. CoP15)) in all cases of export since (1) evidence of legal acquisition is dubious and (2) the data at hand suggest that some parental stock has been obtained in a manner detrimental to the wild population. It is therefore recommended that *E. heenanii* seedlings may only be exported if the nursery is registered in accordance with the CITES Resolution Conf. 9.19 (Rev. CoP15), and

- i. The seedlings are artificially propagated in accordance with the CITES Resolution Conf. 11.11 (Rev. CoP15), or
- ii. The seedlings have been grown from wild harvested seed in accordance with the conditions specified in the CITES Resolution Conf. 11.11 (Rev. CoP15) and within the framework of a Biodiversity Management Plan published in terms of section 43 of the NEMBA, or
- iii. The seedlings have been grown from legal (TOPS possession permits issued prior to May 2012) wild origin parental plants and a portion of the seed / seedlings are made available for the recovery of the species within the framework of a Biodiversity Management Plan published in terms of section 43 of the NEMBA.

Each nursery applying for CITES registration must be audited in accordance with a decision tree to be developed by the Scientific Authority within 3 months of the publication of this NDF, and regular follow up audits must be conducted in order to monitor seedling propagation. All parental plants must

- i. Be accompanied by TOPS possession permits and, with the exception of scenario (iii) above, affidavits from the owner stating that the plants are not of wild origin, and
- ii. Not exhibit any characteristics typical of wild origin, with the exception of wild origin parental plants considered in scenario (iii) above. Guidelines for the identification of wild characteristics will be developed by the Scientific Authority within 3 months of the publication of this NDF.

The export of large artificially propagated specimens (with a stem diameter of more than 15 cm) is prohibited (Government Notice 371, May 2012).

Encephalartos hirsutus (Venda cycad) (May 2016)

Current trade in artificially propagated specimens of *E. hirsutus* is detrimental. The Scientific Authority is unable to state with any confidence that parental stock is cultivated (as defined in the CITES Resolution Conf. 11.11 (Rev. CoP15)) in all cases of export since (1) evidence of legal acquisition is dubious and (2) the data at hand suggest that some parental stock has been obtained in a manner detrimental to the wild population. It is therefore recommended that *E. hirsutus* seedlings may only be

exported if the nursery is registered in accordance with the CITES Resolution Conf. 9.19 (Rev. CoP15), and

- i. The seedlings are artificially propagated in accordance with the CITES Resolution Conf. 11.11 (Rev. CoP15), or
- ii. The seedlings have been grown from wild harvested seed in accordance with the conditions specified in the CITES Resolution Conf. 11.11 (Rev. CoP15) and within the framework of a Biodiversity Management Plan published in terms of section 43 of the NEMBA, or
- iii. The seedlings have been grown from legal (TOPS possession permits issued prior to May 2012) wild origin parental plants and a portion of the seed / seedlings are made available for the recovery of the species within the framework of a Biodiversity Management Plan published in terms of section 43 of the NEMBA.

Each nursery applying for CITES registration must be audited in accordance with a decision tree to be developed by the Scientific Authority within 3 months of the publication of this NDF, and regular follow up audits must be conducted in order to monitor seedling propagation. All parental plants must

- i. Be accompanied by TOPS possession permits and, with the exception of scenario (iii) above, affidavits from the owner stating that the plants are not of wild origin, and
- ii. Not exhibit any characteristics typical of wild origin, with the exception of wild origin parental plants considered in scenario (iii) above. Guidelines for the identification of wild characteristics will be developed by the Scientific Authority within 3 months of the publication of this NDF.

The export of large artificially propagated specimens (with a stem diameter of more than 15 cm) is prohibited (Government Notice 371, May 2012).

Encephalartos inopinus (Lydenburg cycad) (May 2016)

Current trade in artificially propagated specimens of *E. inopinus* is detrimental. The Scientific Authority is unable to state with any confidence that parental stock is cultivated (as defined in the CITES Resolution Conf. 11.11 (Rev. CoP15)) in all cases of export since (1) evidence of legal acquisition is dubious and (2) the data at hand suggest that some parental stock has been obtained in a manner detrimental to the wild population. It is therefore recommended that *E. inopinus* seedlings may only be exported if the nursery is registered in accordance with the CITES Resolution Conf. 9.19 (Rev. CoP15), and

- i. The seedlings are artificially propagated in accordance with the CITES Resolution Conf. 11.11 (Rev. CoP15), or
- ii. The seedlings have been grown from wild harvested seed in accordance with the conditions specified in the CITES Resolution Conf. 11.11 (Rev. CoP15) and within the

framework of a Biodiversity Management Plan published in terms of section 43 of the NEMBA, or

- iii. The seedlings have been grown from legal (TOPS possession permits issued prior to May 2012) wild origin parental plants and a portion of the seed / seedlings are made available for the recovery of the species within the framework of a Biodiversity Management Plan published in terms of section 43 of the NEMBA.

Each nursery applying for CITES registration must be audited in accordance with a decision tree to be developed by the Scientific Authority within 3 months of the publication of this NDF, and regular follow up audits must be conducted in order to monitor seedling propagation. All parental plants must

- i. Be accompanied by TOPS possession permits and, with the exception of scenario (iii) above, affidavits from the owner stating that the plants are not of wild origin, and
- ii. Not exhibit any characteristics typical of wild origin, with the exception of wild origin parental plants considered in scenario (iii) above. Guidelines for the identification of wild characteristics will be developed by the Scientific Authority within 3 months of the publication of this NDF.

The export of large artificially propagated specimens (with a stem diameter of more than 15 cm) is prohibited (Government Notice 371, May 2012).

Encephalartos laevifolius (Kaapsehoop cycad) (May 2016)

Current trade in artificially propagated specimens of *E. laevifolius* is detrimental. The Scientific Authority is unable to state with any confidence that parental stock is cultivated (as defined in the CITES Resolution Conf. 11.11 (Rev. CoP15)) in all cases of export since (1) evidence of legal acquisition is dubious and (2) the data at hand suggest that some parental stock has been obtained in a manner detrimental to the wild population. It is therefore recommended that *E. laevifolius* seedlings may only be exported if the nursery is registered in accordance with the CITES Resolution Conf. 9.19 (Rev. CoP15), and

- i. The seedlings are artificially propagated in accordance with the CITES Resolution Conf. 11.11 (Rev. CoP15), or
- ii. The seedlings have been grown from wild harvested seed in accordance with the conditions specified in the CITES Resolution Conf. 11.11 (Rev. CoP15) and within the framework of a Biodiversity Management Plan published in terms of section 43 of the NEMBA.

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- ii. Not exhibit any characteristics typical of wild origin. Guidelines for the identification of wild characteristics will be developed by the Scientific Authority within 3 months of the publication of this NDF.

The export of large artificially propagated specimens (with a stem diameter of more than 15 cm) is prohibited (Government Notice 371, May 2012).

Encephalartos latifrons (Albany cycad) (May 2016)

The current trade in artificially propagated specimens of *E. latifrons* is considered to be detrimental. The Scientific Authority is unable to state with any confidence that parental stock is cultivated (as defined in the CITES Resolution Conf. 11.11 (Rev. CoP15)) in all cases of export since (1) evidence of legal acquisition is dubious and (2) the data at hand suggest that some parental stock has been obtained in a manner detrimental to the wild population. It is therefore recommended that *E. latifrons* seedlings may only be exported if the nursery is registered in accordance with the CITES Resolution Conf. 9.19 (Rev. CoP15), and

- i. The seedlings are artificially propagated in accordance with the CITES Resolution Conf. 11.11 (Rev. CoP15), or
- ii. The seedlings have been grown from wild harvested seed in accordance with the conditions specified in the CITES Resolution Conf. 11.11 (Rev. CoP15) and within the framework of a Biodiversity Management Plan published in terms of section 43 of the NEMBA.

Each nursery applying for CITES registration must be audited in accordance with a decision tree to be developed by the Scientific Authority within 3 months of the publication of this NDF, and regular follow up audits must be conducted in order to monitor seedling propagation. All parental plants must

- i. Be accompanied by TOPS possession permits and affidavits from the owner stating that the plants are not of wild origin, and
- ii. Not exhibit any characteristics typical of wild origin. Guidelines for the identification of wild characteristics will be developed by the Scientific Authority within 3 months of the publication of this NDF.

The export of large artificially propagated specimens (with a stem diameter of more than 15 cm) is prohibited (Government Notice 371, May 2012).

Encephalartos middelburgensis (Middelburg cycad) (May 2016)

Current trade in artificially propagated specimens of *E. middelburgensis* is detrimental. The Scientific Authority is unable to state with any confidence that parental stock is cultivated (as defined in the CITES Resolution Conf. 11.11 (Rev. CoP15)) in all cases of export since (1) evidence of legal acquisition is dubious and (2) the data at hand suggest that some parental stock has been obtained in a manner detrimental to the wild population. It is therefore recommended that *E. middelburgensis* seedlings may only be exported if the nursery is registered in accordance with the CITES Resolution Conf. 9.19 (Rev. CoP15), and

- i. The seedlings are artificially propagated in accordance with the CITES Resolution Conf. 11.11 (Rev. CoP15), or
- ii. The seedlings have been grown from wild harvested seed in accordance with the conditions specified in the CITES Resolution Conf. 11.11 (Rev. CoP15) and within the framework of a Biodiversity Management Plan published in terms of section 43 of the NEMBA.

Each nursery applying for CITES registration must be audited in accordance with a decision tree to be developed by the Scientific Authority within 3 months of the publication of this NDF, and regular follow up audits must be conducted in order to monitor seedling propagation. All parental plants must

- i. Be accompanied by TOPS possession permits and affidavits from the owner stating that the plants are not of wild origin, and
- ii. Not exhibit any characteristics typical of wild origin. Guidelines for the identification of wild characteristics will be developed by the Scientific Authority within 3 months of the publication of this NDF.

The export of large artificially propagated specimens (with a stem diameter of more than 15 cm) is prohibited (Government Notice 371, May 2012).

Encephalartos msinganus (Msinga cycad) (May 2016)

Current trade in artificially propagated specimens of *E. msinganus* is detrimental. The Scientific Authority is unable to state with any confidence that parental stock is cultivated (as defined in the CITES Resolution Conf. 11.11 (Rev. CoP15)) in all cases of export since (1) evidence of legal acquisition is dubious and (2) the data at hand suggest that some parental stock has been obtained in a manner detrimental to the wild population. It is therefore recommended that *E. msinganus* seedlings may only be exported if the nursery is registered in accordance with the CITES Resolution Conf. 9.19 (Rev. CoP15), and

- i. The seedlings are artificially propagated in accordance with the CITES Resolution Conf. 11.11 (Rev. CoP15), or

- ii. The seedlings have been grown from wild harvested seed in accordance with the conditions specified in the CITES Resolution Conf. 11.11 (Rev. CoP15) and within the framework of a Biodiversity Management Plan published in terms of section 43 of the NEMBA.

Each nursery applying for CITES registration must be audited in accordance with a decision tree to be developed by the Scientific Authority within 3 months of the publication of this NDF, and regular follow up audits must be conducted in order to monitor seedling propagation. All parental plants must

- i. Be accompanied by TOPS possession permits and affidavits from the owner stating that the plants are not of wild origin, and
- ii. Not exhibit any characteristics typical of wild origin. Guidelines for the identification of wild characteristics will be developed by the Scientific Authority within 3 months of the publication of this NDF.

The export of large artificially propagated specimens (with a stem diameter of more than 15 cm) is prohibited (Government Notice 371, May 2012).

Hippopotamus amphibius (hippopotamus) (May 2016)

International trade poses a low risk to this species in South Africa. The species is well managed and the Scientific Authority does not have any current concerns relating to the harvest of the species.

B. NDFs published for public input

Aloe plicatilis (= *Kumara plicatilis*) (fan aloe) (May 2015)

Excepting for large plants (with stems greater than 1 m tall), the demand for *A. plicatilis* is largely met by plants propagated in nurseries from seed or through tissue culture and there is no evidence to suggest that current international trade is detrimental to the species. As such, the export of artificially propagated specimens may continue. Under the current management regime export of wild-sourced specimens would place the wild population of *A. plicatilis* at a moderate to high risk of overharvesting and render trade detrimental. Available data suggest that there are however methods that could be employed to ensure sustainable harvest, but the management system for the species must be improved before wild harvest can be considered. Any wild harvest must be conducted in accordance with a harvest plan that specifies restrictions to prevent overuse, and this must be accompanied by monitoring, improved access control to wild populations and a dedicated permitting system.

Damaliscus pygargus pygargus (bontebok) (May 2015)

Legal local and international trade in live animals and the export of hunting trophies at present poses a moderate risk to the survival of this subspecies in South Africa, which can neither be deemed detrimental nor non-detrimental. This moderate risk however is mostly due to a lack of management and monitoring of bontebok off-takes. With the development and effective implementation of a Biodiversity Management Plan (BMP) in terms of section 43 of the NEMBA to improve both management and monitoring, trade will be non-detrimental. It is recommended that the BMP includes a meta-population management plan and addresses the following:

1. The long term monitoring of harvest in the form of translocation and trophy hunting,
2. Guidelines for the management and regulation of harvest,
3. Incentives to increase habitat conservation benefits from the harvest of bontebok, especially within the natural and extended natural distribution range.

Equus zebra zebra (Cape mountain zebra) (May 2015)

Legal local and international trade in live animals and the export of hunting trophies at present poses a moderate to high risk to the survival of this subspecies in South Africa. This however is mostly due to a lack of meta-population management and low conservation incentives derived from the harvest of Cape mountain zebra. If a small hunting quota was to be introduced, it will likely increase the economic value of the Cape mountain zebra, which is anticipated to generate species and habitat conservation incentives. If the Cape mountain zebra had a higher economic value, there would be more of an incentive to conserve the subspecies and limit the introduction of alternative high-value extra-limital species that can lead to habitat deterioration. More landowners investing in the subspecies will increase its abundance and improve its conservation status within its natural distribution range. It is however important that the quota be based on sound ecological principles, and that its impact on numbers and the overall heterozygosity of the population be monitored. The development and effective implementation of a Biodiversity Management Plan (BMP) will further improve the management and monitoring of the Cape mountain zebra. If a small quota and a BMP are introduced in parallel it will lead to a non-detriment finding for this subspecies. The following is thus recommended

1. A small cautious hunting quota must be determined through a population viability analysis that considers genetic diversity within the population. The implementation of the quota must be monitored through a research project.
2. A Biodiversity management Plan must be developed and implemented to improve the meta-population management of the Cape mountain zebra.

Upon implementation of recommendations 1 and 2 above, the export of hunting trophies can be allowed.

Panthera leo (African lion) (May 2015)

Legal local and international trade in lion poses a low to moderate, but non-detrimental risk to the species in South Africa. The species is well managed and the Scientific Authority does not have any current concerns relating to the export of lion in accordance with Article IV of CITES. It is suggested that guidelines for the hunting of wild lion be developed for the South African context making use of the most current scientific information.

Panthera pardus (leopard) (May 2015)

Legal local and international trade in live animals and the export of hunting trophies at present poses a high risk to the survival of this species in South Africa. This is mostly due to poor management of harvest practices and a lack of reliable monitoring of leopard populations. National norms and standards (section 9 of the National Environmental Management: Biodiversity Act 10 of 2004 (NEMBA)) are required to address current shortcomings in the management of leopard trophy hunting and putative DCAs. Similarly, monitoring frameworks that reliably track leopard population trends should be implemented by all provinces. This will facilitate adaptive management of the harvest of the species, as well as provide insight on the effects of the illegal off-take of leopards.

C. NDFs to be submitted to the Minister for publication for public input

Acinonyx jubatus (cheetah) (December 2015)

Any international or local trade in wild specimens poses a high risk to this species in South Africa. The Scientific Authority is unable to state with any confidence that the export of wild specimens of *Acinonyx jubatus* from South Africa will not have a detrimental impact on the wild population and therefore recommends a zero export quota for wild-sourced specimens. A quota for hunting trophies should only be considered once there is:

- i) an improved understanding of cheetah abundance and trends in the national population;
- ii) an improved understanding of the threats to cheetah populations in South Africa;
- iii) an improved understanding of illegal off-takes, including the illegal control of damage causing animals and the illegal harvest of live cheetahs to supply the captive trade;
- iv) an improved understanding of the conservation benefits of trophy hunting; and
- v) an improved system for monitoring the legal harvest of cheetah (hunting and DCA removal).

The Scientific Authority is furthermore unable to state with any confidence that the export of captive-bred specimens of *A. jubatus* from South Africa will not have a detrimental impact on the wild population. It is therefore recommended that the following measures be introduced to improve the management of captive-bred cheetahs and to ensure that no wild specimens are traded as "captive-bred".

- i) All captive-bred cheetah must be recorded in a studbook that keeps records of dates of births and deaths, translocations and sales (with blood or tissue samples taken from dead animals for DNA fingerprinting);
- ii) all cheetah in captivity must be individually identifiable through identification photographs and micro-chips and DNA fingerprints;
- iii) all specimens to be exported internationally must first be verified as offspring of captive-bred parents through DNA analyses;
- iv) any facility exporting internationally must be registered with the Management Authority in compliance with the TOPS and CITES regulations; and
- v) criteria for registered cheetah breeding facilities must be developed within 3 months of the publication of this NDF.

Once the Management Authority has confirmed that these measures are in place, trade can be allowed from those facilities meeting all requirements.

Loxodonta africana (African elephant) (December 2015)

Local and international trade in elephant poses a low and non-detrimental risk for the species in South Africa. The species is well managed in South Africa and the Scientific Authority does not have any current concerns relating to the export of elephants in accordance with Article IV of CITES. The growing market for the trophy hunting of large-tusked bulls could however decrease the average tusk size of elephants within South Africa and potentially result in a loss of genetic diversity. Over exploitation of older bulls may socially disrupt elephant populations. Furthermore, the hunting of females has behavioural consequences not only for the individual's offspring but for the entire family unit. It is therefore recommended that guidelines for the trophy hunting of elephants be developed.

The current offtake of bulls as DCAs from the GMTFCA elephant population exceeds the 10 trophy bulls that can be harvested sustainably per annum for the entire population (inclusive of Botswana and Zimbabwe). It is therefore recommended that DCA or hunting trophy removals from this population in South Africa be reduced to no more than 5 bulls per annum, while the offtake from the entire GMTFCA elephant population must be addressed.

The Scientific Authority is cognizant of the increased poaching of elephant and the illegal trade in ivory in other parts of Africa and will review this NDF assessment should the number of poaching incidents in South Africa increase.

Philantomba monticola (blue duiker) (February 2017)

Legal local and international trade in live animals and the export of hunting trophies at present poses a moderate to high risk to the survival of this species in South Africa and is detrimental to the species in the wild. This outcome is mostly due to a lack of monitoring of blue duiker populations and off-takes. With improved monitoring of blue duiker populations in key protected areas and sound monitoring

protocols with agreed thresholds to guide adaptive harvest management in all areas where blue duiker are hunted, trade will be non-detrimental.

The following is thus recommended:

1. Monitoring of blue duiker populations within key protected areas are improved to better understand population trends and the effectiveness of protection for blue duiker within protected areas.
2. Exports of specimens originating from the Kowie-Kariega Conservancy in the Eastern Cape may continue after a monitoring protocol with agreed thresholds to guide adaptive harvest management and ensure sustainable offtakes is approved by the Scientific Authority.
3. All other exports of blue duiker should cease.
 - a. Exports of specimens originating from other potential hunting areas within the blue duiker distribution range will be considered after an adaptive harvest management model is approved by the Scientific Authority for implementation within a conservancy framework.

Poicephalus fuscicollis suahelicus (grey-headed parrot) (December 2015)

Any international and/or local trade in wild specimens poses a high risk to this subspecies in South Africa. The Scientific Authority is unable to state with any confidence that the trade in *P. fuscicollis suahelicus* from South Africa will not have a detrimental impact on the wild population in South Africa. The Scientific Authority is therefore unable to issue a positive NDF for *P. fuscicollis suahelicus* at this time and trade must therefore be confined to captive-bred specimens. As chicks of many parrot species look alike, identifying grey-headed parrot chicks would be very difficult for law enforcers. As such only captive-bred birds once fledged with juvenile plumage or older can be traded.

Since the extent of illegal trading in this subspecies is high, it is recommended that measures be taken to ensure that no wild specimens are traded as “captive-bred”; specifically all specimens for export must be verified as offspring of captive birds through DNA analyses.

The following is recommended to improve the management of captive-bred grey-headed parrots:

- i) Captive-bred birds must be recorded in the Pan African Association of Zoos and Aquaria Stud Book;
- ii) Captive-bred birds must be marked with closed rings and/or micro-chipped, and DNA fingerprinted;
- iii) all breeders must keep records of breeding and mortality (dates of births and deaths, with blood samples taken from dead birds for DNA fingerprinting);
- iv) all breeders exporting grey-headed parrots internationally must be registered with the Management Authority in compliance with the TOPS and CITES regulations.

A decision tree or inspection checklist to assist Environmental Management Inspectors with verifying specimens as “captive-bred” in accordance with CITES provisions must be developed by the Scientific Authority within 3 months of publication of this NDF.

Poicephalus robustus (Cape parrot) (December 2015)

Any international and local trade in wild specimens poses a high risk to this species. The Scientific Authority is unable to state with any confidence that the trade in *P. robustus* from South Africa will not have a detrimental impact on the wild population. The Scientific Authority is therefore unable to issue a positive NDF for *P. robustus* at this time and trade must therefore be confined to captive-bred specimens. As chicks of many parrot species look alike, identifying Cape parrot chicks would be very difficult for law enforcers. As such only captive-bred birds once fledged with juvenile plumage or older can be traded.

Since the extent of illegal trading in this species is unknown, it is recommended that measures be taken to ensure that no wild specimens are traded as “captive-bred”; specifically all specimens for export must be verified as offspring of captive birds through DNA analyses. All shipments of grey-headed parrots must also be checked carefully by inspectors to ensure that they do not include any Cape parrots. The South African National Biodiversity Institute (SANBI) has developed an identification guide for this purpose.

The following is recommended to improve the management of captive-bred Cape parrots:

- i) captive-bred birds must be recorded in the Pan African Association of Zoos and Aquaria Stud Book;
- ii) captive-bred birds must be marked with closed rings and/or micro-chipped, and DNA fingerprinted;
- iii) breeders must keep records of breeding and mortality (dates of births and deaths, with blood samples taken from dead birds for DNA fingerprinting);
- iv) all breeders exporting Cape parrots internationally must be registered with the Management Authority in compliance with the TOPS and CITES regulations.

A decision tree or inspection checklist to assist Environmental Management Inspectors with verifying specimens as “captive-bred” in accordance with CITES provisions must be developed by the Scientific Authority within 3 months of publication of this NDF.

Smaug giganteus (sungazer) (December 2015)

Any international or local trade in wild specimens poses a high risk to this species in South Africa and is detrimental to the wild population. The Scientific Authority is therefore unable to issue a positive NDF for *S. giganteus* at this time and wild specimens of the species may not be exported (except for research or conservation purposes). Due to the uncertainty concerning the captive breeding of this species, exports of captive-bred specimens must not be allowed until scientific evidence for the successful breeding of *S. giganteus* in captivity is provided to the Scientific Authority for evaluation.

Spheniscus demersus (African penguin) (October 2015)

International or local trade in wild specimens would pose a moderate risk to this species in South Africa. However, this finding pertains only to those wild specimens that are taken into captivity for rehabilitation purposes and are subsequently deemed unfit for release back into the wild. Considering the poor conservation status of the African penguin, trade in healthy wild specimens would have a detrimental impact on the wild population. It is therefore recommended that exports of *S. demersus* be confined to captive-bred specimens and rehabilitated wild specimens that have been deemed unfit for release into the wild. All specimens exported must be registered in the African penguin studbook and marked with closed rings and/or micro-chipped. It is further recommended that national guidelines for the release of rehabilitated penguins must be developed within 3 months of the publication of this NDF.

2. Plant NDFs currently underway

Aloe ferox

Encephalartos altensteinii

Encephalartos arenarius

Encephalartos brevifoliolatus

Encephalartos caffer

Encephalartos cycadifolius

Encephalartos eugene-maraisii

Encephalartos ferox

Encephalartos friderici-guilielmi

Encephalartos ghellinckii

Encephalartos horridus

Encephalartos humilis

Encephalartos lanatus

Encephalartos lebomboensis

Encephalartos lehmannii

Encephalartos longifolius

Encephalartos natalensis

Encephalartos ngoyanus

Encephalartos nubimontanus

Encephalartos paucidentatus

Encephalartos princeps

Encephalartos senticosus

Encephalartos transvenosus

Encephalartos trispinosus

Encephalartos villosus

Encephalartos woodii

Euphorbia bupleurifolia

Euphorbia umfoloziensis

Euphorbia colliculina

Euphorbia globosa
Euphorbia schoenlandii
Euphorbia susannae
Stangeria eriopus

3. Animal NDFs currently underway

Aquila verreauxii (Verreaux's eagle)
Balearica regulorum (grey-crowned crane)
Falco biarmicus (lanner falcon)
Geronticus calvus (southern bald ibis)
Gyps coprotheres (Cape vulture)
Leptailurus serval (serval)
Sagittarius serpentarius (secretarybird)