NDF101
Ensuring the sustainability of trade in priority species

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Presentation objectives

- Introduction
- Why is a non-detriment finding required?
- Who is required to make non-detriment findings?
- What is a non-detriment finding?
- How is a non-detriment finding undertaken?
- What data are required to make non-detriment findings?
Everyone has the right:
1. to an environment that is not harmful to their health or well-being; and
2. to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that
   a. prevent pollution and ecological degradation;
   b. promote conservation; and
   c. Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

Sustainable use

NEMA: Development must be socially, environmentally and economically sustainable

Definition:
White paper (1996) – The use of components of biological diversity in a way and at a rate that does not lead to its long-term decline, thereby maintaining its potential to meet the needs and aspirations of present and future generations (NOTE: Definition of conservation includes sustainable use) (includes consumptive and non-consumptive forms of utilisation)
International trade

• Biodiversity economy
  – Bioprospecting and Wildlife Economy

• 852 SA plant taxa listed on CITES Appendices
  – 44 on App I (91% cycads); 808 on App II (245 in trade)

• 468 SA animal species listed on CITES
  – 30 listed on App. I (mainly mammals & reptiles); 416 listed on App. II

• >2000 plant species used locally for medicinal purposes
CITES

- Convention on International Trade in Endangered Species of Wild Fauna and Flora
  - (CITES) Regulations, 2010 (Government Notice No. R.173 of 5 March 2010)
- Appendix I – species threatened with extinction which are or may be affected by trade
  - Commercial trade in wild specimens prohibited
  - Countries of export may authorize trade in hunting trophies (Res Conf. 2.11 (Rev.))
  - Export permit shall only be granted when a Scientific Authority of the State of export indicates that export will not be detrimental to the survival of that species (Article III)
  - Captive bred / artificially propagated specimens = Appendix II species
- Appendix II – species that may become threatened with extinction unless trade is subject to strict regulation
  - May be traded internationally on presentation of an export permit
  - Export permit shall only be granted when a Scientific Authority of the State of export indicates that export will not be detrimental to the survival of that species (Article IV)
Who is required to make non-detriment findings?

Scientific Authority

- Established by the Minister in terms of Section 60 of the National Environmental Management: Biodiversity Act
- Committee of experts with one member from:
  - Each of the provincial conservation authorities
  - DEA
  - SANBI
  - SANParks
  - National Zoological Gardens
  - South African Museums
- Chaired by Prof John Donaldson (SANBI)
- Scientific Coordinator: Michèle Pfab (SANBI)
- Meet ± twice yearly
What is the role of the Scientific Authority?

According to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES):

- Assess whether the export of specimens of a species listed on Appendix I or II will be detrimental to the survival of that species
- Monitor exports of Appendix II species (both permits issued and actual exports)
  - Determine whether exports should be limited in order to maintain a species throughout its range at a level consistent with its role in the ecosystems in which it occurs and at levels to avoid listing in Appendix I
  - Advise the appropriate Management Authority of suitable measures to be taken to limit the grant of export permits
What is the role of the Scientific Authority?

According to the Biodiversity Act:

Assist with regulating and restricting the trade in specimens of listed threatened or protected species (TOPS)

- Monitor illegal/legal trade and advise Minister/other organs of state on these matters
- Make recommendations on permit applications in relation to undertaking restricted activities with TOPS species or prohibiting such activities
- Make non-detriment findings on impacts of international trade on TOPS species and publish annual non-detriment findings
- Advise on registration and requirements of facilities for captive breeding / artificial propagation
- Advise on amendments to TOPS listings and prohibition of restricted activities
- Advise on nomenclature of species
- Assist Minister / EMIs in identifying specimens of TOPS species
- Issue certificates verifying identification of specimens
- Any other prescribed or delegated function
What is a non-detriment finding?
NDF = science-based risk assessment

Vulnerability of the species

Management system

low risk

moderate risk

moderate risk

high risk

Trade can be considered

Trade not advisable

Vulnerability of the species
## Prioritizing CITES species

<table>
<thead>
<tr>
<th>A) Size of the national population</th>
<th>C) IUCN Red List status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Small (IUCN criteria C or D (D1) / Critically Rare species)</td>
<td>1. Critically Endangered/Extinct = 1</td>
</tr>
<tr>
<td>2. Large</td>
<td>2. Endangered = 2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B) Volumes traded (CITES exports over last 10 years)</th>
<th>D) Trends in trade (CITES exports over last 10 years)</th>
</tr>
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<tbody>
<tr>
<td>1. Very high trade volumes (&gt;10,000) = 1</td>
<td>1. Increasing = 1</td>
</tr>
<tr>
<td>2. High trade volumes (1000 -9999) = 2</td>
<td>2. Stable / no significant trend = 2</td>
</tr>
<tr>
<td>3. Moderate trade volumes (250-999) = 3</td>
<td>3. Decreasing = 3</td>
</tr>
<tr>
<td>4. Low trade volumes (10-249) = 4</td>
<td>4. Sporadic = 4 (one or two trade events)</td>
</tr>
<tr>
<td>5. Negligible trade (&lt;10) = 5</td>
<td></td>
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<tr>
<td>6. No trade = 6</td>
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</table>
How is a non-detriment finding undertaken?
# CITES NDF checklist

<table>
<thead>
<tr>
<th><strong>2.1. Life history: What is the species’ life history?</strong></th>
<th><strong>High reproductive rate, long-lived</strong></th>
<th><strong>High reproductive rate, short-lived</strong></th>
<th><strong>Low reproductive rate, long-lived</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2.7. National population trend: What is the recent national population</strong></td>
<td><strong>Increasing</strong></td>
<td><strong>Stable</strong></td>
<td><strong>High confidence</strong></td>
</tr>
<tr>
<td><strong>2.18. Confidence in harvest management: Do budgetary and other factors allow effective implementation of management plan(s) and harvest</strong></td>
<td><strong>High confidence</strong></td>
<td><strong>Medium confidence</strong></td>
<td><strong>Low confidence</strong></td>
</tr>
<tr>
<td><strong>2.24. Proportion strictly protected: What percentage of the species’ natural range or population is legally excluded from harvest?</strong></td>
<td><strong>&gt; 15%</strong></td>
<td><strong>5-15%</strong></td>
<td><strong>&lt; 5%</strong></td>
</tr>
<tr>
<td></td>
<td><strong>None</strong></td>
<td></td>
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</tbody>
</table>
Final radar charts - comparison

**Hippopotamus amphibius**

- Conservation incentives
- Quotas
- Management plan

**Encephalartos heenanii**

- Effectiveness of protection
- Conservation incentives
- Status

Joint SANBI Biodiversity Information Management & Foundational Biodiversity Information Programme FORUM | 13–16 August 2018
Management-vulnerability ratios

**Hippopotamus amphibius**

Non-detrimental: 1.53

**Encephalartos heenanii**

Detrimental: 0.48
Type of data required

- **Biological characteristics**
  - Life history/Life form
  - Ecological adaptability/Regeneration potential
  - Dispersal efficiency
  - Interaction with humans/Habitat

- **National status**
  - National distribution & abundance
  - National trend
  - Quality of the information
  - Major threats

- **Management of the species**
  - Harvest management
  - Monitoring of harvest
  - Incentives & benefits from harvest
  - Protection from harvest

- **Evidence of trade**
  - Legal trade & illegal trade
  - Is there local or international demand for the species?
  - Information on captive breeding/artificial propagation of the species
The sounder & more reliable the data we base our decisions on - the better the decisions we make in ensuring the sustainable use of our biological resources.
THANK YOU

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