



### **Members (in alphabetical order)**

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### **Case Studies**

<b>Case Studies species</b>	<b>Country</b>	<b>Main characteristics of case studies</b>
Narwhal <i>Monodon monoceros</i>	Greenland	Unsustainable subsistence harvest (export of tusks - not driving harvest)
Indo-Pacific Dolphin <i>Tursiops aduncus</i>	Solomon Islands	High level of harvest – lack of data
Leopard <i>Panthera pardus</i>	South Africa	Trophy hunting (recent CoP approved increase in quota Appendix I species)
Grizzly Bear <i>Ursus arctos horribilis</i>	Canada	Trophy hunting (long term harvest)
African Lion <i>Panthera leo</i>	Tanzania	Trophy hunting (long term harvest)
Crab-eating macaque <i>Macaca fascicularis</i> Rhesus monkey <i>Macaca mulatta</i>	China	Captive breeding non-native species (crab-eating macaque) and captive breeding native species (rhesus monkey)
Vicugna <i>Vicugna vicugna</i>	Peru	Live shearing

## I. INTRODUCTION

To identify the most important variables for making Non-Detriment Findings for mammalian species, the Mammal Working Group reviewed eight case studies and the document *Factors to be considered during a CITES Non-Detrimental Finding* prepared by Uwe Shippmann (that compiled information from the IUCN Checklist, the EU guidelines and the ISSC-MAP). The elements to be considered when making NDFs were extracted from this background information and scored to determine their relative importance.

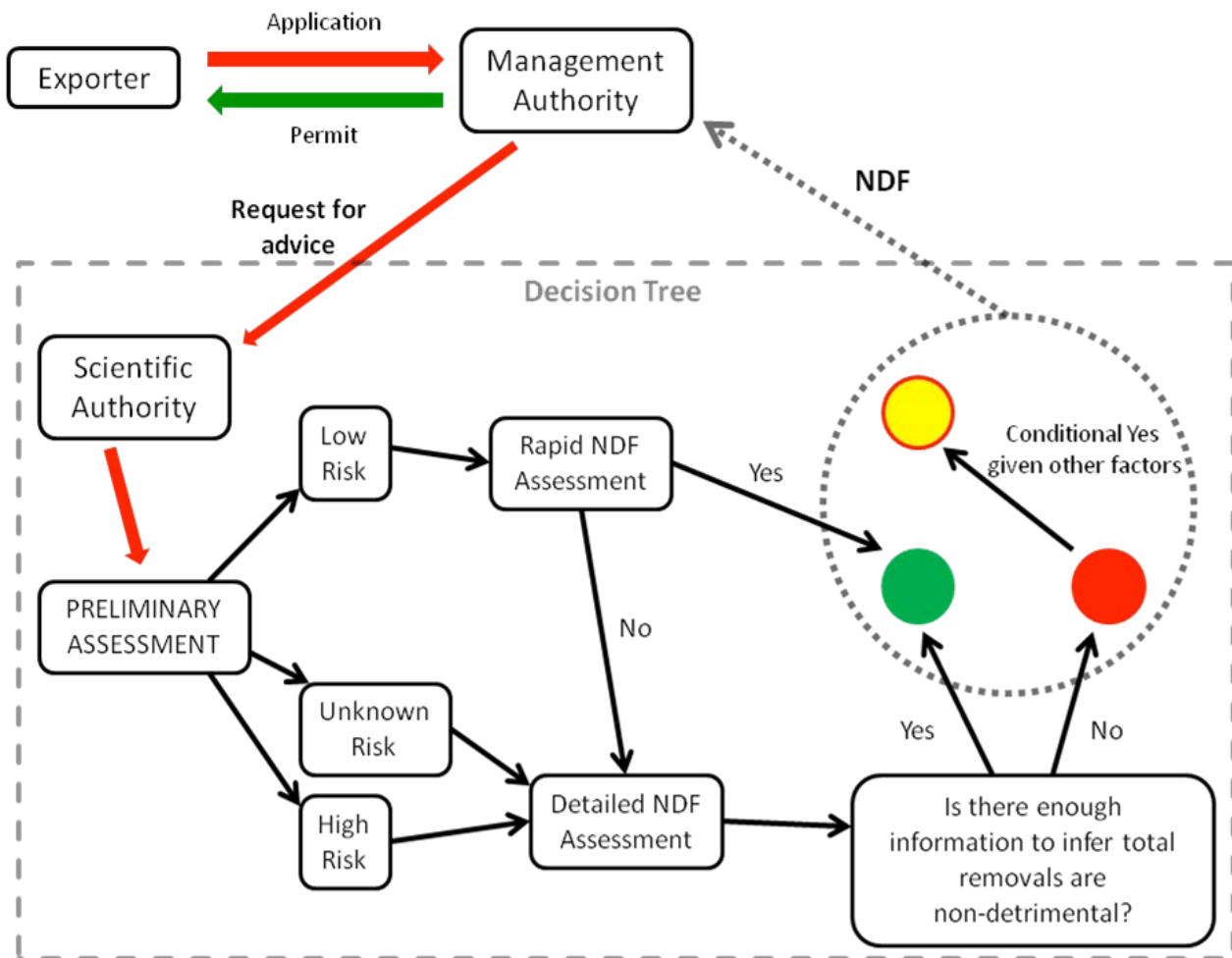
Elements considered to be most important included: population size, structure, trend, and range size, as well as information on the segment and proportion of the population harvested and on the type and magnitude of threats as well as the extent of monitoring of all these factors through time and space.

Additional discussions focused on need for guidance on several issues, including the need to take account of the population for which the NDF is being made, recognizing that whilst the harvest is from a local population, the Scientific Authority (SA) must consider the impact on the national population and, in the case of shared populations, on the regional scale. There was agreement that all types of removal from the population should be considered when assessing the likely sustainability of harvests, and that the making of a NDF is a matter of judgment. But, the group recognized the need for further work on issues such as the role of the species in the ecosystem, and how to deal with the question of allowing trade in unsustainably sourced by-products from meat harvests.

To aid SAs in making a preliminary rapid-assessment, the working group developed a decision tree based on the risk that harvest would imply for the species, taking account of the level of harvest and general population characteristics. For trade likely to be of high or unknown risk to the species, a subsequent detailed-data-collection approach would be required. To assess the quantity and quality of information that is compiled to support a decision, the group recommended the use of peer review, technical assessment and expert opinion. Then, to integrate information in order to take the final NDF decision, methods such as risk assessment, expert assessment, modeling and consideration of the precautionary principle, were considered essential.

Throughout, adaptive management was agreed as the main approach to be adopted for future NDF making, as it will allow continuous improvement of Scientific Authorities work.

## II. NDF PROCEDURE (Decision Tree)



## III. PRELIMINARY ASSESSMENT

The following questions<sup>1</sup> are thought to be the first approach Scientific Authorities will take when receiving a NDF request from the Management Authority (MA):

1. What population(s) is the NDF process focused on?
2. Is it a shared, national or local population?
3. Does it involve removing animals from the wild population?
4. Is the species population considered widespread and abundant?
5. Is the species considered vulnerable (conservation status, threats)?
6. Is the harvest likely to have negative impact on the population?
7. Is the harvest likely to reduce the range of the species?

<sup>1</sup> Definitions of terms & benchmarks (e.g. Resolution 9.24)

These questions will help the SA to determine the risk that the harvest poses (low, high or unknown risk), so they can decide whether a rapid or a detailed assessment is necessary for the requested species. Additional references and data sources should also be consulted to help characterize the vulnerability of mammal species (see Future Work section below).

## **IV. OUTPUT FORMAT**

When making a detailed assessment when an export is requested for species with a high or uncertain risk of harvest, the following points should be taken into account:

### **1. Information (elements) to be considered when making NDF for mammalian species**

#### 1.1 Biological and species status:

- Demographics (e.g. life history, etc.)
- Population size, trends, proportion of K (depletion level)
- Population range and structure
- Role in ecosystem and impact of harvest on it
- Global conservation status
- National conservation status

#### 1.2 Takes/uses<sup>2</sup>:

- Demographic segment taken
- Number of individuals taken

<sup>2</sup> All types of removal (legal, illegal, unintended, bycatch, etc.) must be taken into account.

#### 1.3 Management, monitoring and conservation:

- Separate population management
- Connectivity among populations
- Extent of time-space monitoring
- Conservation actions (e.g. protected areas, management plans, etc.)
- Harvest monitoring (all forms of removal)
- Tracking population origin of the specimen
- Historical effects of harvest and trade on the species
- Utilization trend
- relationship between international trade and harvest (removal)
- Risk of mortality after harvest / before export

#### 1.4 Threats

- Type
- Magnitude

### **2. Methods and sources of information**

Due to the variety of life forms of mammal species, SA staff should consult references and data sources to determine the optimum methods to study particular groups of mammals (see Future Work section below). However, an Adaptive Management approach is highly recommended and the following are general lines to be considered when compiling information for the concerned species:

#### 2.1 Biological and species status:

- Empirical data
- Modeling

- Experts opinion and assessments (all stakeholders)
- Literature review

#### 2.2 Harvesting and trade data:

- Permit systems
- Monitoring export quotas and total removals
- Experts opinion (all stakeholders)
- Collecting biological data and samples from harvested specimens
- Periodic review of harvest

### **3. Data integration and analysis**

Before taking any decision, the quantity and quality of information must be assessed (see next point). When integrating and analyzing information, the following approaches could be taken into account:

- Risk assessment
- Experts assessment
- Models
- NDF decision tree (see above)

### **4. Data quantity and quality assessment**

- Peer review
- Technical assessment
- Experts opinion
- Different sources of data
- Transparent processes

### **5. Problems, errors, challenges or difficulties when formulating NDF**

- Lack of information and limited access to it (biology, harvest, management, etc.)
- Improve reporting and standardization of units exported (conversion factors-CITES Database)
- Stockpile issues
- Need for capacity (cooperation between Parties, training, data sharing, funding, etc.)
- Lack of standardized process/guideline
- Costs
- Governance

### **6. Recommendations**

- Need for guidance on basic principles (sustainability of harvest/export)
- Include in NDF decision documents a description on methods and sources of information
- Cooperation with other Parties or regions
- Documentation on the basis of NDF for routinely/significantly traded species (e.g. quotas)
- Need for mechanisms to satisfy validity of NDFs

- Need for proactive processes on CITES
- Consider incentives, benefits from harvest for communities
- Promote consumers to ask for NDF document when purchasing specimens
- Periodic data assessment
- Gain access to existing data, publications, etc.
- Evaluate alternatives to address real lack of information
- Precautionary principle when not enough information.
- Adopt adaptive management approach
- Harvest vs trade terms
- Take into account all sources of mortality.
- In case of captive breeding state the kind, extent, and importance of any existing ex-situ in-situ cooperation

#### **7. Useful references and sources of information for future NDF formulation**

- IUCN Checklist
- Future work to compile additional references (see next point).

#### **V. FUTURE WORK**

- Glossary to describe terms
- Compilation of helpful references and data sources
- Characterization of vulnerability for mammal species.