

DEFINING RECOVERY UNDER CANADA'S SPECIES AT RISK ACT: DE-LISTING OR MORE?

Justina C. Ray, Ph.D.

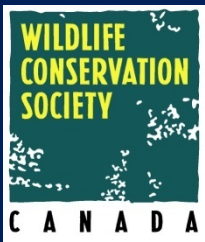
ICCB, 2013



**SARA:
Proclaimed 2003**



Greenland shark



LISTING AND RECOVERY UNDER SARA

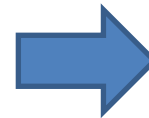
Species Assessment
(What is its status?)



Listing Decision
(Should it be regulated?)



Recovery/Management Planning
(what should be done to conserve it?)



Recovery Implementation
(What will be done?)



LISTING AND RECOVERY UNDER SARA

Species Assessment

COSEWIC



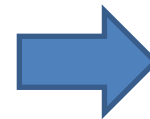
Listing Decision

(Should it be regulated?)



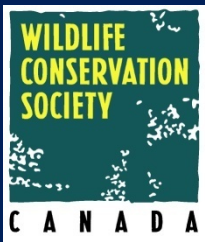
Recovery/Management
Planning

RECOVERY STRATEGY



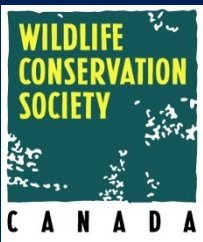
Recovery Implementation
(What will be done?)

SARA keeps baseline scientific information transparent and distinctly separate from stages in the process at which socio-economic factors are considered



RECOVERY UNDER SARA

- **Within the Recovery Strategy:**
 - A **Recovery Goal** sets the strategic course for recovery planning by defining what ‘recovery’ means
 - **Population and Distribution Objectives** establish the number of individuals and/or populations and the geographic distribution of the species required to successfully reach the recovery goal.

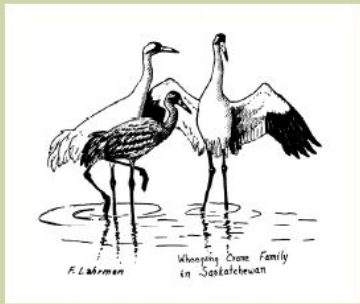


SARA RECOVERY STRATEGIES

Species at Risk Act
Recovery Strategy Series

Recovery Strategy for the Whooping Crane (*Grus americana*) in Canada

Whooping Crane



 Environment Canada / Environnement Canada

Canada

Species at Risk Act
Recovery Strategy Series

Recovery Strategy for the Swift Fox (*Vulpes velox*) in Canada

Swift Fox



 Parks Canada / Parcs Canada

January 2008

Canada

Species at Risk Act
Recovery Strategy Series

Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada

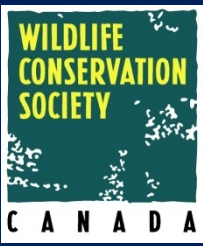
KILLER WHALE



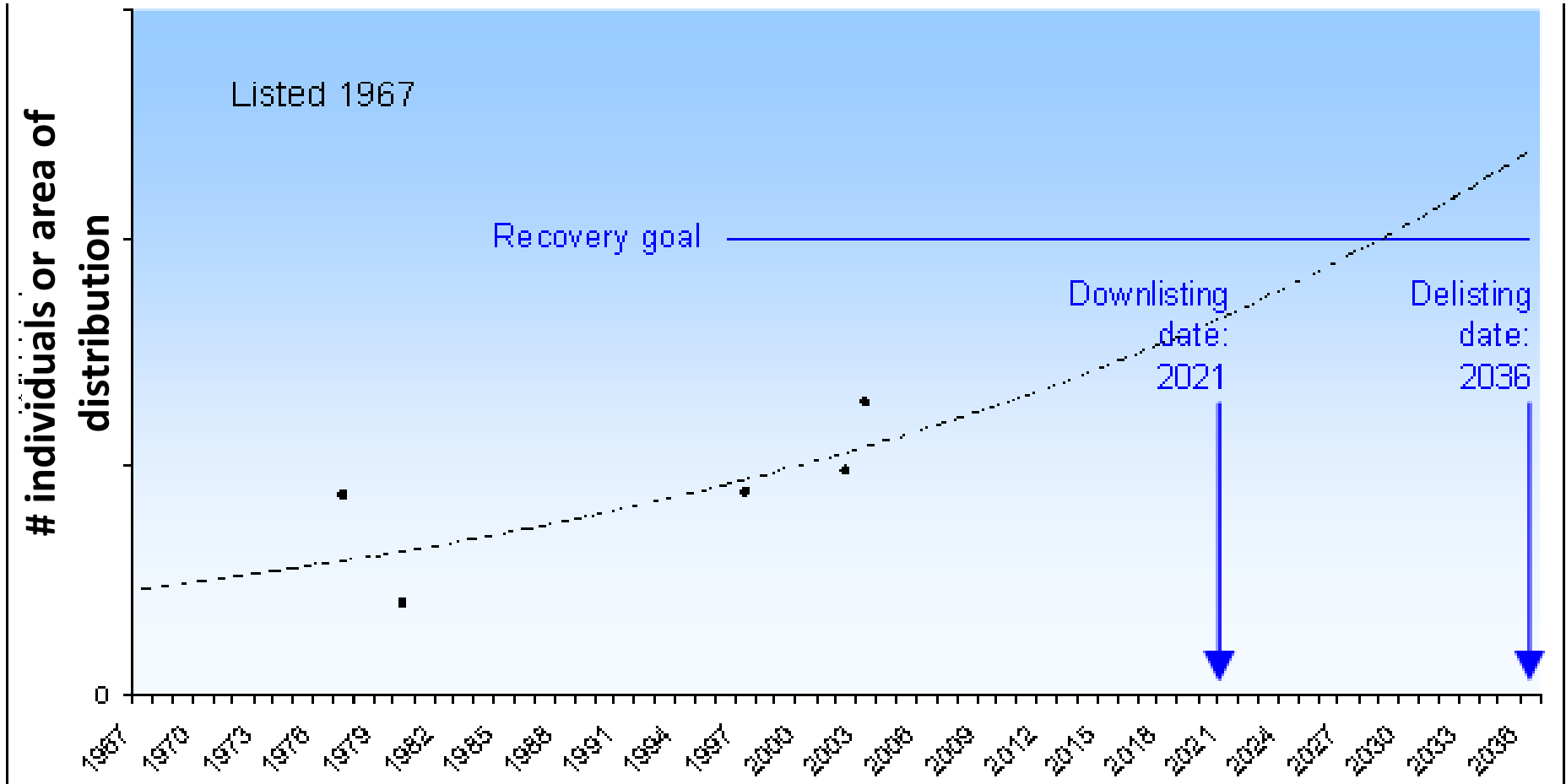
March 2008

 Fisheries and Oceans Canada / Pêches et Océans Canada

Canada



“RECOVERY” MUST PROVIDE A SCIENTIFIC BASELINE



SARA DOES NOT DEFINE RECOVERY

Recovery Planners must rely on:

- **Ordinary meaning** of the word
- Interpretations of the legislation provide guidance as to **intent**
- **Scientific understanding** of what is required to secure the long-term conservation of species



ORDINARY MEANING OF “RECOVERY”

- **Dictionary:** regaining something lost, or returning or restoring something to a normal (pre-harm) condition
- *does not mean* either getting any worse than the current state or staying the same

The state of having returned to a normal (pre-harm) condition




SARA'S INTENT:

- ***SARA's purposes***: Recovery is a state distinct from survival;
- ***SARA's preamble***: Recovery means more than just keeping the species present in Canada; and
- ***SARA's structure***: Recovery is defined for each listed species based on scientific and technical, but not socioeconomic, considerations.





POLICY GUIDANCE UNDER SARA

 **Gouvernement
of Canada** / **Gouvernement
du Canada**

Species at Risk Act **Implementation Guidance**

-DRAFT-

Guidelines on Establishing Recovery Goals and Objectives


August 2008



© Andrew Tullos - ~~Shutterstock~~ Sea Lions

- As drafted by Environment Canada -

Canada

 **Fisheries and Oceans
Canada** / **Pêches et Océans
Canada**
Science / Sciences

C S A S
Canadian Science Advisory Secretariat

S C C S
Secrétariat canadien de consultation scientifique

Proceedings Series 2012/001
National Capital Region

Compte rendu 2012/001
Région de la capitale nationale

Proceedings of the National Peer
Review Meeting on the SARA
Population and Distribution Objectives

Compte rendu de la réunion nationale
d'examen par les pairs sur les Objectifs
relatifs à la population et à la
dissémination des espèces en péril en
vertu de la LEP

29-30 October 2009
Ottawa, Ontario

29 et 30 octobre 2009
Ottawa (Ontario)

Co-Chairperson: Kent Smedbol
Co-Chairperson: Simon Nadeau

Coprésident : Kent Smedbol
Coprésident : Simon Nadeau

Fisheries Population Science / Science des populations de poissons
Fisheries and Oceans Canada / Pêches et Océans Canada
200 Kent Street, Ottawa, Ontario, Canada K1A 0E6

May 2012

Mai 2012

Canada

ATTRIBUTES OF FULLY CONSERVED SPECIES

Attributes of a fully conserved (=recovered) species	Required scale of focus		
	<u>Population</u>	<u>Multiple connected populations</u>	<u>Distribution of species</u>
Demographically viable	X	+	
Genetic integrity	X	+	+
Ecologically functional	X	X	+
Representative	X	X	X
Replicated	X	X	X
Resilient	X	X	X

DEMOGRAPHIC

RISK MANAGEMENT

Redford et al. 2011. What does It mean to successfully conserve a (vertebrate) species?
BioScience, 61:39-48.

OUR SCIENTIFIC KNOWLEDGE OFTEN PRECLUDES SETTING TARGETS



COMMON REASONS FOR LOWERING THE BAR ON RECOVERY

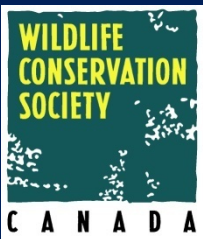
- **Confusing stages of recovery with discrete objectives**
- **Confusing biological/technical feasibility with lack of investment, will, or “social carrying capacity”**
- **Confusing criteria for recovery with measures for extinction risk**



RECOVERY vs. DOWN (DE-) LISTING

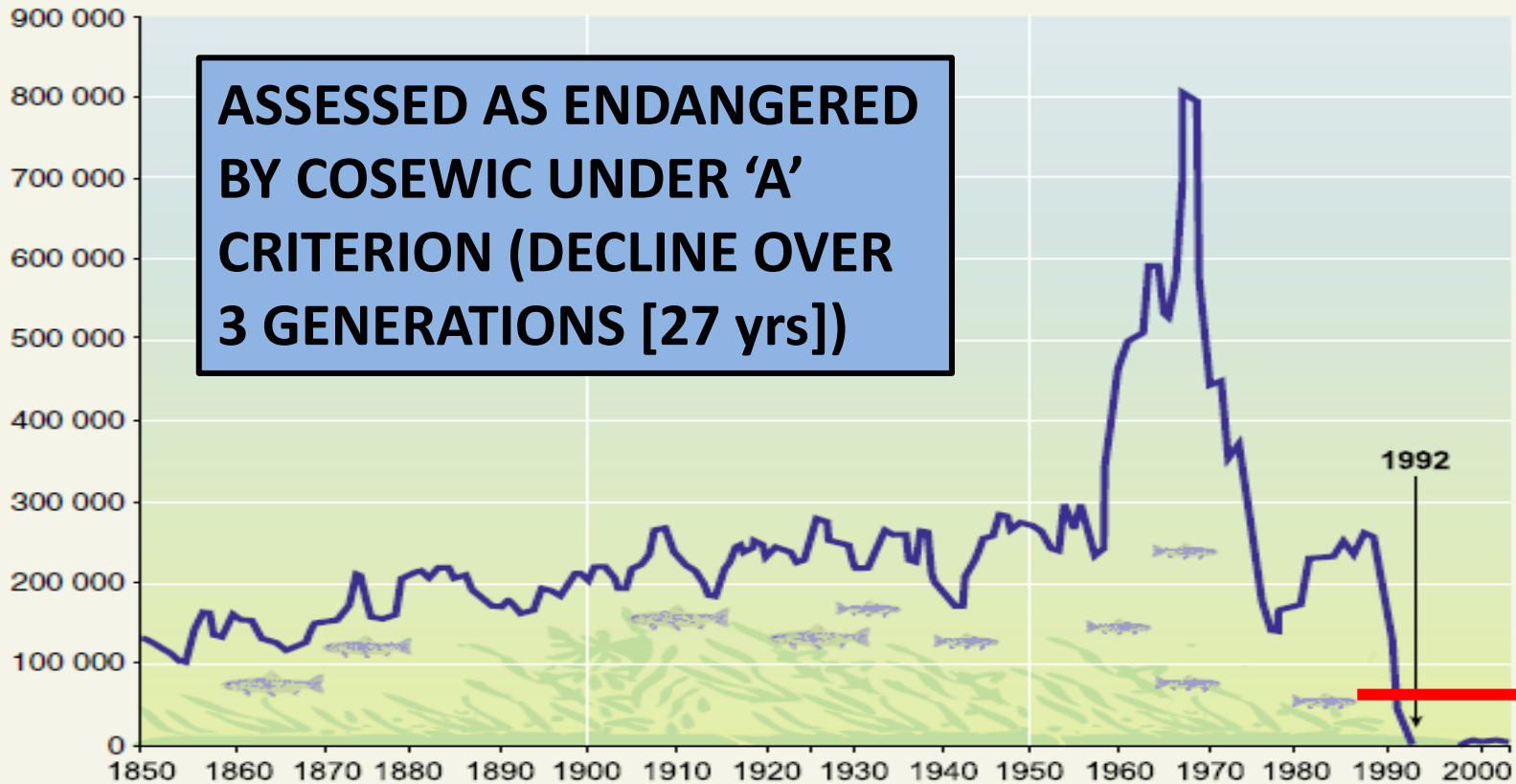
- IUCN Red List categories are intended to guide the classification of species into threat categories that reflect the likelihood of a species going extinct under prevailing circumstances (Mace et al. 2008).
- **Consequence: Policy decisions begin at a threshold from which very little can be traded off before long-term persistence is in doubt;**





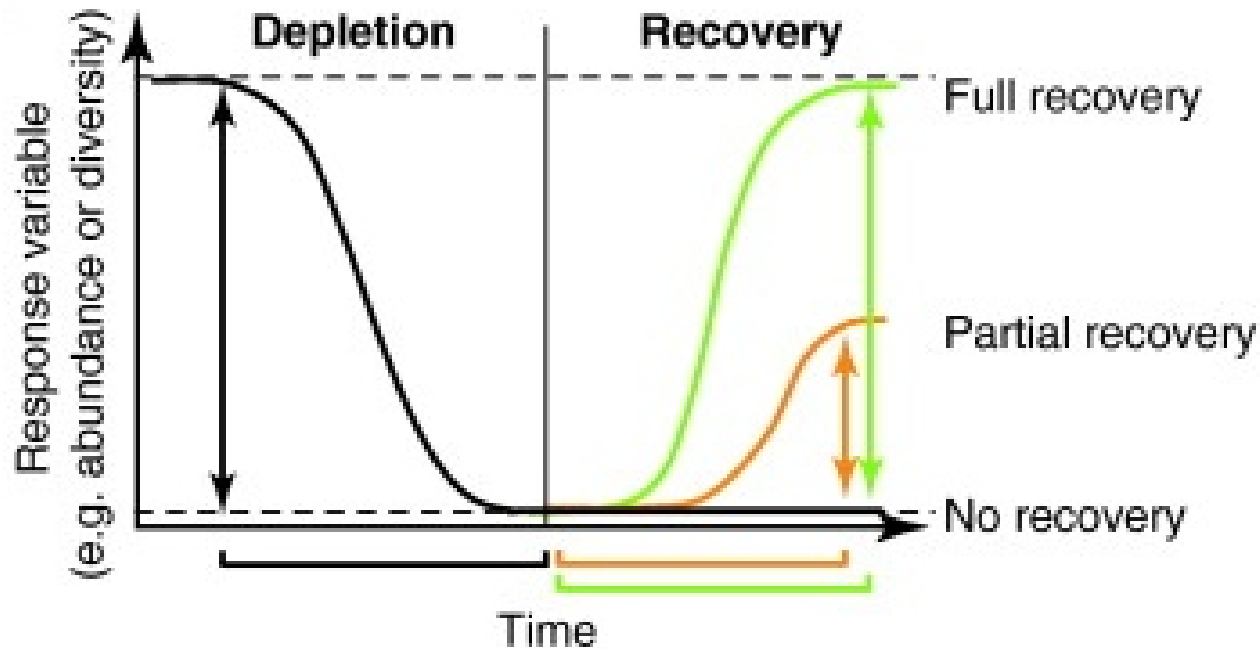
ATLANTIC COD

Fish landings in tons



Source: Millennium Ecosystem Assessment

HOW MUCH RECOVERY IS ENOUGH?



Lotze et al. TREE, 26, No. 11

TRENDS in Ecology & Evolution

Must be sufficiently precautionary to safeguard against most future threats (and therefore risks) to the species' long-term persistence as a part of biological diversity

TAKE-HOME MESSAGES

- Defining recovery under SARA is a scientific process set within a complicated legal and policy context;
- To be scientifically defensible, and precautionary, recovery for must be defined as the maximum degree of restoration of the pre-harm state that is scientifically and technically feasible; and
- Recovery must maximize the species' capacity to contribute to biodiversity and ecological functionality, its resilience to environmental change, and thus its likelihood of long term persistence.



TAKE-HOME MESSAGES

- There are many pressures that lead to lowering the bar in defining recovery;
- Allowing for this can and does promote continued incremental loss of populations and distribution, increases extinction risk, and is usually scientifically arbitrary; and
- The recovery goal/objectives serve as a scientific baseline ---a foundation for policy decisions that occur later about the timeframes, costs, and likelihoods associated with achieving recovery

