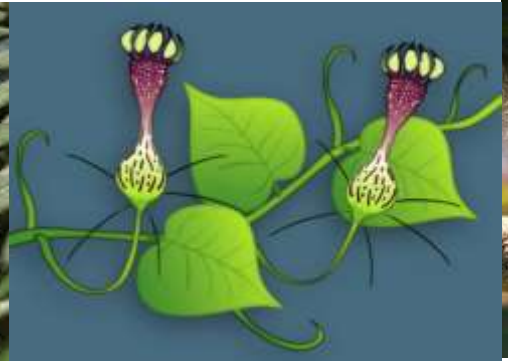





RED DATA BOOK


*Presented By-
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WHAT IS RED DATA BOOK?

- ❑ Species judged as threatened are listed by various agencies as well as by some private organizations.
- ❑ The most cited of these list is the Red Data Book. It is a loose-leaf volume of information on the status of many kinds of species.
- ❑ This volume is continually updated and is issued by the International Union for Conservation of Nature (IUCN) located in Morges, Switzerland.

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- ▣ . "Red" of course is symbolic of the danger that these species both plants and animals presently experience throughout the globe.
 - ▣ The Red Data Book was first issued in 1966 by the IUCN's Special Survival Commission as a guide for formulation, preservation and management of species listed.
 - ▣ In this Book, information for endangered mammals and birds is more extensive than for other groups of animals and plants, coverage is also given to less prominent organisms facing extinction.

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- There are organizations and institutions at the national and international level for developing and coordinating biodiversity conservation activities WWF (World Wide Fund for the Conservation of plant and animal resources), IUCN (International Union for the Conservation of Nature and Natural Resources), Forest Survey of India, Wild life Institute Of India etc are examples.

Main Aims & Goals of the **RED** Data Book

- There are enormous of species , which were extinct long before the life exists on the planet earth. The IUCN was founded with an aim to maintain the complete record of every species.
- The red data book contains the complete list of threatened species. The main aim behind this documentation is to provide complete information for research and analysis of different existence species.
- This book also has information about the reason for the species to become extinct along with the population trends and range.

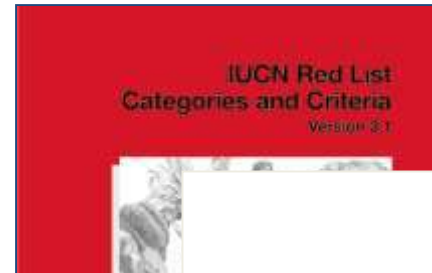
The IUCN Red List assessment estimates **risk of extinction**

What is the likelihood of a species becoming extinct in the near future, given current knowledge about population trends, range, and recent, current or projected threats?



The IUCN Red List Categories & Criteria

All materials are freely available on IUCN Red List web site:
www.iucnredlist.org



Summary of the five criteria (A-E) used to evaluate if a taxon belongs in a threatened category (Critically Endangered, Endangered or Vulnerable).

Use any of the criteria A-E	Critically Endangered	Endangered	Vulnerable
A. Population reduction Declines sustained over the longer of 10 years or 3 generations			
AI. AI, AI.1 & AI.2	≥ 90%	≥ 70%	≥ 50%
AI. Population reduction observed, estimated, inferred, or suspected in the past where the causes of the reduction are clearly reversible AND understood AND have ceased, based on and specifying any of the following: (a) direct observations; (b) an index of abundance appropriate to the taxon; (c) a decline in area of occupancy (AOO), extent of occurrence (EOO) and/or habitat quality; (d) actual or potential levels of exploitation; (e) effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites.			
AI.2. Population reduction observed, estimated, inferred, or suspected in the past where the causes of reduction may not have ceased OR may not be understood OR may not be reversible, based on (a) to (e) under AI.			
AI.3. Population reduction projected or suspected to be met in the future (up to a maximum of 100 years) based on (a) to (e) under AI.			
AI.4. An observed, estimated, inferred, projected or suspected population reduction (up to a maximum of 100 years) where the time period must include both the past and the future, and where the causes of reduction may not have ceased OR may not be understood OR may not be reversible, based on (a) to (e) under AI.			
B. Geographic range in the form of either BI (extent of occurrence) AND/OR BC (area of occupancy)			
BI. Extent of occurrence	< 100 km ²	< 5,000 km ²	< 20,000 km ²
BC. Area of occupancy	< 10 km ²	< 500 km ²	< 2,000 km ²
AND at least 2 of the following:			
(a) Severely fragmented, OR Number of locations =	≤ 1	≤ 5	≤ 20
(b) Continuing decline in any of: (i) extent of occurrence, (ii) area of occupancy, (iii) area, extent and/or quality of habitat, (iv) number of locations or subpopulations, (v) number of mature individuals			
(c) Extensive fluctuations in any of: (i) extent of occurrence, (ii) area of occupancy, (iii) number of locations or subpopulations, (iv) number of mature individuals			
C. Small population size and decline			
Number of mature individuals	≤ 250	≤ 2,500	≤ 10,000
AND either CI or CII:			
CI. An estimated continuing decline of at least: decline of at least: (up to a max. of 100 years or 5 generations)	30% in 3 years or 1 generation	30% in 5 years or 2 generations	10% in 10 years or 3 generations
CII. A continuing decline AND (a) and (b): (a) number mature individuals in each subpopulation =	≤ 50	≤ 250	≤ 1,000
(b) or % individuals in one subpopulation =	90-100%	85-100%	100%
(c) extensive fluctuations in the number of mature individuals			
D. Very small or restricted population			
Either: Number of mature individuals	≤ 50	≤ 250	DI. ≤ 1,000
Restricted area of occupancy			DI. AND/OR: ADD = 10 km ² or number of locations ≤ 5
E. Quantitative Analysis: Indicating the probability of extinction in the wild to be:	≥ 10% in 10 years or 2 generations (100 year time)	≥ 30% in 20 years or 3 generations (100 year time)	≥ 10% in 100 years

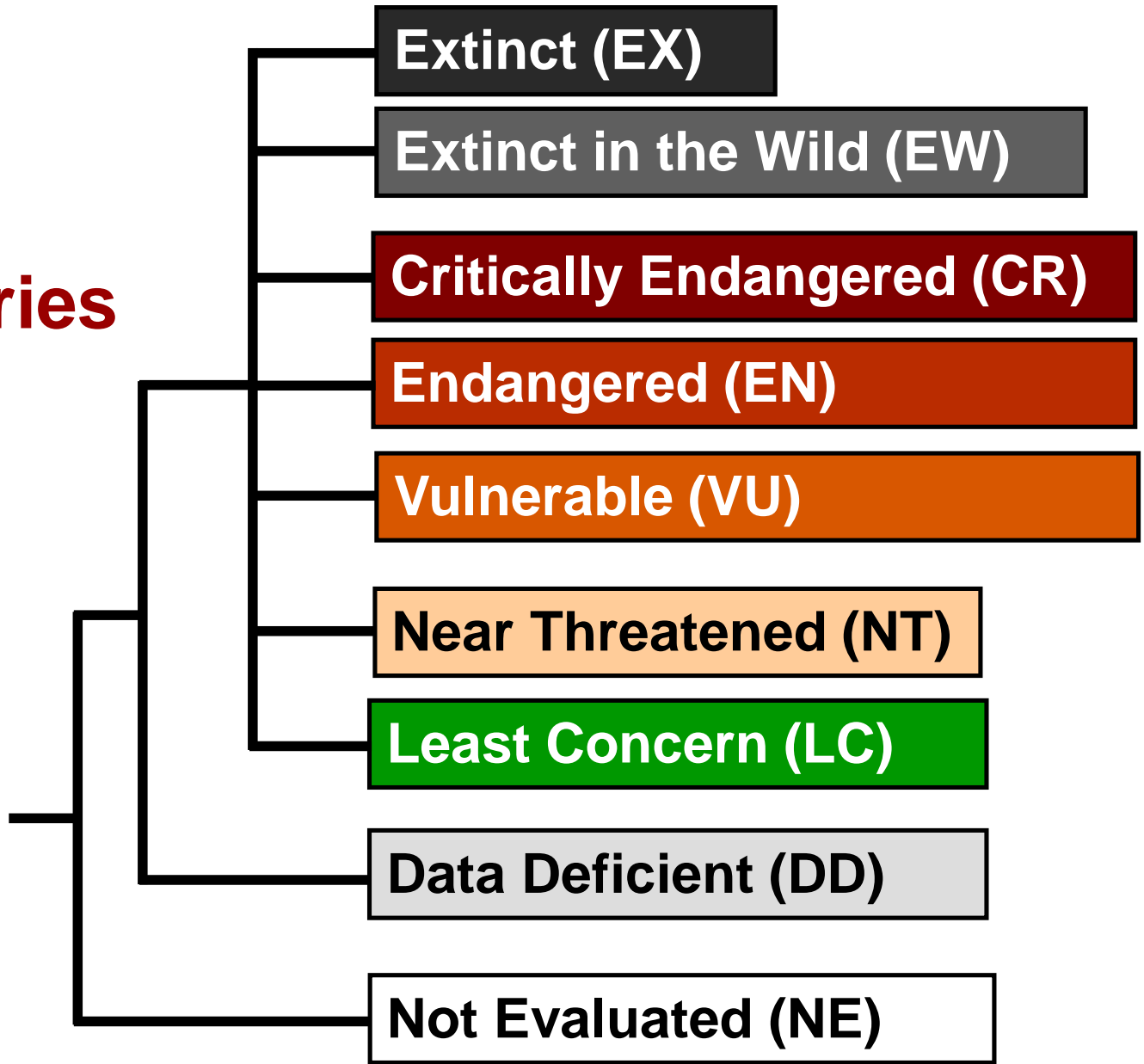
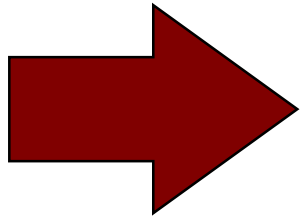
g the IUCN Red List and Criteria

(August 2018)

and Petition Working Group Assessment Sub-Committee,

July Group 2018. Guidelines For Using the IUCN 3.1. Prepared by the Standards and Petition Assessment Sub-Committee in August 2018. <https://doi.org/10.1017/S2041210X18000001>

The IUCN Categories

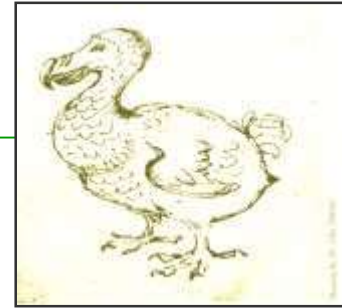


THREATENED



Extinct (EX)

A taxon is **Extinct** when there is no reasonable doubt that the last individual has died.



Dodo, *Raphus cucullatus*

Extinct in the Wild (EW)

A taxon is **Extinct in the Wild** when it is known only to survive in cultivation, in captivity or as a naturalized population (or populations) well outside the past range.



Franklinia,
Franklinia alatamaha



A taxon is threatened when the best available evidence indicates that it meets any of the criteria A to E for the thresholds stated in one of the three threatened categories: Critically Endangered, Endangered or Vulnerable.

Critically Endangered (CR)

CR taxa are considered to be facing an **extremely high risk of extinction** in the wild



Photo © Wendy Strahm
Mandrinette, *Hibiscus fragilis*

Endangered (EN)

EN taxa are considered to be facing a **very high risk of extinction** in the wild



Black-browed Albatross,
Thalassarche melanophrys

Vulnerable (VU)

VU taxa are considered to be facing a **high risk of extinction** in the wild



Golden Pagoda,
Mimetes chrysanthus

Photo © Craig Thomas Taylor



Near Threatened (NT)

A taxon is Near Threatened when it has been evaluated against the criteria and **does not qualify** for CR, EN or VU now, **but is close to qualifying** for or is **likely to qualify** for a threatened category in the near future.



Photo © H. Fraga

Macaronesian Laurel, *Laurus azorica*

Least Concern (LC)

A taxon is Least Concern when it has been evaluated against the criteria and **does not qualify** for CR, EN, VU or NT. **Widespread and abundant taxa** are included in this category.



Photo © Caroline Pollock

Olive Baboon, *Papio anumbis*



Data Deficient (DD)

A taxon is Data Deficient when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status.



Tree Tomato
Solanum [Cyphomandra] betacea

Not Evaluated (NE)

A taxon is Not Evaluated when it has not yet been evaluated against the criteria



The Nilgiri Tahr (*Nilgiritragus hylocrius*)



© bmalico@gmail.com

❑ Endangered species. The clouded leopard is protected throughout most of its range. Deforestation is the principle threat to the clouded leopard, although the seriousness depends upon further study of the species' tolerance of various degrees of forest clearance. The clouded leopard is also widely hunted for its teeth and pelt and for bones for the traditional Asian medicinal trade.



Nature of the Criteria

CRITERIA

A

Population
reduction

B

Restricted
geographic range

C

Small population
size & decline

D

Very small or
restricted
population

E

Quantitative
analysis

**Quantitative
thresholds**

THREATENED CATEGORIES

Critically Endangered (CR)

Endangered (EN)

Vulnerable (VU)

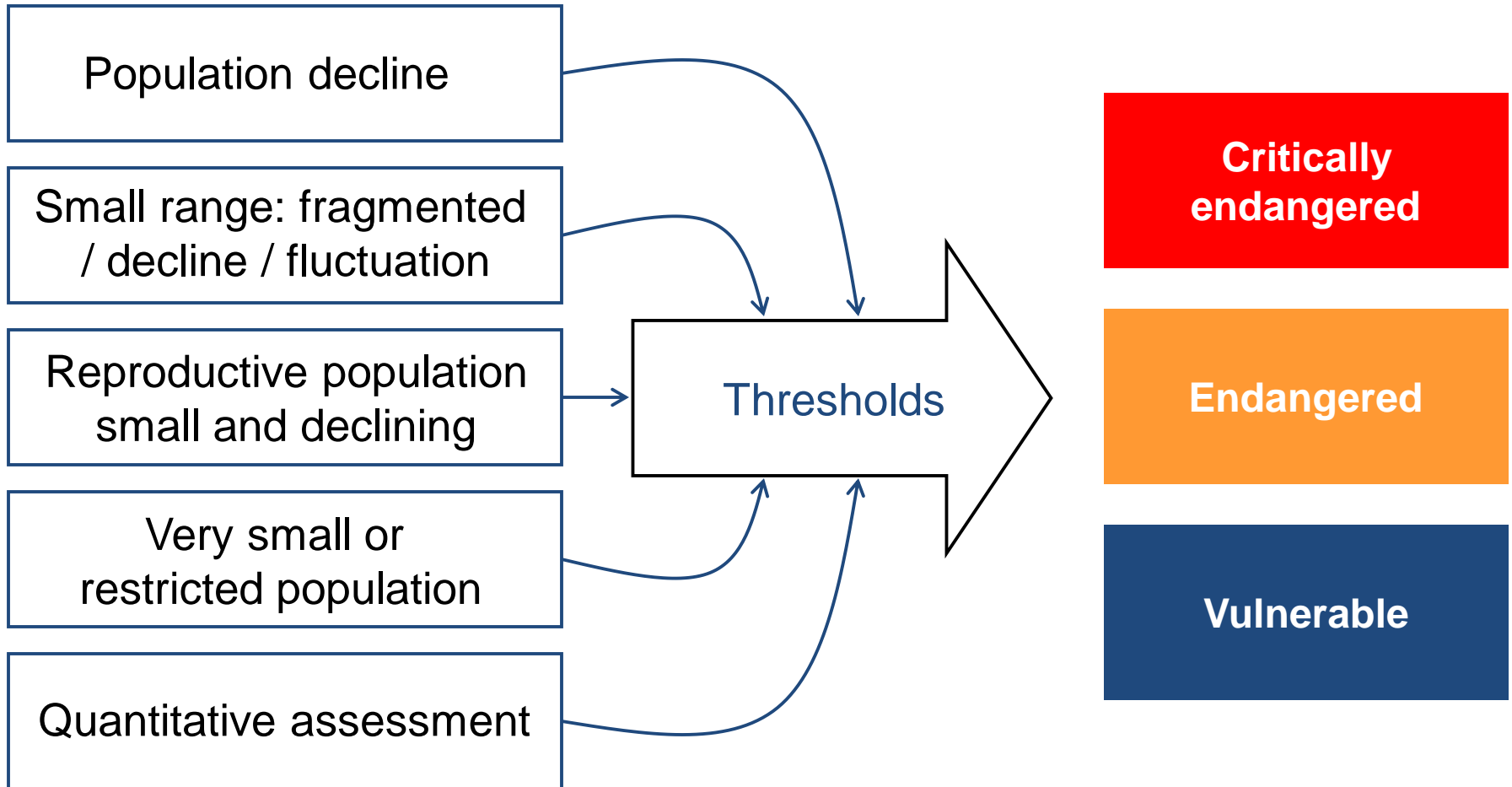


Georgina M. Mace

Quantitative criteria: Categories for IUCN red lists



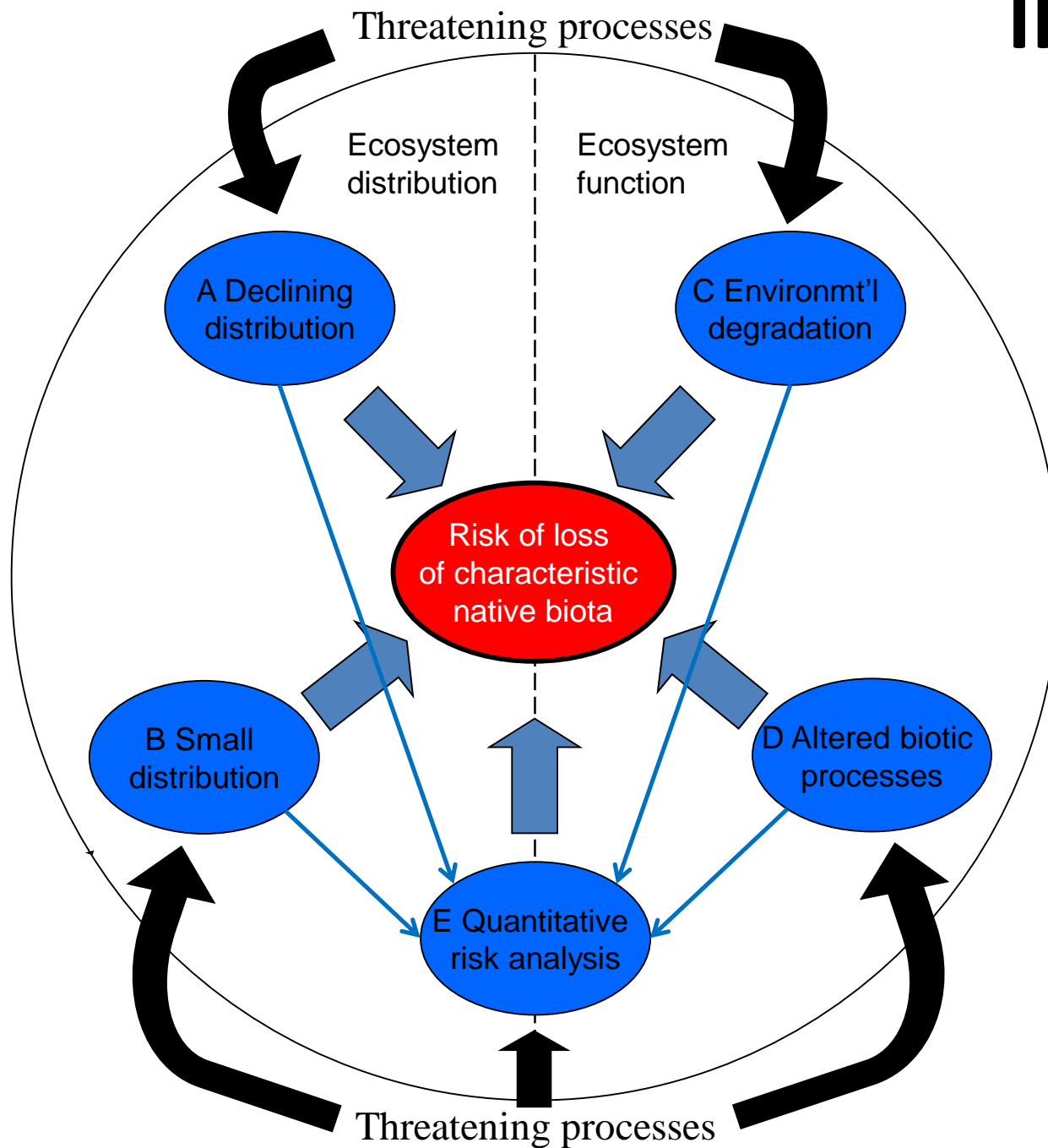
Russell S. Lande



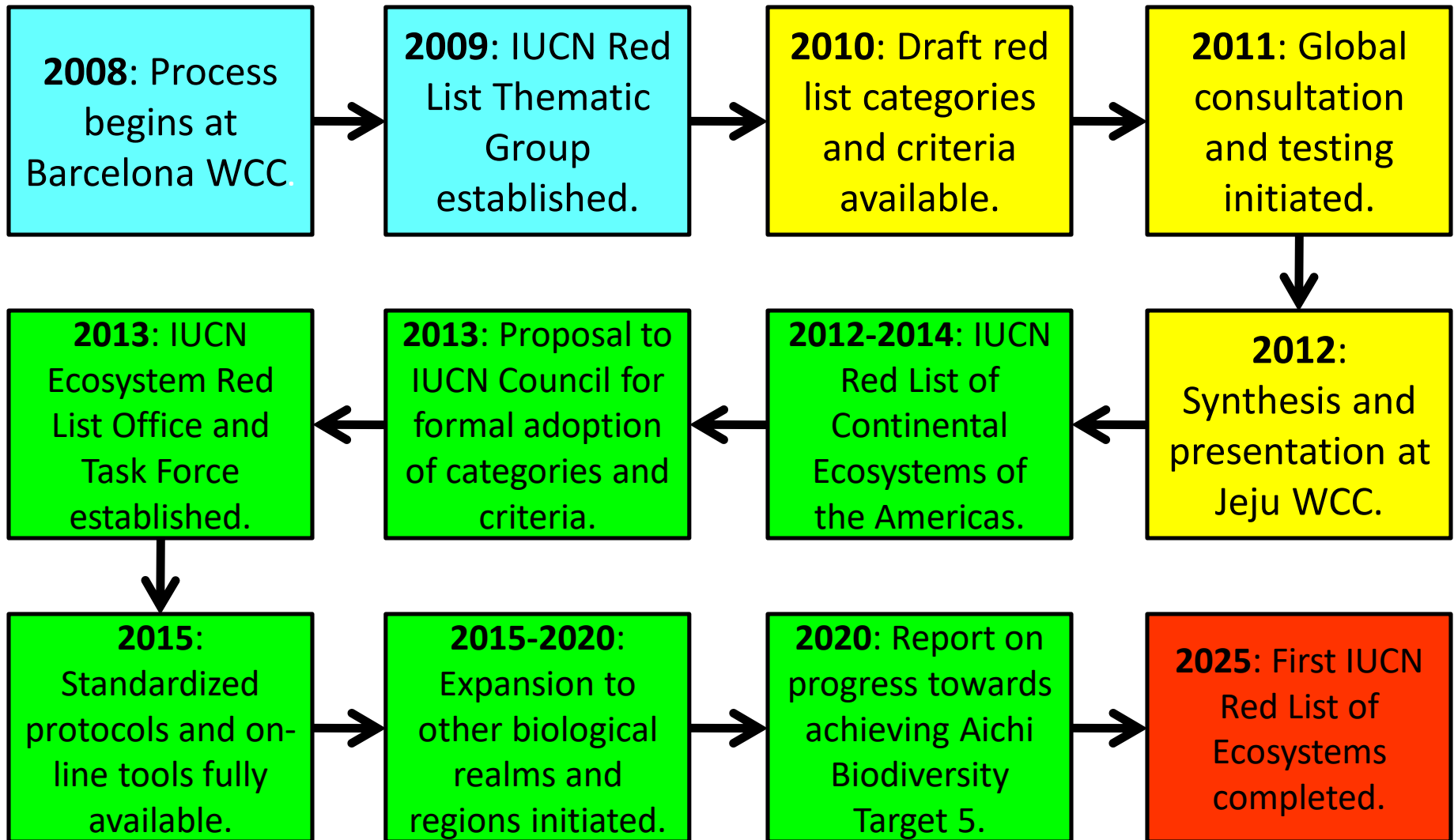
III. Assessing Ecosystem Change

Risk model for ecosystems:

- threats to defining features (distribution, biota & function)
- multiple mechanisms (causes of threat)
- 4 symptoms (of decline) = 4 criteria
- plus one overarching criterion (probability of collapse)



Past, present and future



The IUCN knowledge products *and their integration*

IUCN Red List of Threatened Species:
measures
extinction risk

IUCN Red List of Ecosystems:
measures
elimination risk

Key Biodiversity Areas (KBAs):
sites of biodiversity
importance
requiring
conservation action

World Database on Protected Areas (WDPA):
sites with protected
status

Scope of Application

The IUCN Red List Categories and Criteria are:

- Used to assess taxa at the global level
- Can be used at regional levels (**but see the *Guidelines for Application of IUCN Red List Criteria at Regional Levels***)
- Used to assess wild populations inside their natural range (including populations resulting from benign introductions)

IUCN Categories and Criteria can be applied to:

- All described taxa (species, subspecies, varieties), except micro-organisms
- Taxa not yet formally described, **but only if** they are:
 - A clearly distinct species;
 - Museum/herbarium voucher references are provided;
 - Distribution information is available;
 - There is clear conservation benefit to assessing the species.

Advantages of the **RED** Data Book

- It helps in identifying all animals, birds, and other species, about their extinct and endangered.
- It is used to evaluate the total wild animals population present
- The data available in this book is to evaluate the taxa at the global level.
- The main benefit of this book is evaluate the risk of taxa becoming globally extinct.
- This book maintain the complete record of all endangered animals, plants and other species.

Disadvantages of the **RED** Data Book

- The information available in the red data book is incomplete. Many species both extinct and present are not updated in this book.
- The criteria is applied here only within the territory of the state.
- This book maintain the complete record of all animals, plants, other species but it has no information about the microorganism.



 THANK YOU