

CONSERVATION OF DEER

the IUCN Deer Specialist Group



Rucervus schomburgki

Sandro Lovari

Cagliari 2018



IUCN/SSC Deer Specialist Group

"Assess all deer taxa with the IUCN Red list categories, to identify and understand the threats and human impact on local populations of deer and their habitats"

107 members

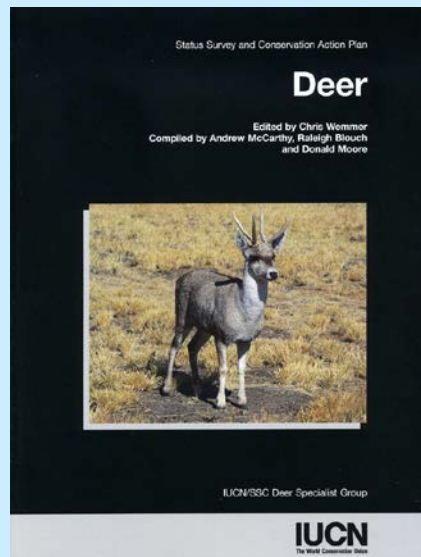
Co-chairs

Dr Susana Gonzalez (Uruguay)

Dr William McShea (U.S.A.)



IUCN Deer Action Plan (1998)



Re-assessment
completed
in 2016
(Sarah Brook RLA)

WHO ARE THE "DEER" ?

Class *Mammals*

Order *Artiodactyla*

Suborder *Ruminantia*

Families c. {
57 spp. *Cervidae* Eurasia, Americas, N. Africa
7 spp. *Moschidae* Asia (high, cold)
7 spp. *Tragulidae* Asia (tropical forest)
} c. **71** spp



RECENT DISCOVERIES

Giant muntjac 1994

Muntiacus vuquangensis

CR



Tarim red deer

Lorenzini & Garofalo 2015

Cervus hanglu

LC

Leaf muntjac 1999

Muntiacus putaoensis

DD



THREATS



Direct (*i.e.* linked to human activities)

- habitat loss/degradation/fragmentation
- over-harvesting/poaching
- disease
- competition with aliens (*e.g.* wild boar, other deer, livestock)

Indirect

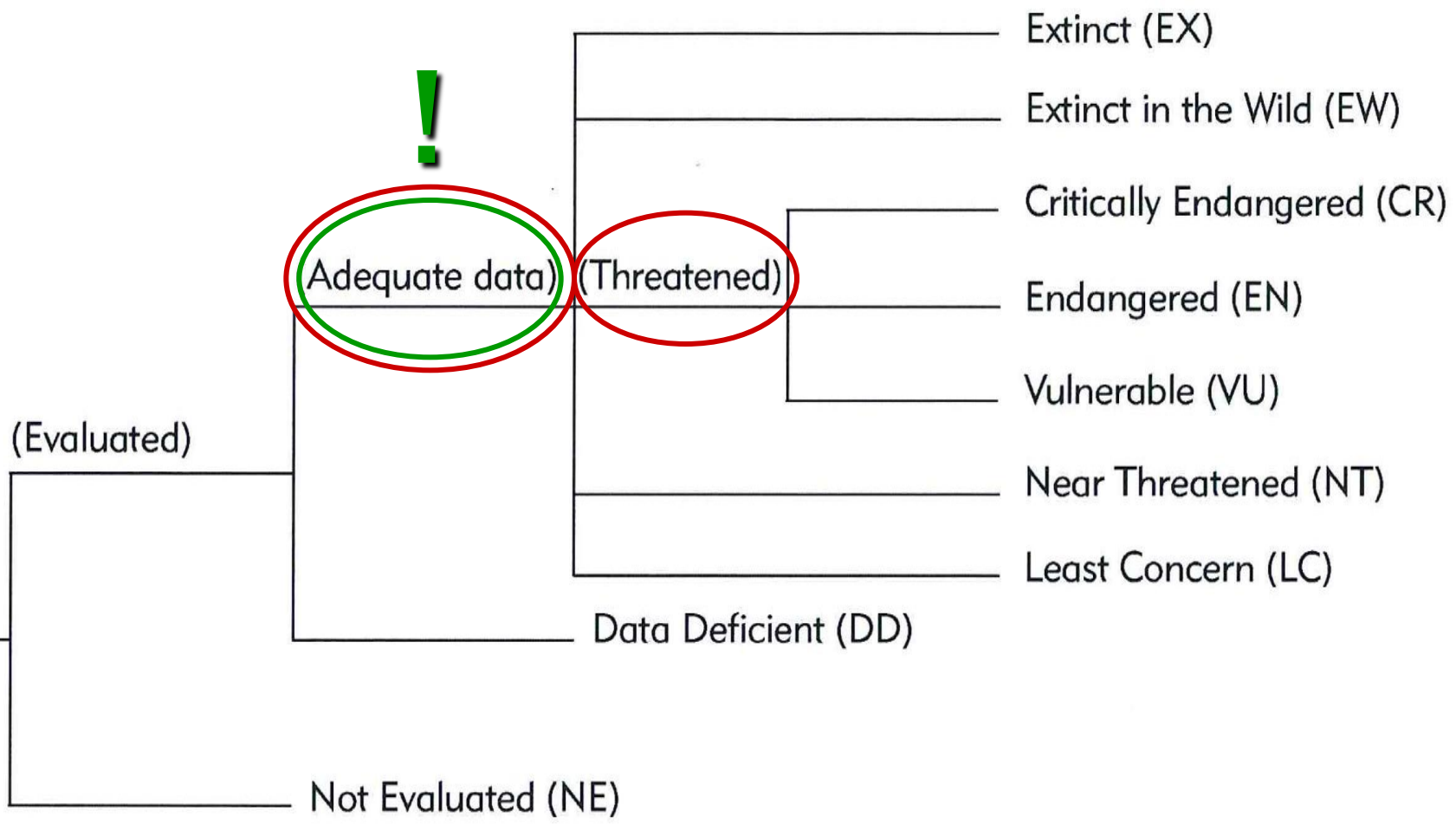
- development and globalisation trends
- lack of local expertise
- indifference



How to plan management and conservation guidelines?

- Species need to be easily recognised
- Monitoring trends
- Faecal DNA useful to survey populations

THE IUCN Red List SYSTEM



ZOOGEOGRAPHIC REGIONS

PALAEARCTIC

51 spp

- 1 CR
- 14 EN
- 17 VU
- 3 NT
- 3 LC
- 12 DD



Cervus hanglu hanglu

NEARCTIC

3 spp

3 LC

NEOTROPICAL

18 spp

- 11 EN
- 2 NT
- 3 LC
- 2 DD

THREATENED

ONLY 9 spp out of 71 LC!



RECENT CHANGES

	<i>from</i>	<i>to</i>
Reindeer/Caribou	LC	VU
Giant muntjac	EN	CR
Bornean yellow muntjac	LC	NT
Red deer	3 spp	

Only a handful have become "**overabundant**"
in North America and Europe

IUCN "OBJECTIVE" CRITERIA FOR RISK ASSESSMENT



ARE THEY REALLY OBJECTIVE ?

VERSIONS

Mace & Lande 1991

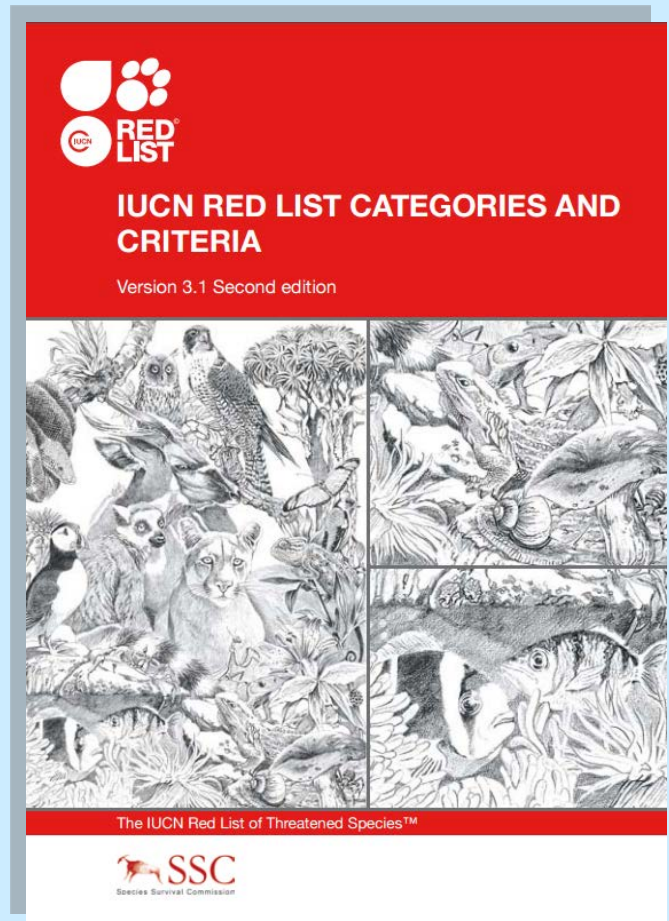
Mace et al. 1992

IUCN 1993

Mace & Stuart 1994

IUCN 1994

IUCN 2001



CRITICALLY ENDANGERED as an example !

CR = the best available evidence indicates that it meets any of the following criteria (A to E) and is therefore considered to be facing an extremely high risk of extinction in the wild

A. Reduction in population size based on any of the following

1. An **observed, estimated, inferred** or **suspected** population size reduction of 90% over the last 10 years or three generations, whichever is the longer, where the causes of the reduction are clearly reversible AND understood AND ceased, based on (and specifying) any of the following: (a) direct observation; (b) an index of abundance appropriate to the taxon; (c) a decline in area of occupancy, extent of occurrence and/or quality of habitat; (d) actual or potential levels of exploitation; (e) the effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites.
2. An **observed, estimated, inferred** or **suspected** population size reduction of 80% over the last 10 years or three generations, whichever is the longer, where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying) any of (a) to (e) under A1.
3. A population size reduction of 80%, **projected or suspected to be met within the next 10 years or three generations**, whichever is the longer (up to a maximum of 100 years), based on (and specifying) any of (b) to (e) under A1.
4. An **observed, estimated, inferred, projected** or **suspected** population size reduction of $\geq 80\%$ over any 10 year or three generation period, whichever is longer (**up to a maximum of 100 years in the future**), where the time period must include both the past and the future, and where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying) any of (a) to (e) under A1.

RECENT DISCOVERIES

Leaf muntjac 1999
Muntiacus putaoensis
DD

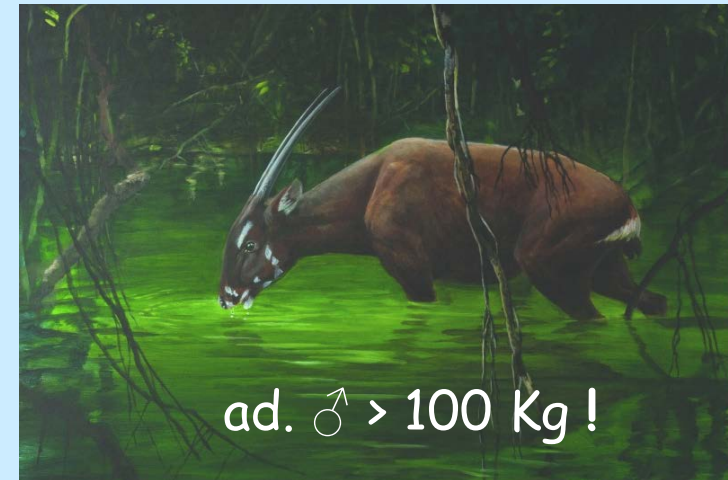


ad. ♂ < 50 Kg !



Giant muntjac 1994
Muntiacus vuquangensis
CR

Saola 1992
Pseudoryx nghetinhensis
CR
(Bovidae)



ad. ♂ > 100 Kg !

IS CONSERVATION BIOLOGY TURNING INTO CONVERSATION BIOLOGY ?

CLIMATIC ENVELOPE

PVA

MVA

GAP ANALYSIS

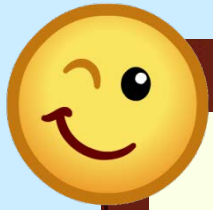
METANALYSIS

MVP

MODELS

REMOTE SENSING

... DATA COLLECTION
IN THE FIELD ?



Thank you for
not falling asleep !

