

# ***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**

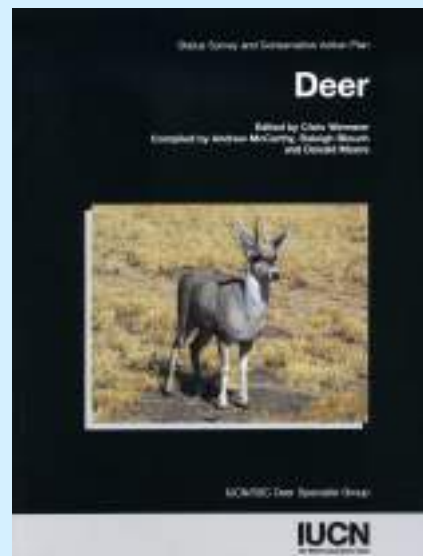
**Co-chairs**

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**

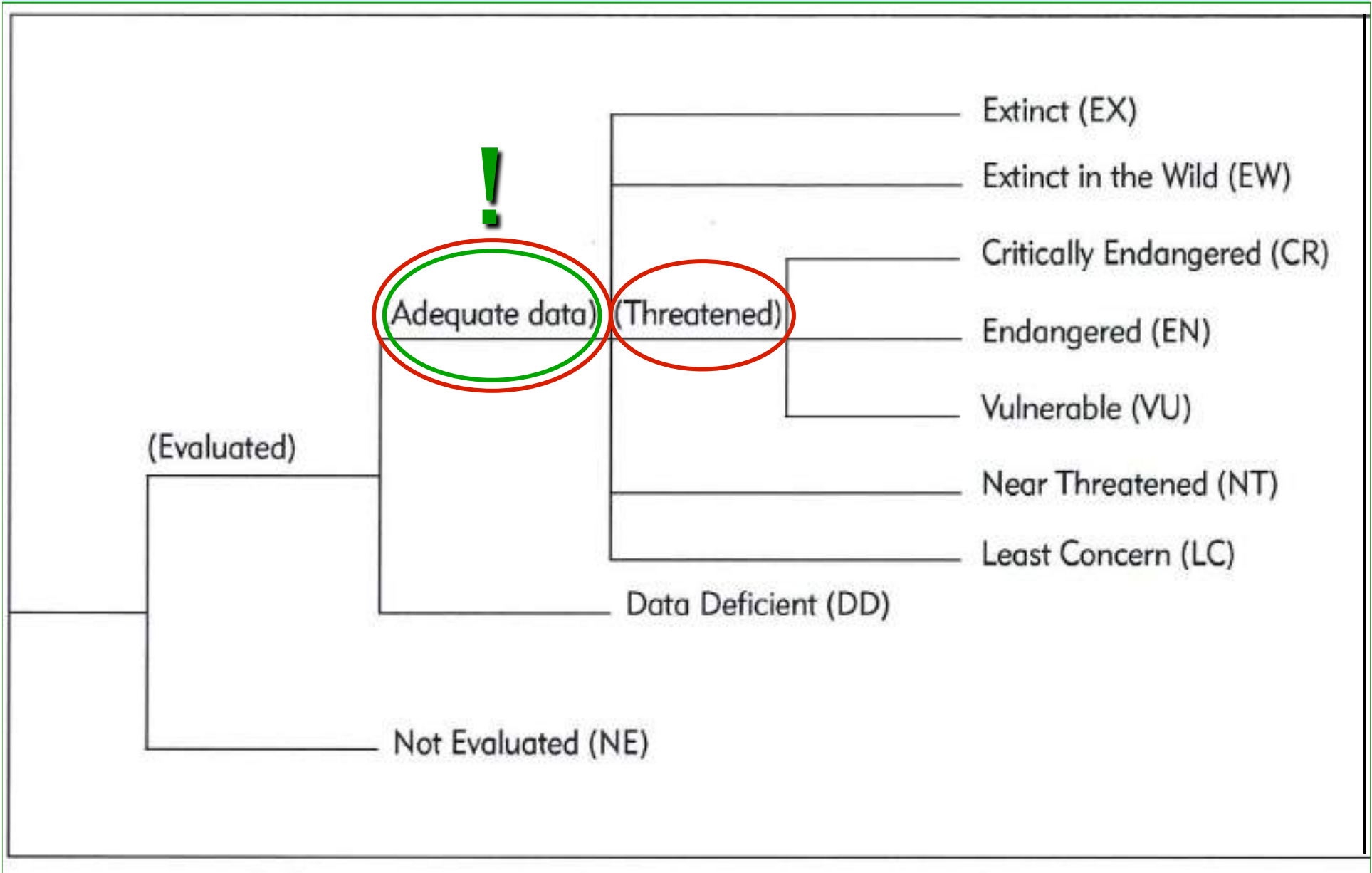
- development and globalisation trends
- lack of local expertise
- indifference



## 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

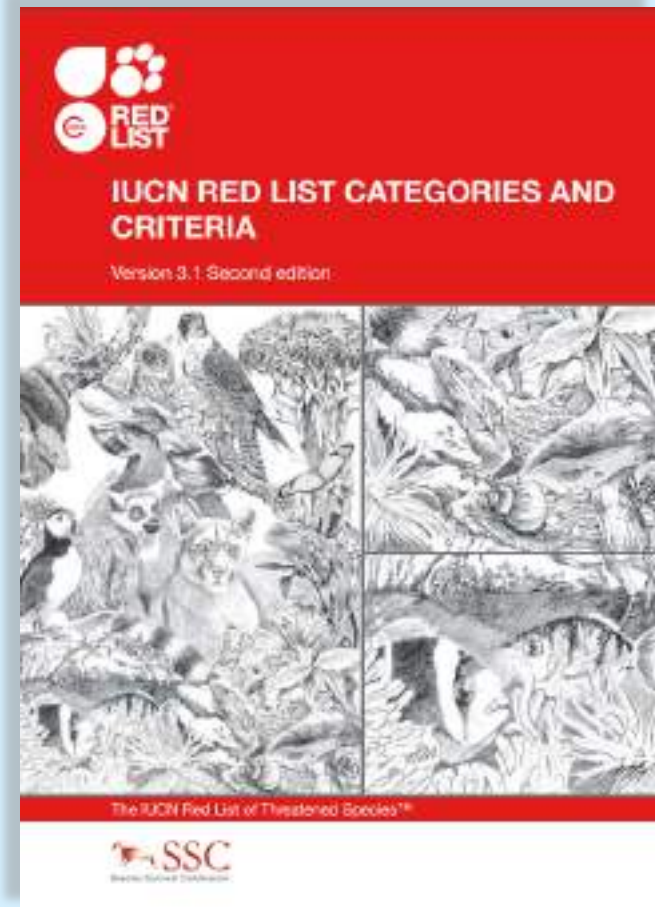
# IUCN "OBJECTIVE" CRITERIA FOR RISK ASSESSMENT



**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.

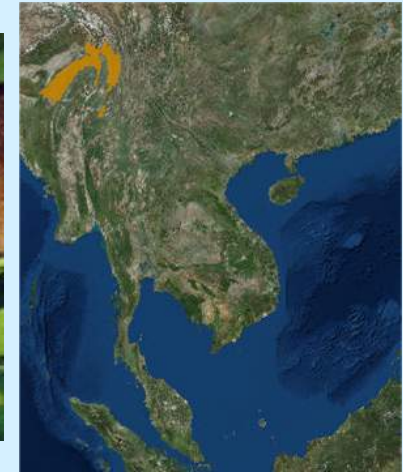


## RECENT DISCOVERIES

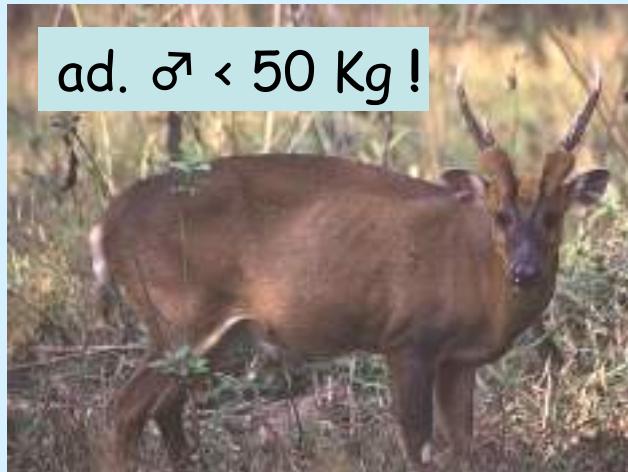
Leaf muntjac 1999

*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 !

