

# **Levels of wildlife/biodiversity conservation**

- **Informal and local level institutions (e.g., VDC, temples, and monasteries)**
- **National level formal institutions (e.g., protected areas and community forests)**
- **International level institutions (e.g., biodiversity trusts, funds and intellectual property rights)**

# Local level initiatives

- prior to 50s: century-old traditional resource management system through user groups (*Shingo naua* and *Osho naua*)
- religious (e.g., monastery) systems
- cost-effective and efficient

## Constraints:

- lack of resources
- no improvement over time
- neglected by present system



# **National level initiatives**

- 1957 The Wildlife Conservation Act, Rhino Sanctuary
- 1961 Aquatic animal protection Act
- 1973 National Parks and Wildlife Conservation Act
- 1984 Amendments – Provision for Conservation Area
- 1992 Water Resources Act
- 1993 Buffer zone
- 1993 Forest Act
- 1996 Buffer zone Regulations
- 1996 The Environment Protection Act 1996
- 2003 Management of PAs by NGOs 2003

# **International level initiatives**

- 1971 Ramsar Convention
- 1972 World Heritage site
- 1973 CITES
- 1993 Convention on Biological Diversity
- 1992 UN Convention on Climate Change
- 1992 Water Resources Act
- 1994 UN Convention to Combat desertification
- Agenda 21

# **Establishment of protected areas**

**1973**



**1970s:**

- Initiation of formal biodiversity conservation
- Strict protection by army
- Wildlife Office of Forest Department

# Establishment of protected areas

1984



1980s:

- Participation of communities in conservation
- Department of National Parks and Wildlife Conservation

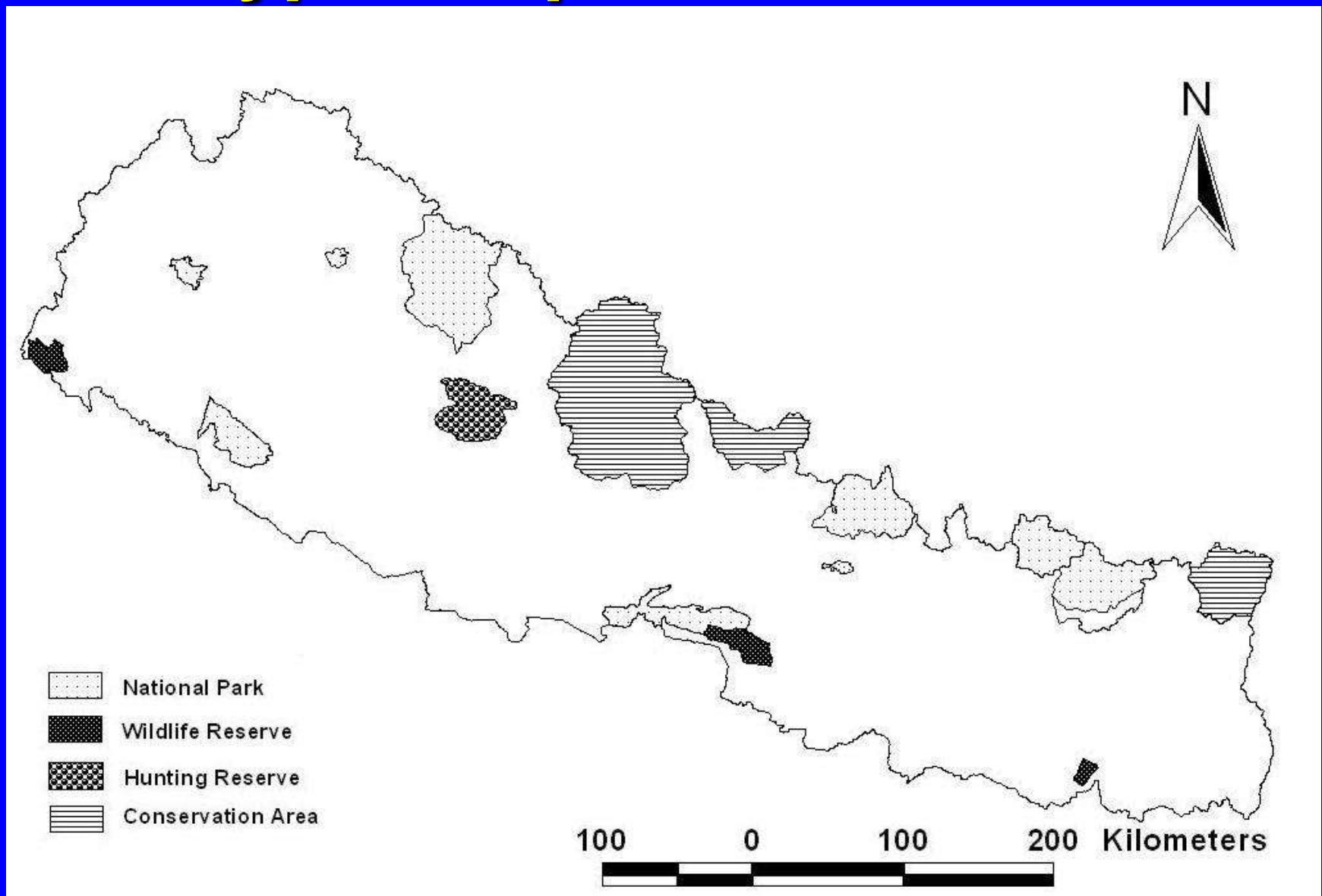
# Establishment of protected areas 1999



1990s and beyond:

- Buffer zone initiative (users, committees, council)
- Shift to landscape level approach of conservation

# Types of protected areas



# Types of protected areas (PAs):

- **Strict nature reserve** (IUCN cat. I PA) - area of unusual ecological significance, set aside for the purpose of scientific study.
- **National park** (IUCN cat. II PA) - area set aside for the conservation and management of the natural environment; eco-tourism compatible with sustainable conservation allowed.
- **Wildlife Reserve** (IUCN cat. IV PA) - area established for the conservation of flora and fauna and their habitats.
- **Conservation area** (IUCN cat. VI PA) – area, in which conservation and the sustainable use of the natural resources are integrated.
- **Hunting Reserve** (IUCN cat. VIII protected area) - area set aside for the conservation and management of wildlife; controlled recreational hunting allowed.
- **Buffer zone** - designated area surrounding a national park or reserve within which the use of forest products by local people is regulated in order to ensure sustainability.

# Protected areas:

Protected areas (Year established)	Area (km <sup>2</sup> )		Altitude (m)
	Core area	Buffer zone	
<b>National Parks (NP)</b>			
Chitwan NP (1973)	932	750	150-815
Bardia NP (1976/1988)	968	328	152-1494
Shivapuri NP (2002)	144	-	1366-2732
Khaptad NP (1984)	225	216	1000-3276
Makalu Barun NP (1992)	1500	830	435-8463
Langtang NP (1976)	1710	420	792-7245
Sagarmatha NP (1976)	1148	275	2800-8850
Shey Phoksundo NP (1984)	3555	1349	2000-6885
Rara NP (1976)	106	198	1800-4048

# Protected areas:

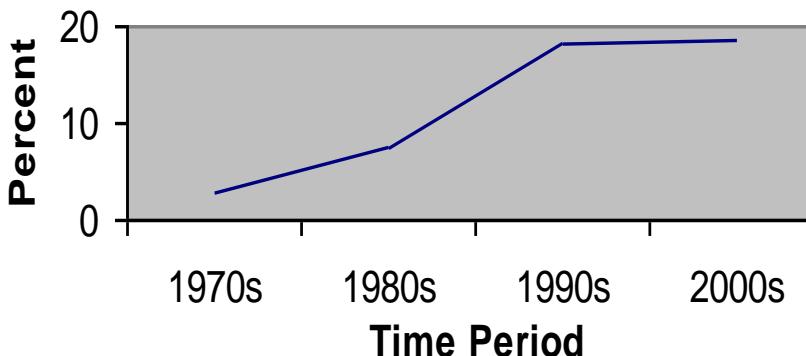
Protected areas (Year established)	Area (km <sup>2</sup> )		Altitude (m)
	Core area	Buffer zone	
<b>Wildlife Reserves (WR)</b>			
Koshi Tappu WR (1976)	175	173	90
Parsa WR (1984)	499	298	150-815
Suklaphanta WR (1976)	305	243	90-270
<b>Hunting Reserves (HR)</b>			
Dhorpatan Hunting Reserve (1987)	1325		2850-7000
<b>Conservation Areas (CA)</b>			
Kanchenjunga CA (1997)	2035		1200-8598
Manaslu CA (1998)	1663		1360-8163
Annapurna CA (1986, 1992)	7629		1000-8092

# Protected areas:

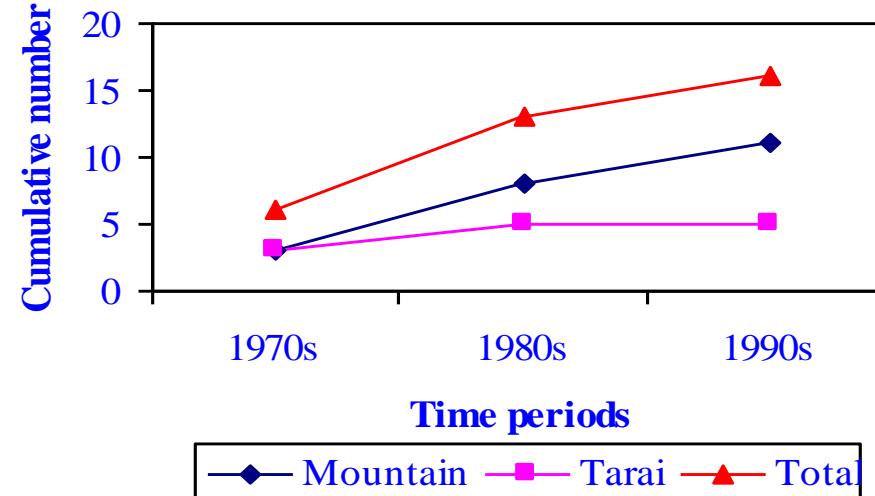
Protected areas (Year established)	Area (km <sup>2</sup> )		Altitude (m)
	Core area	Buffer zone	
Subtotal	23919 (16.2%)	5079 (3.4%)	
Total area protected (%)	28998 (19.7%)		

# Establishment of protected areas

Area covered by PAs of Nepal

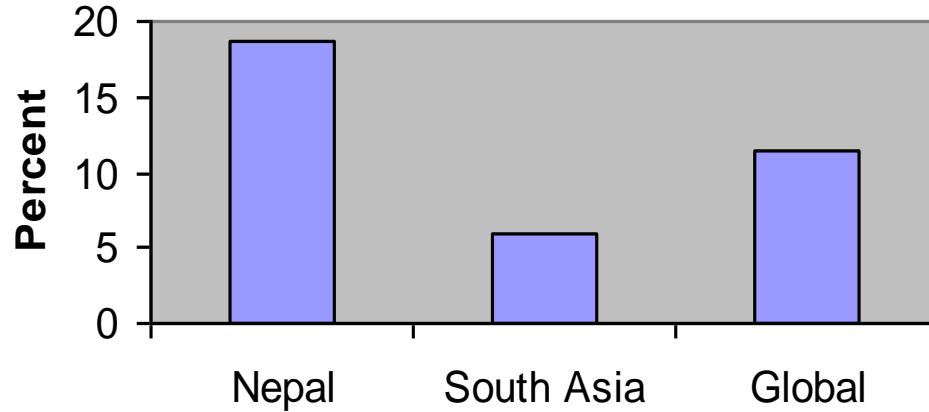


Number of Protected Areas

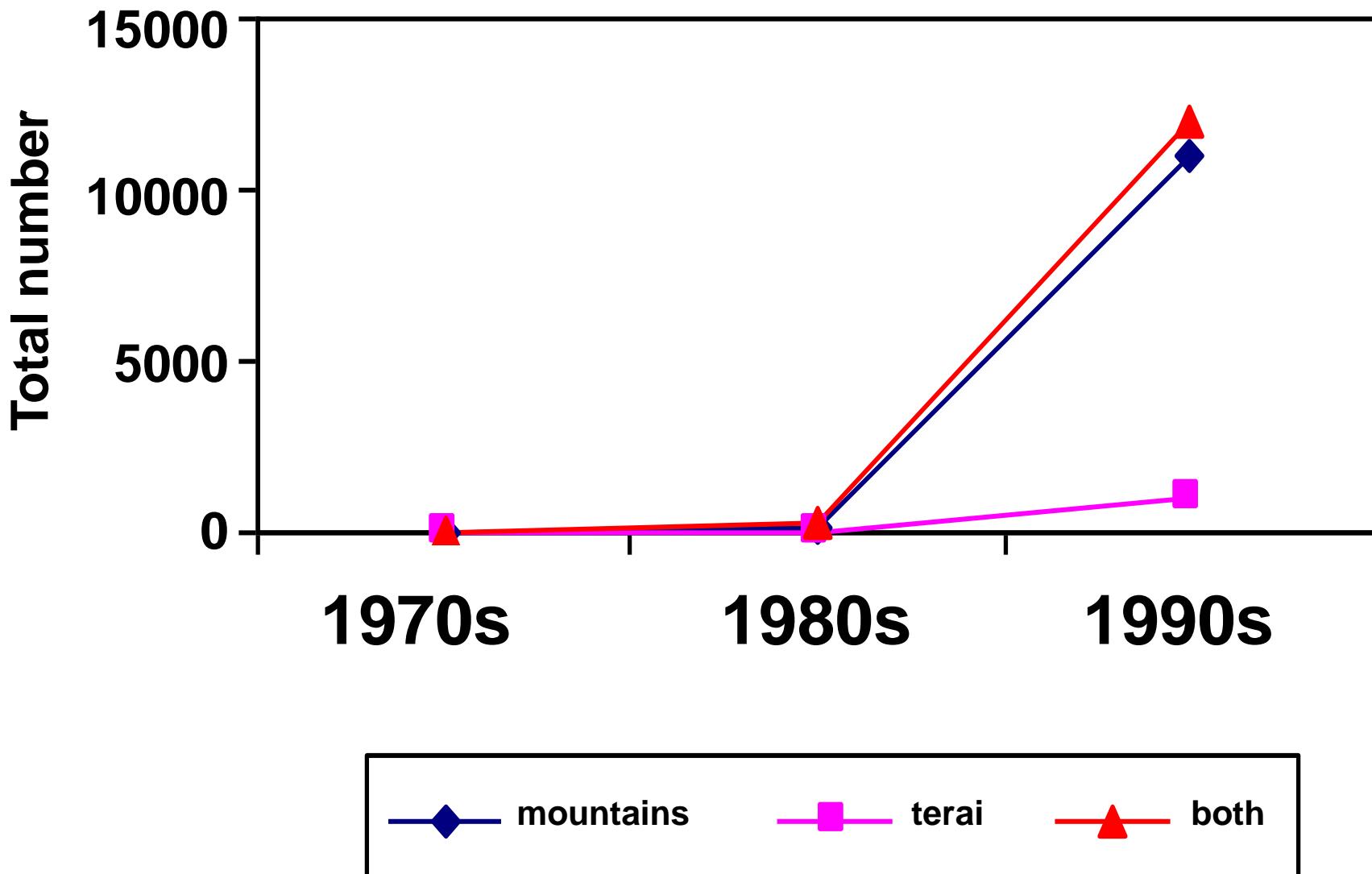


- Total area >19% (16)
- Mountains: 14.3% (11)
- Terai: 2% (5)
- Buffer zones >2.4% (11)

PAs coverage: a comparison



## Community forests



# Endangered animals in Nepal

	SCIENTIFIC NAME	ENGLISH NAME	IUCN category	CITES Appendix
<b>MAMMALS</b>				
1	<i>Manis pentadactyla</i>	Indian pangolin	EN	II
2	<i>Caprolagus hispidus</i>	hispid hare	EN	I
3	<i>Panthera tigris</i>	tiger	EN	I
4	<i>Panthera uncia</i>	snow leopard	EN	I
5	<i>Elephas maximus</i>	asiatic elephant	EN	I
6	<i>Rhinoceros unicornis</i>	rhinoceros	EN	I
7	<i>Porcula salvania</i>	pygmy hog	CR	I
8	<i>Moschus chrysogaster</i>	Himalayan musk deer	EN	I
9	<i>Bubalus arnee</i>	wild water buffalo	EN	I
10	<i>Pantholops hodgsonii</i>	Tibetan antelope	EN	I
11	<i>Platanista gangetica</i>	gangetic dolphin	EN	I
<b>BIRDS</b>				
12	<i>Eupodotis bengalensis</i>	Bengal florican	CR	I
13	<i>Syphoetides indica</i>	lesser florican	EN	I
<b>REPTILES</b>				
14	<i>Gavialis gangeticus</i>	gharial crocodile	CR	I



Tiger (*Panthera tigris*).



**Rhinoceros (*Rhinoceros unicornis*)**



**Rhinos (*Rhinoceros unicornis*) in their natural habitat:  
Beeshazari Lake, next to the Chitwan National Park.**



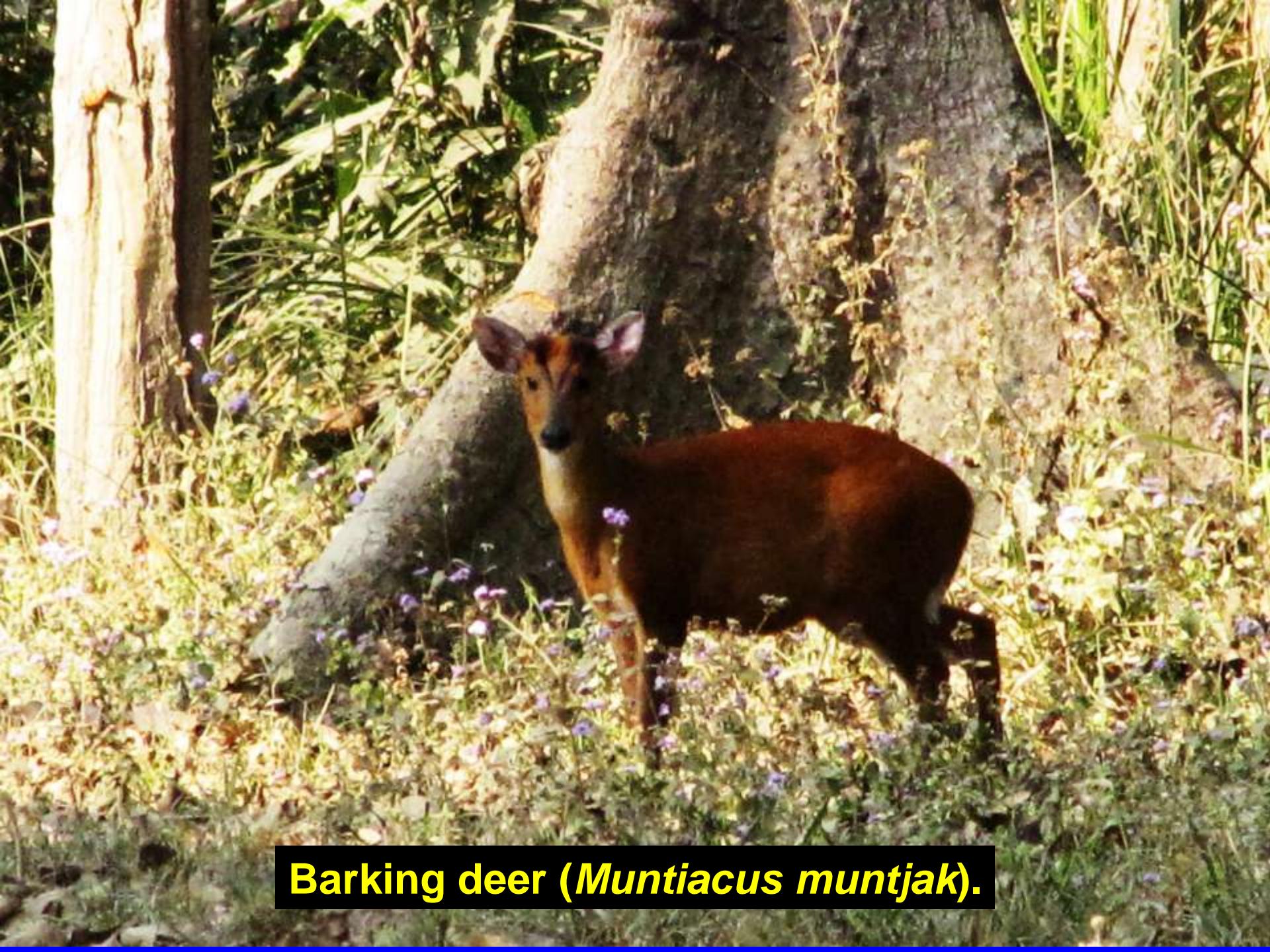
**Asian elephant (*Elephas maximus*).**



**Mugger crocodile (*Crocodylus palustris*).**



**Sambar deer (*Cervus unicolor*).**



Barking deer (*Muntiacus muntjak*).



**Spotted deer (*Axis axis*).**



**Wild boar (*Sus scrofa*).**



***Rhododendron arboreum*, a  
national flower of Nepal.**

**Rhododendrons along with oak,  
hemlock, and firs form a number of  
forest types in different climatic  
conditions throughout the country.**





**Flame of the forest (*Butea monosperma*).**



**Cassia alata** in the lowlands of Nepal

***Bauhinia variegata*,**  
the flower is used  
for pickle.





***Coelogyne corymbosa* (Orchidaceae), Central Nepal**



Giant hornbill (*Buceros bicornis*).



**Common Kingfisher  
(*Alcedo atthis*):  
a symbol of healthy  
wetlands.**



Hill myna (*Gracula religiosa*).



**Jungle owlet (*Glaucidium radiatum*).**



Ruddy Shel-duck (*Tadorna ferruginea*).