

# Community - Protected Area Relationship and Implications on Conservation

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# The 1<sup>st</sup> Protected Area in Sri Lanka

Mihinthale Sanctuary 307 BC [2319 years ago]

*"the birds of the air & the beasts have an equal right to live & move about in any part of this land .*

*The lands belongs to the peoples & all other beings*

*The king is only the guardian of it"*

King **Tissa**, **307 BC**

Advised by the Buddhist monk **Arahat Mahinda** the  
Son of Indian **Emperor Asoka**



In 7 gau (46km) radius area of Anuradapura Kingdom was declared a refuge for animal including **birds** and 7 tanks for **fish**.

**King Nissanka Malla (2nd Century AD)**



A UNESCO World heritage Site

**Faxian** [法显: Fǎxiǎn] (337 – 422 CE) a **Chinese Buddhist monk** who traveled to Nepal → India → Sri Lanka.

spend two years in Sri Lanka copying the **Book of Discipline**  
He also mention this sanctuary



# Protected Area (PA) types

Wildlife Department	Forest Department
1. Strict nature reserves	1 . National Heritage Wilderness Areas
2. National parks	2 . Conservation Forests
3. Nature reserves	3. Reserved Forests
4. Jungle corridors	4. Village Forests
5. Refuge	5. Other State Forests
6. Marine reserves	
7. Buffer zones	
8. Sanctuaries	

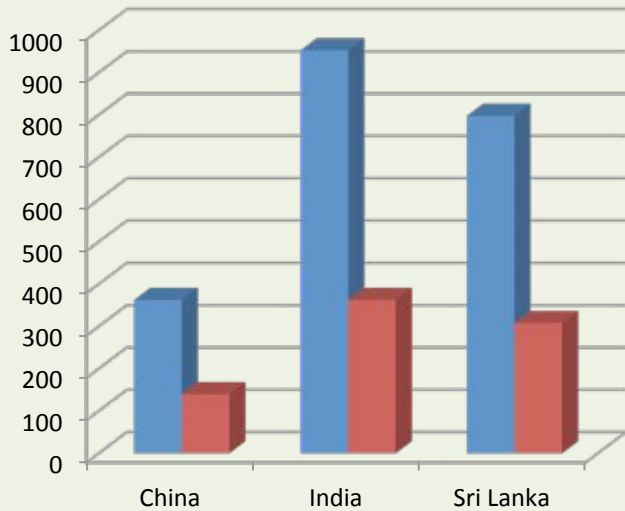
Overview of Sri Lanka showing current and proposed Protected Areas and Forests



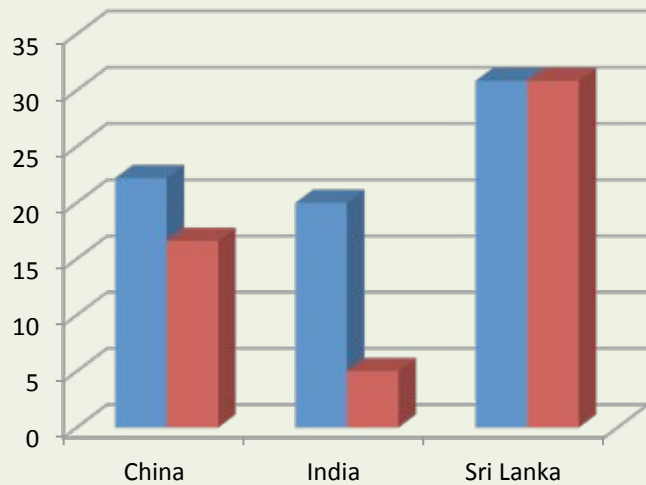
## Forest cover and PA

Forest type	Total area (ha)	Total land area (percent)
Montane	3 108	0.05
S u b - montane	68 616	1.04
Lowland rain	141 506	2.14
M o i s t monsoon	243 886	3.69
D r y monsoon	1 090 981	16.49
Riverine	22 435	0.34
Mangrove	8 688	0.13
Lowland rain	141 506	2.14
Sparse	464 076	7.01
<b>Total</b>	<b>2 043 296</b>	<b>30.89</b>

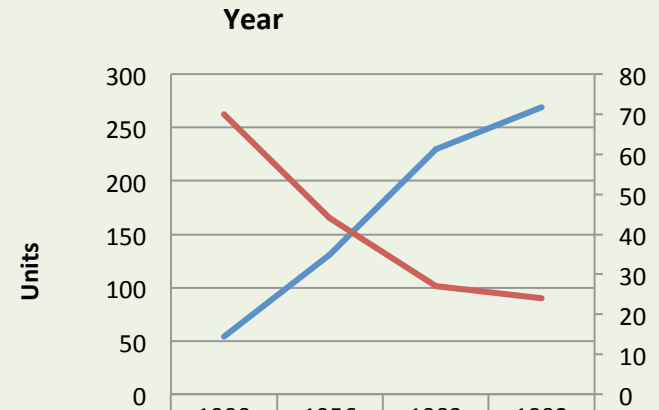
# Human – Wildlife coexistence



■ Pop density  
■ Pop density /land

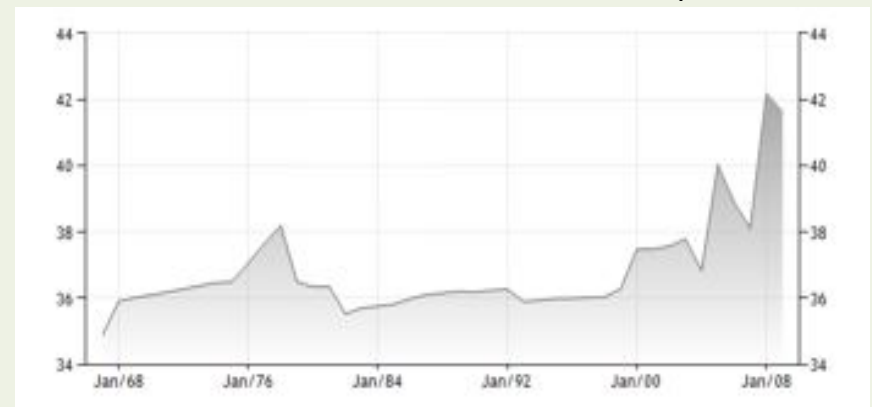


■ Forest cover  
■ Protected



Year	1900	1956	1983	1992
Population density (persons/km <sup>2</sup> )	54	131	230	269
Forest cover (percent of land area)	70	44	27	24

Source: Forest Department



Source: WORLD BANK Indicators

# Study Area



- Bundala National Park (**BNP**)
- Located in the **arid zone**
- ( $6^{\circ}08' - 6^{\circ}14'N$ ,  $81^{\circ}08' - 81^{\circ}18'E$ )
- Area of  $24\text{km}^2$
- RAMSAR **wetland** in Sri Lanka
- Park consists of five **lagoons**
- Surrounded by **seven villages**
- **Bird Migratory** destination

# Importance of the BNP and adjacent area

## Historical



125000PB pre-history settlement in BNP

## Cultural



Traditional mask dancing

## Environmental



Wildlife (Sri Lankan leopard)

## Economical



Wind power



Ancient Buddhist Temple



Arts and crafts (District flag)



Forests, sand dunes, beaches and minerals



Salt production



# Questions

1. What are the negative impact from community to the Park?
2. How people benefit from the Park?
3. How Park benefits from people?
4. How the establishment of Park affect the community?
5. What should Park Management do?

# Methods

- Interview - **163 families** from **seven villages** adjoining the **Bundala National Park (BNP)** in 2008.
- Literature survey
- Lived with villagers for 1 ½ years
  - [while sampling  
birds,  
aquatic invertebrates,  
plankton with  
water quality]

What we found..?

## Negative impact from community to the Park



[8% ] use park water



[4% ] rear cattle

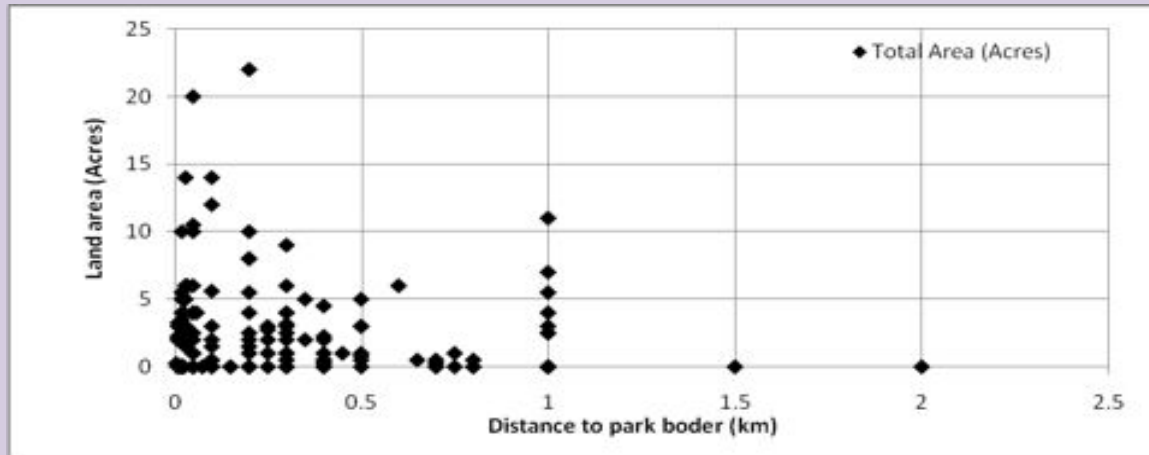


[62% ] Intense use of agrochemicals

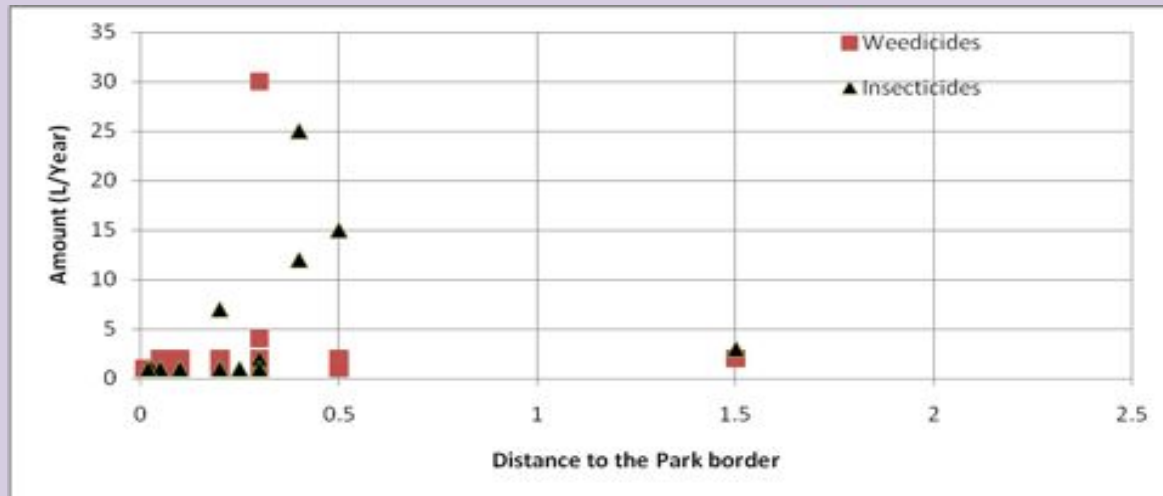


[17 % ] fish

# Misuse of agrochemicals [62%]



Distribution of Agricultural Areas surveyed.



Distribution of the amount of Pesticides used

# Benefits from people to Park



Protecting turtles



Rescue and chasing elephants



Removing invasive species



Assist researchers

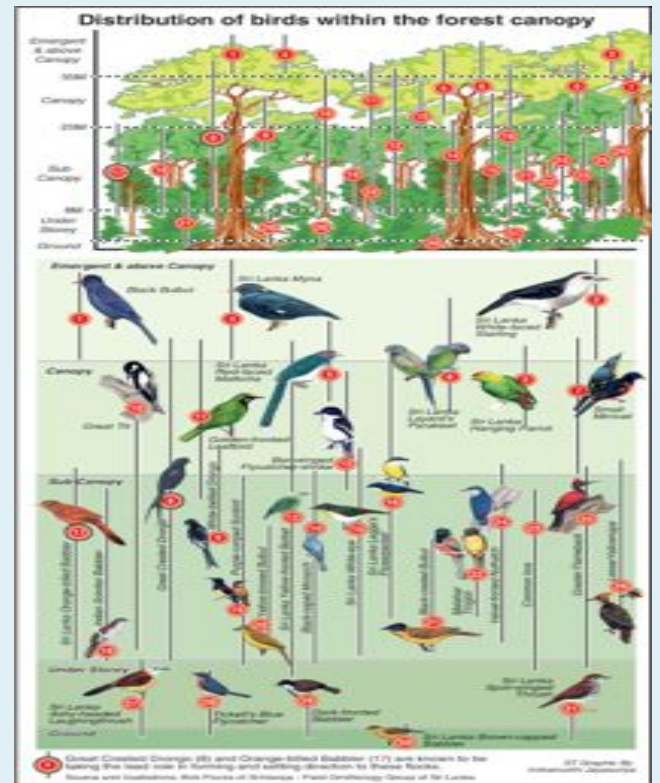
# Benefits to people from the Park



Eco - tourism [3%]



Work for the Park [1%]



Educated on wildlife

## Before and after the establishment of Park

Before	Now	Status	Impact
Farming	Not in practice	Illegal	No
Fishing	In practice	Allowed for traditional inhabitants	Sustainable
Cattle rearing	Cattle trespass the park	Illegal	Eutrophication, overgrazing , Soil erosion
Fuel wood		Illegal /Tolerate	Reduce invasive <i>Prosopis</i>
Salt production	In practice	Controlled	Water pollution
shell mining	Unknown	Illegal	Unknown
Felling tree	In practice (?)	Illegal	Unknown



## Recommendations for PAM

- More benefits to community through ecotourism and conservation programs
- Reduce excess use of **agrochemicals**
- Stop **rearing cattle** in the park.
- Use of **invasive *Prosopis*** for fuel wood should be encouraged.
- Releasing **irrigated water** and addition of **brine water** from saltern to lagoon system should be bypassed to sea



Thank You