

**2nd Huangshan Dialogue on UNESCO Sites
and Sustainable Development
12-15th September 2016**



**THE CONSERVATION SUCCESS OF
PREK TOAL CORE AREA OF THE TONLE SAP
BIOSPHERE RESERVE, CAMBODIA**

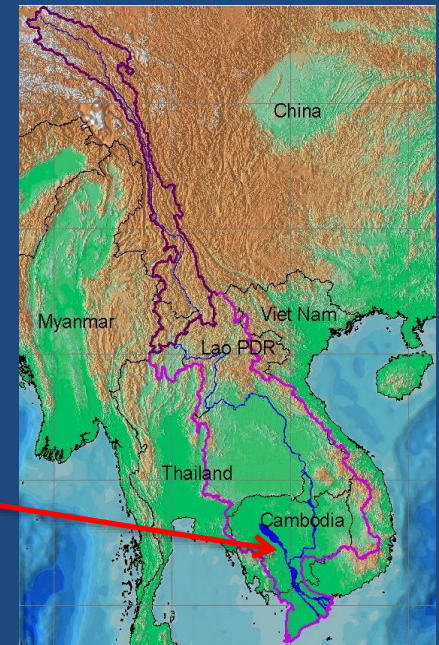
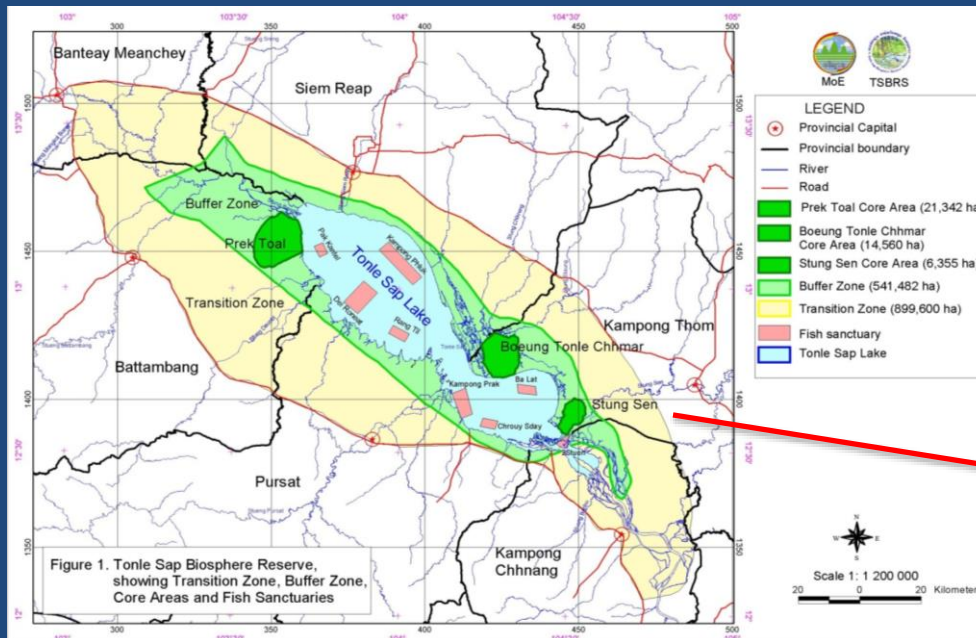
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Outline

- Introduction
- Management Model of Prek Toal Core Area of the Tonle Sap Biosphere Reserve
- Project Activities and Results
- Challenges
- Conclusions

Introduction

- Tonle Sap is the Largest freshwater lake in the SEA
- Tonle Sap fish species richness is ranked 4th of the world's greatest lakes
- 4th most productive fishery lake in the world
- The world largest harvest of watersnakes
- Largest breeding colonies of large waterbirds in SEA.



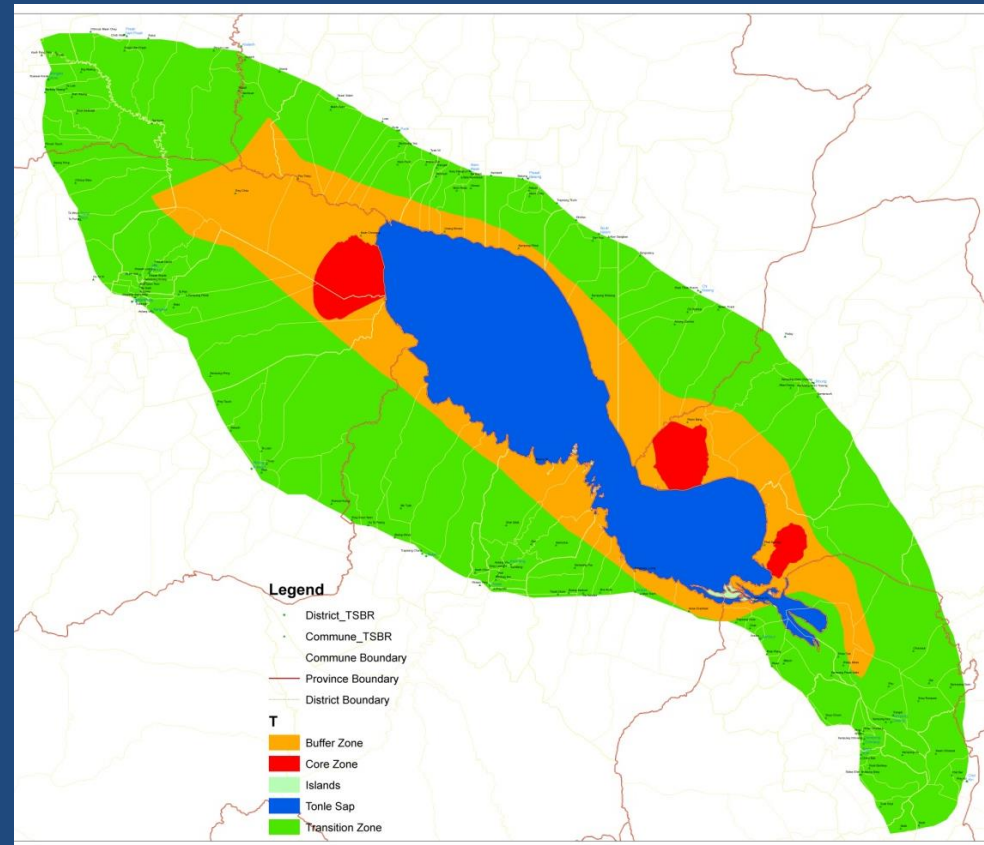
Conservation History

Introduction (cont.)

- 1994: Discovered waterbird colonies
- 1996: Collection measured for the first time: 26,000 eggs & 2,600 chicks
- 1997: TSL recognized as BR by UNESCO through MAB.
- 2001: Royal Decree on the Tonle Sap Biosphere Reserve issued by RGC.
- 2008: Law on Protected Areas issued



- **March 2012: All of fishing lots (37 lots = 271,117 ha) in TSL was abolished for the fishery conservation and community fishing.**
- 65.6% of the total lots (177,881 ha) is for family fishing
- 34.40% (93,236 ha) was designated as fishery conservation areas in TSBR



How to manage, protect and monitor an ecosystem that undergoes such a phenomenal amplitude of change?

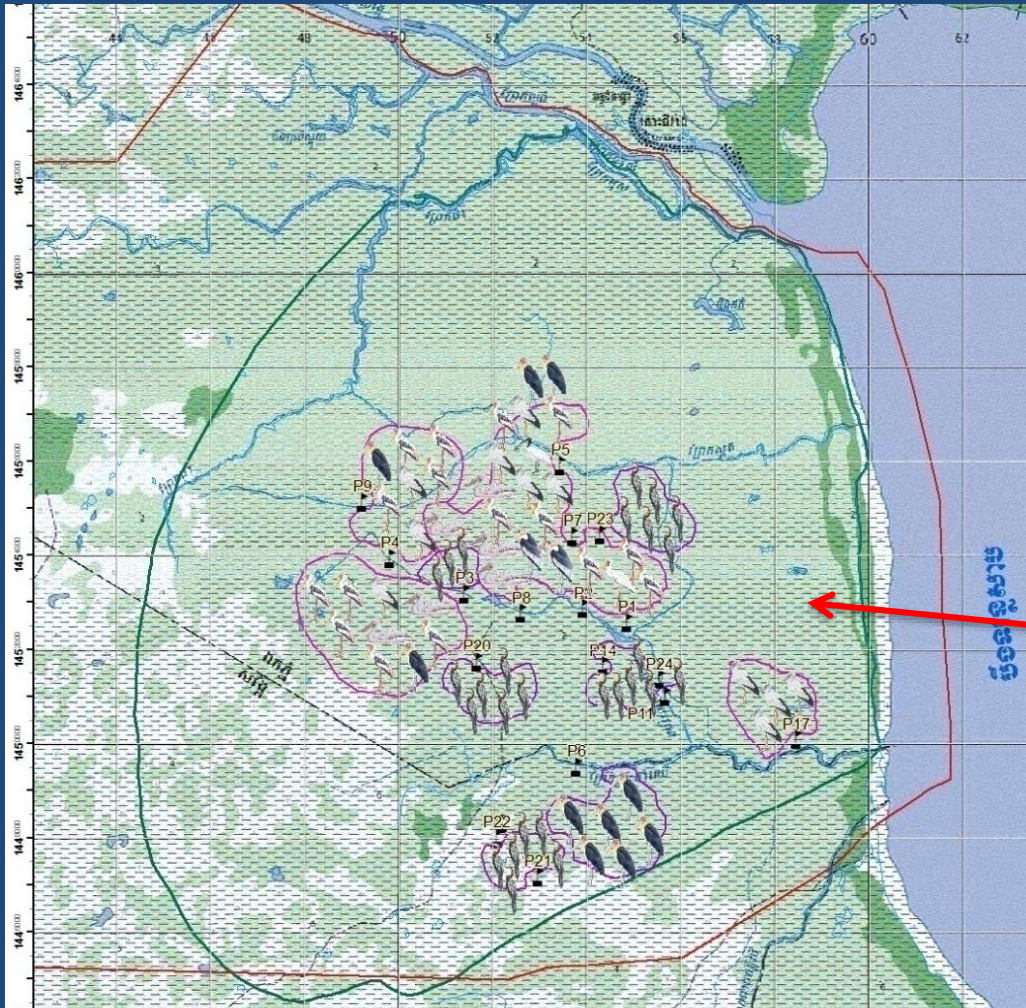


Case Study

Prek Toal Core Area

Prek Toal Core Area
(21,342 ha)

- Breeding colonies of large waterbirds
- Unique shrub habitats
- The Highest catch of fishes in the TSBR.

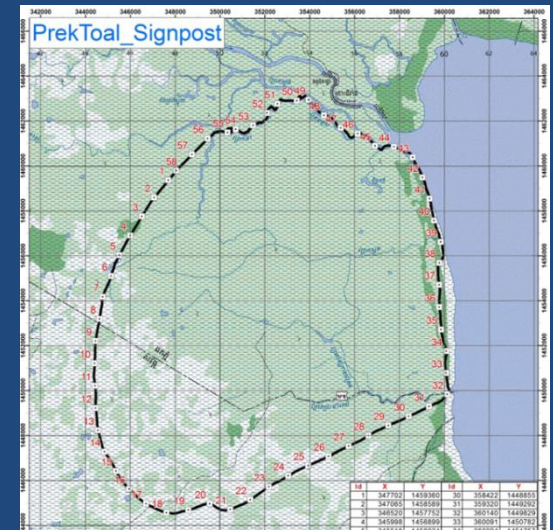


Prek Toal Management Model



Project Activities & Results

- Established Field based Headquarter & Equipped with research equipment
- Employed local residents as rangers and provided on job trainings
- Core Area boundary demarcation.



1. Waterbird Colonies Protection & Monitoring

Activities (cont.)

- Built 16 tree top platforms for permanent watch of breeding colonies
- Set up bird colony monitoring program



2. Smart Patrols



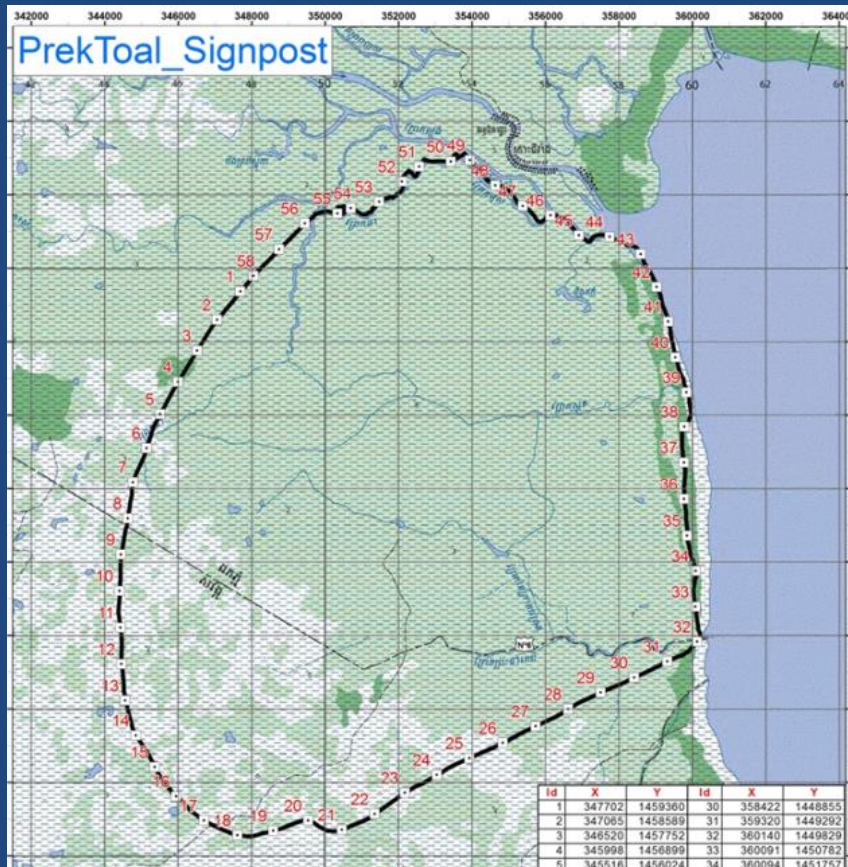
Activities..(cont.)

- Patrol to define wildlife status & threats
- Patrol for law enforcement



3. Stream Conservation

- 3 main streams in the CA are conserved for fish and bird habitats



4. Forest Fire Control



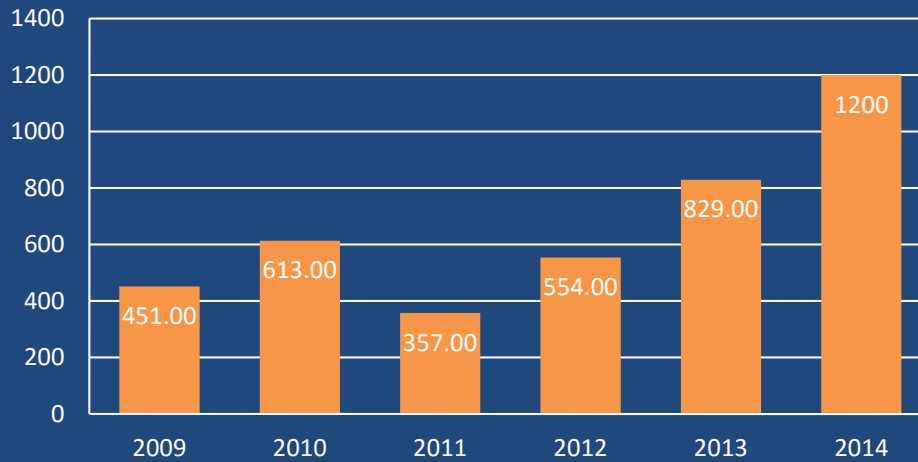
5. Ecotourism

- ❑ 300 families benefit:
 - Boat services
 - Community restaurant
 - Homestay
 - Handicraft shop
 - Tour Guide
 - Other business...



Prek Toal Ecotourism

No. of Foreign Visitor



- Revenue Flow
 - 43 % for the local community
 - 42% for Conservation
 - 15% for national treasury



Results of permanent watch of breeding colonies of large waterbirds



Largest waterbird colony in Asia

c.50,000 pairs of waterbird, including:

- 190 pairs of Greater Adjutant (EN)
- 395 pairs of Lesser Adjutant (VU)
- 10-20 pairs of Milky Stork (VU)
- 2,500 pairs of Painted Stork (NT)
- 14,000 pairs of Asian Openbill (LC)
- 6,700 pairs of Oriental Darter (NT)
- 1,800 pairs of Spot-billed Pelican (NT)
- 50 pairs of Grey-headed Fish-eagle (NT)

Oriental Darter

Anhinga melanogaster



- Largest colony in SE Asia >30% of global population.
- Numbers are increasing by ~1.7x each year
- 2014: 6,117 pairs.
- Breed: August to January

Greater Adjutant

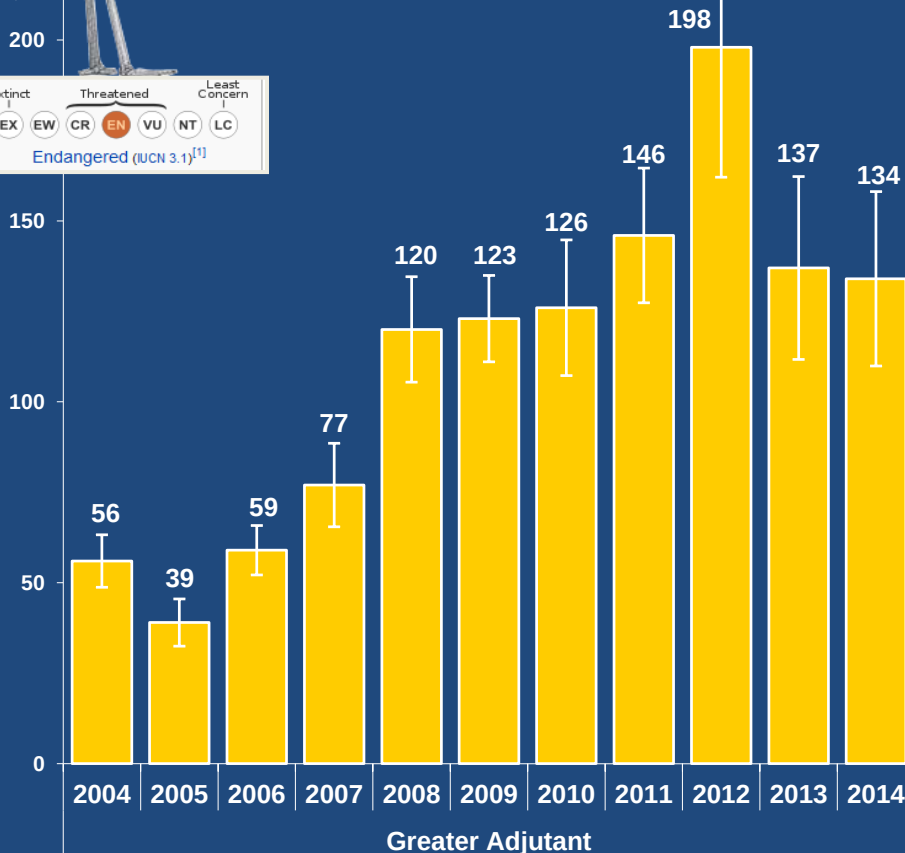
Leptoptilos bubius



- Second largest colony in the world
- Largest population in mainland SE Asia, 40% of Global population
- Breed: January to June, 1-3 nests per tree

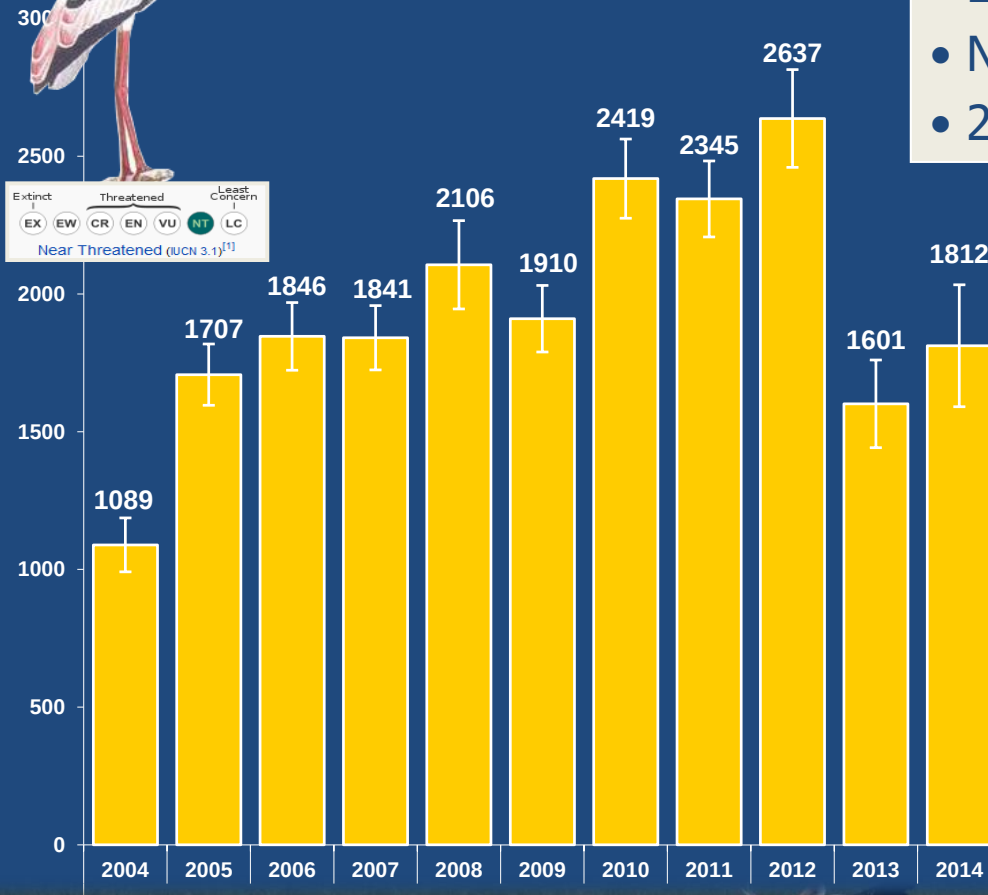


Breeding Pairs



Painted Stork

Mycteria leucocephala



- Largest colony in South-east Asia
- Numbers are slowly increasing
- 20% of South-east Asian population

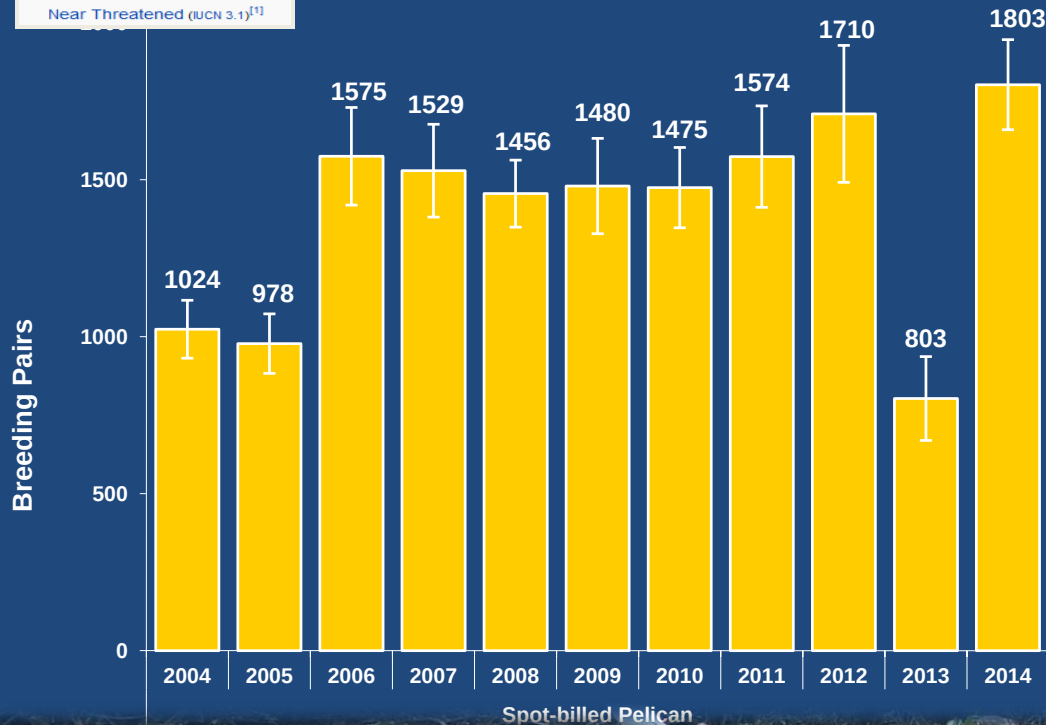


Spot-billed Pelican

Pelecanus philippensis



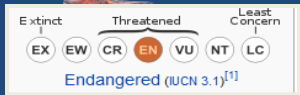
- Last breeding colony in South-east Asia
- Most significant colony in the world
- 30% Global Population.



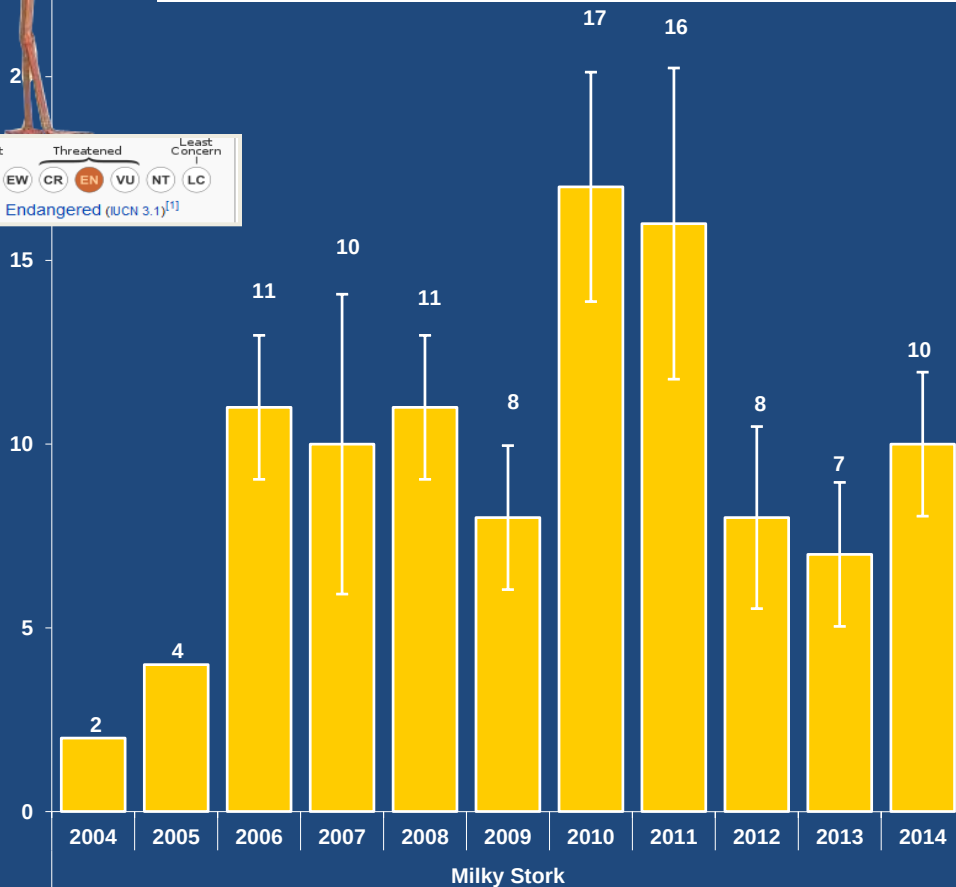
Milky Stork

Mycteria cinerea

- Only known colony in mainland Southeast Asia
- Numbers are slowly increasing
- Breed within Painted Stork colonies
- Breed: January to May-June

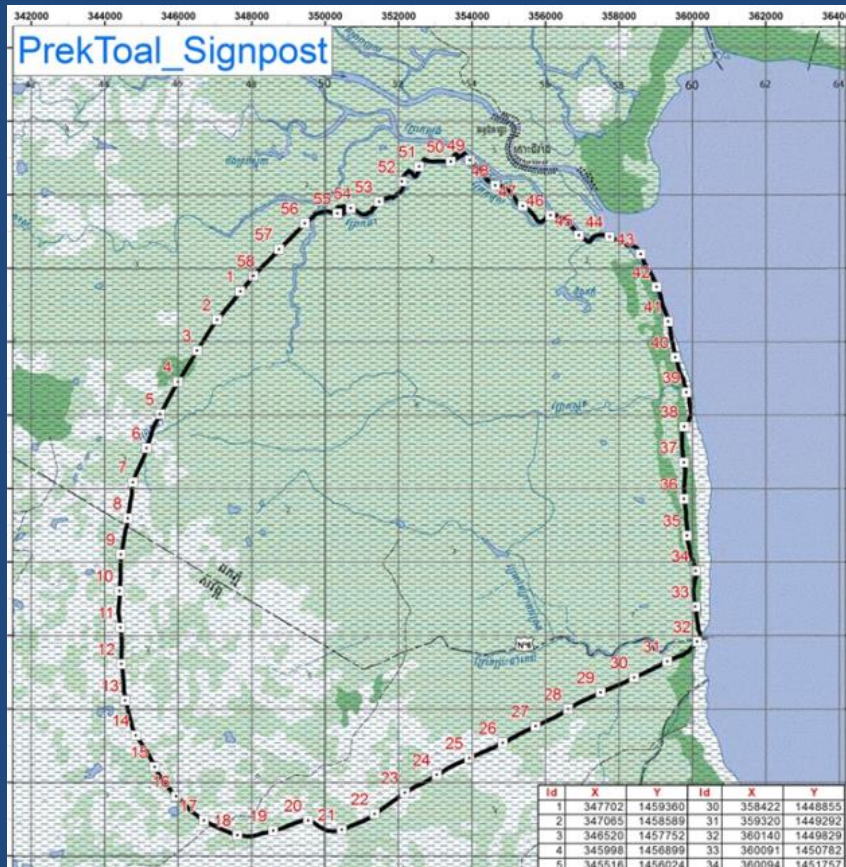


Breeding Pairs



7. Stream Protection

- 3 main streams in the CA are conserved for fish and bird habitats



Preventing Dry Season Streams



Before stream conservation

- ❑ Streams & Ponds Pumping
- ❑ Mosquito-net Fishing &
- ❑ Bamboo-fence Traps



After Stream Protection



- Increase fish in the streams
- 2013: 5-10 fish/cast net
- 2014-15: 20-50 fish/cast net

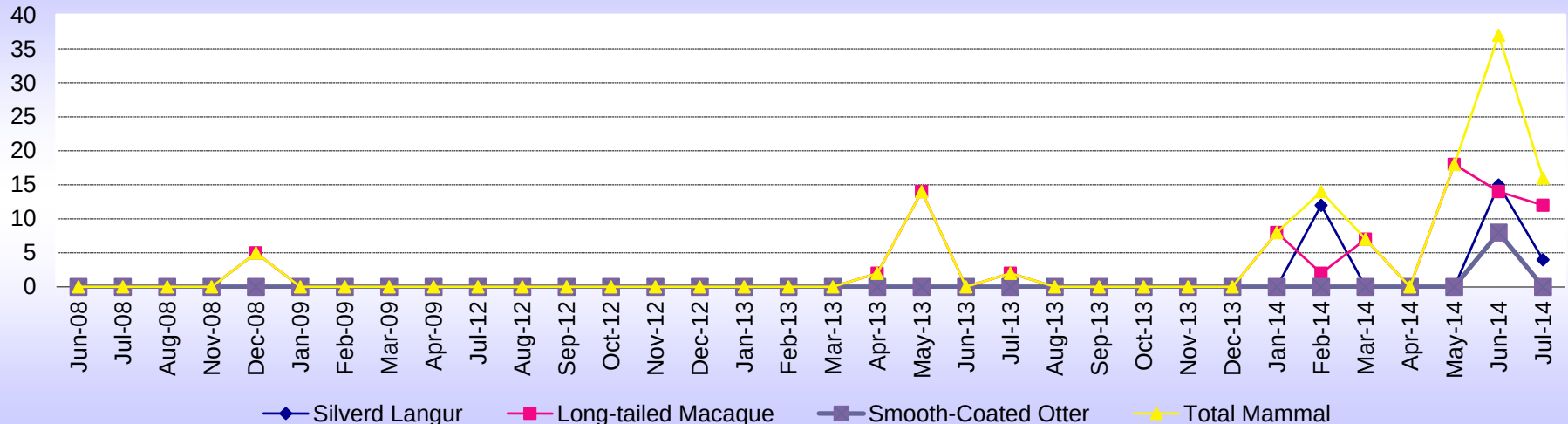


Return of Endangered/rare Species

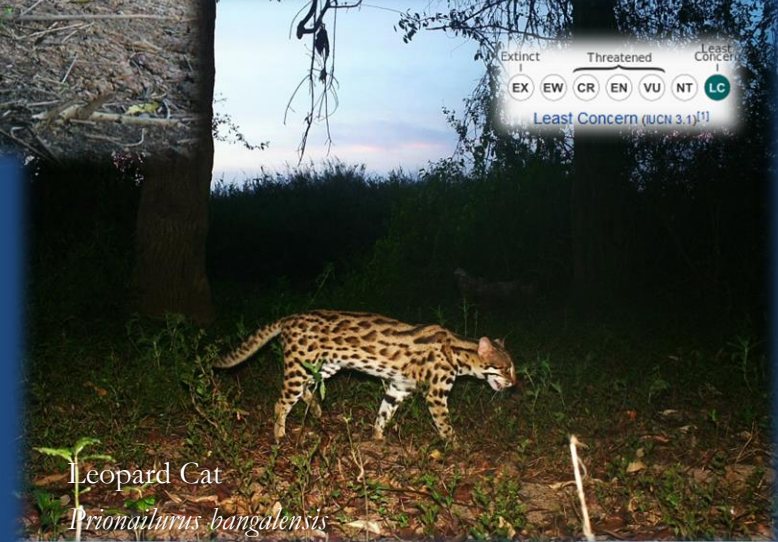
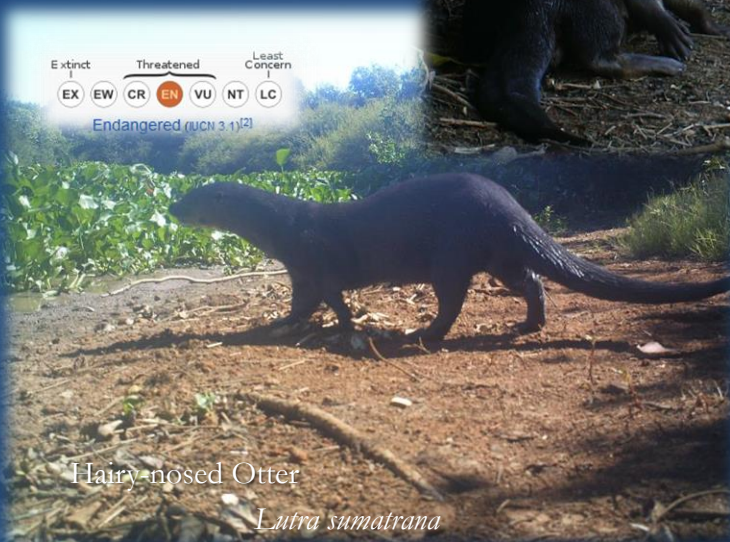
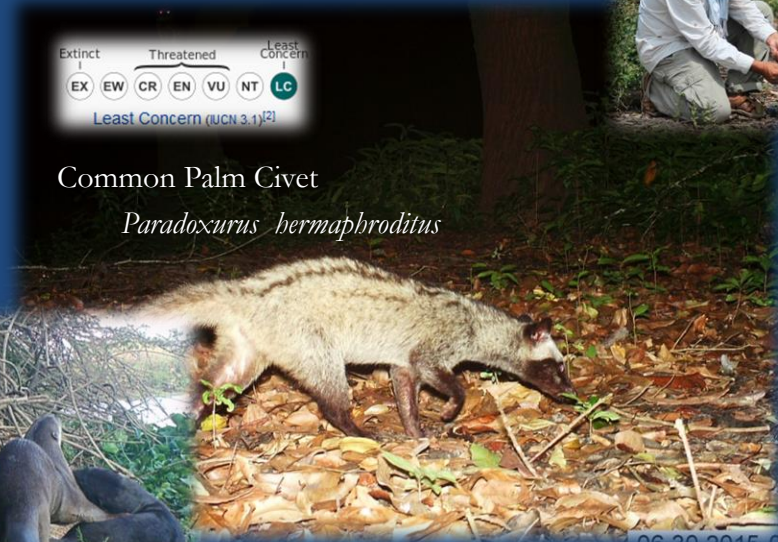
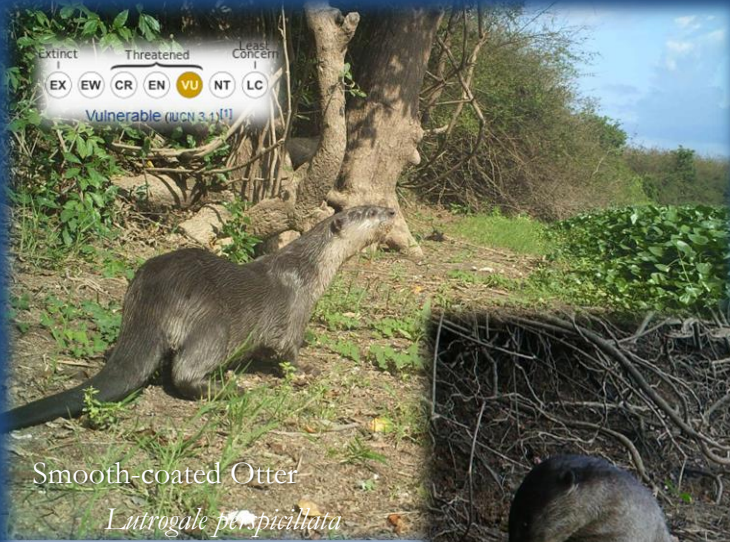
- Silvered Langur
- Long tailed Macaque
- Smooth Coated Otter
- Hairy nosed Otter



Mammal

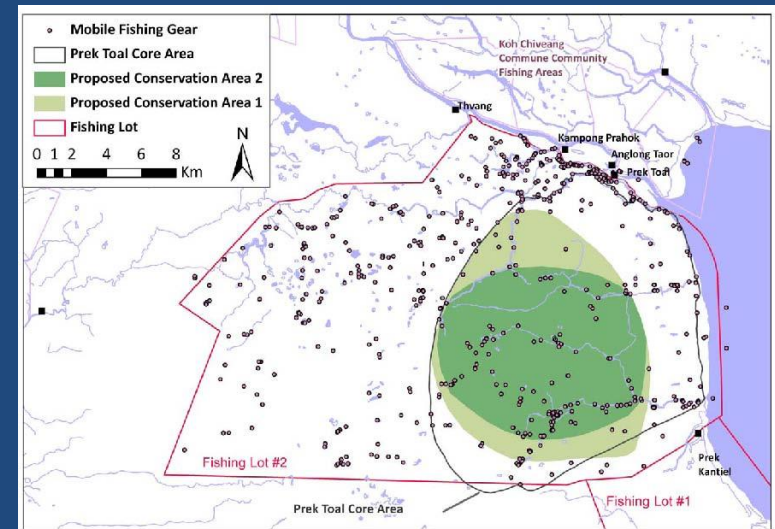
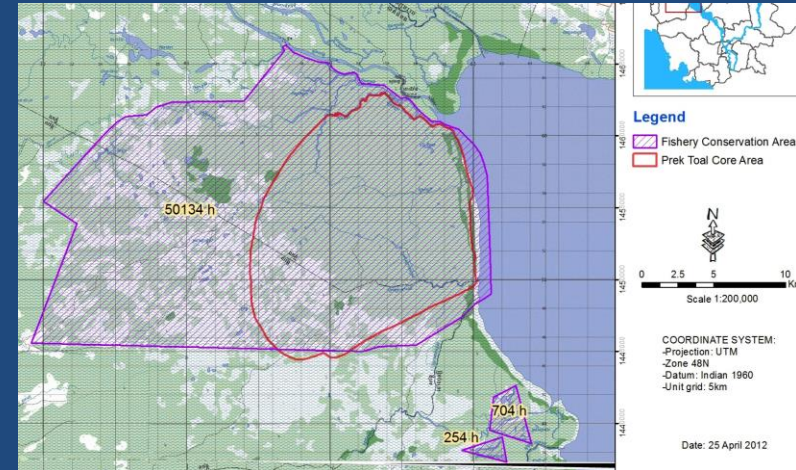


Other key wildlife species



Challenges

1. Overlap Management authority and jurisdiction (MoE & MAFF, MOWRAM,...)
2. Illegal Fishing Practices and wildlife hunting
3. Invasive alien Species
4. Upstream hydroelectric dams
5. Climate Change



6. Deforestation

- Inundated forest from 2005 to 2010, lost about 48,170 ha, which is about 9,634 ha of annual decrease.
- Inundated forest in TSBR_647.406 ha is strictly protected by Sub-decree 2011.
- Forest fires in 2016
 - Estimated ~ 2,500 ha of CA destroyed by fires



Conclusions



- Incredible growth - largest waterbird colony in SEA.
- One of Asia's Greatest Conservation Success Stories which is results of strong protection addressed key threats, long term government-NGO partnership ensures constant political and donor support; and community participation
- Stream conservation in the TSBR's core areas are vital for fish, wildlife species and ecological system of the TSBR.
- Increasingly healthy ecosystem- reappearance of threatened species
- Prek Toal is recently well-known due to the success of the bird colonies conservation and make a strong support of the government and civil societies.

**Thank You Very Much for Your
Attention!**

