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

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Outline

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• Project Activities and Results
• Challenges
• Conclusions
Introduction

• Tonle Sap is the Largest freshwater lake in the SEA
• Tonle Sap fish species richness is ranked 4\textsuperscript{th} of the world’s greatest lakes
• 4\textsuperscript{th} most productive fishery lake in the world
• The world largest harvest of watersnakes
• Largest breeding colonies of large waterbirds in SEA.
Conservation History

- 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

**GOAL**
Sustainable Conservation of Biodiversity in Prek Toal Core Area.

**TARGETS**
- Increased bird populations and fish stock
- Stable forest cover (no deforestation & forest fire)

**THREATS**
- Wildlife Hunting & Disturbance
- Unsustainable Fishing
- Forest fire & Fuel wood collection
- Fuel wood collection

**ACTIONS**
- Permanent watch and patrolling by Rangers
- Community awareness and Env.t. Education
- Ecotourism for Community livelihoods

**Resources**
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

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

• 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
• 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
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
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
Other key wildlife species

- Smooth-coated Otter
  *Lutrogale perspicillata*

- Hairy-nosed Otter
  *Lutra sumatrana*

- Leopard Cat
  *Prionailurus bangalensis*

- Common Palm Civet
  *Paradoxurus hermaphroditus*
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!