



Title	Wetland Habitat Change in the Shenzhen River Cross-boundary Catchment, China
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Wetland habitat change in the Shenzhen River cross-boundary catchment, China



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Background

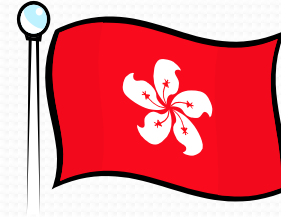
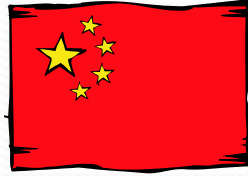
China – rapidly urbanizing
Coastal development
Wetland loss

Shenzhen & Hong Kong



Study Area

Shenzhen



Hong Kong

- China's first Special Economic Zone
- Rapid economic growth



- Once a British Colony
- One Country, Two Systems

Important wetlands



Research Objectives

- To analyze the land use change in the Shenzhen River catchment with a focus on **wetlands**
- To investigate the potential **impacts of land use change** on the habitat of **avifauna**



Methodology



1. SPOT satellite images (1993 and 2008)
2. Ecological and environmental monitoring data
3. Literatures



Methodology



Hong Kong Herbarium

Mangrove



WWF-HK

Gei Wai



Charlie Moores

Mudflat



WWF-HK

Brackish wetland

Methodology



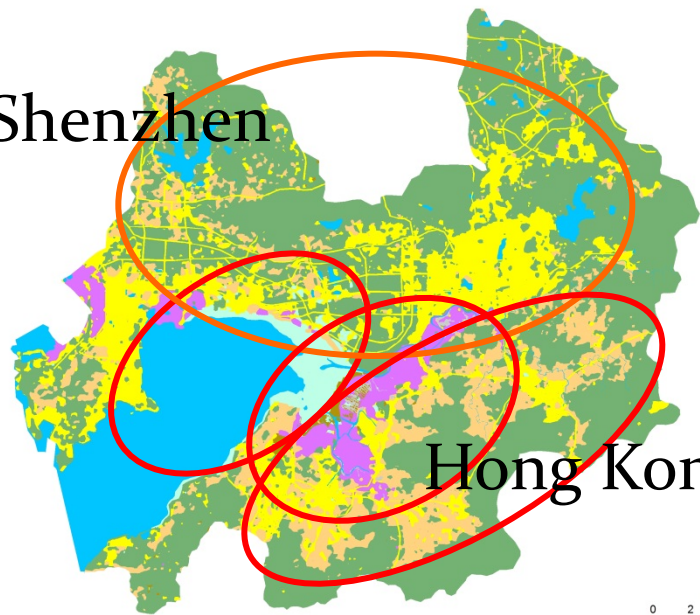
Cultivated land
Long Valley, Hong Kong



Urbanized area
High rises in Shenzhen
Futian District

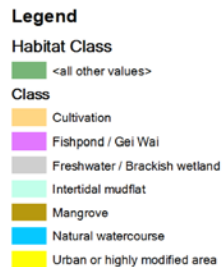
Results- habitat change

Shenzhen

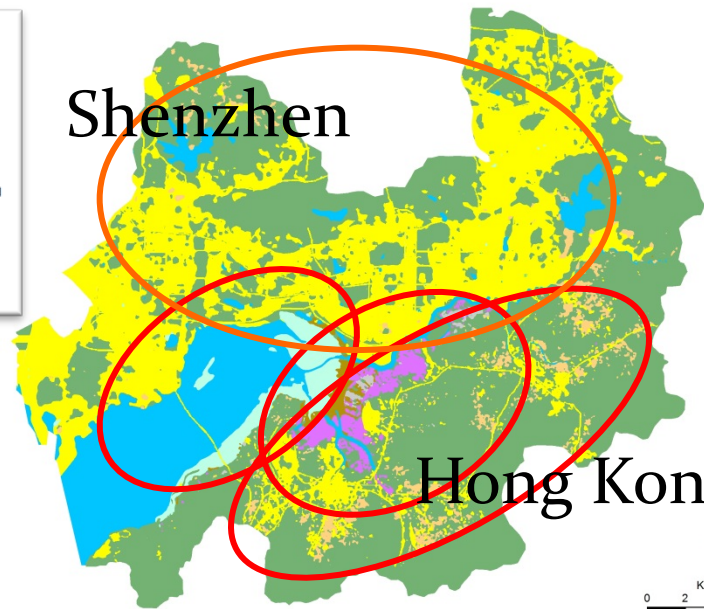


Hong Kong

1993




Shenzhen



Hong Kong

2008

Habitat Class	1993 (Area in km ²)	2008 (Area in km ²)	Area change (in km ²)	% change
Cultivation	86.34	19.72	-66.63	-77.16
Fishpond/GeiWai	27.29	10.39	-16.90	-61.93
Freshwater/Brackish wetland	1.59	1.95	0.36	22.98
Intertidal mudflat	16.22	17.16	0.94	5.80
Mangrove	3.28	5.78	2.5	76.45
Urban or highly modified	134.72	226.30	91.59	67.99



Habitat change in the Shenzhen River Catchment between 1993 and 2008

Results

Potential environmental impacts:

1. Habitat loss, disturbance and fragmentation
2. Water quality degradation
3. Heavy metals contamination



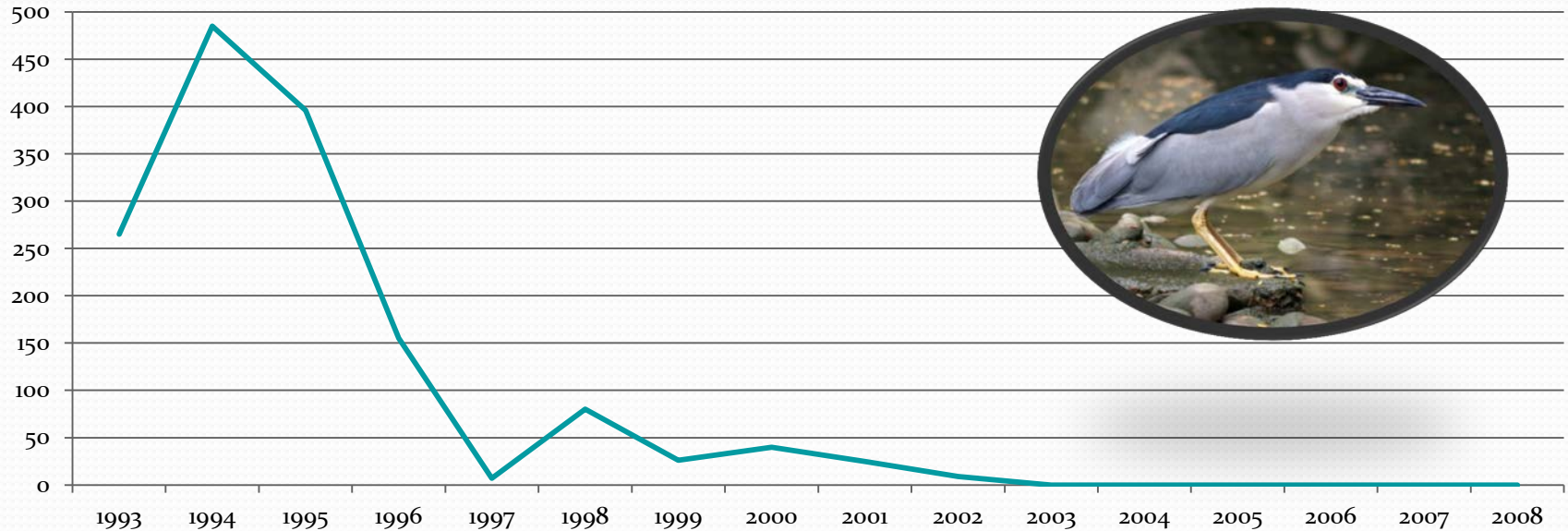
Results- egretty counts

- Egretty counts



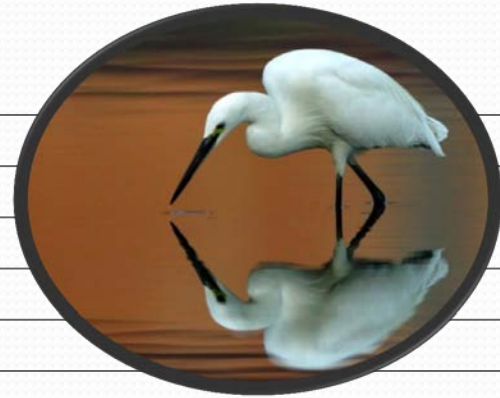
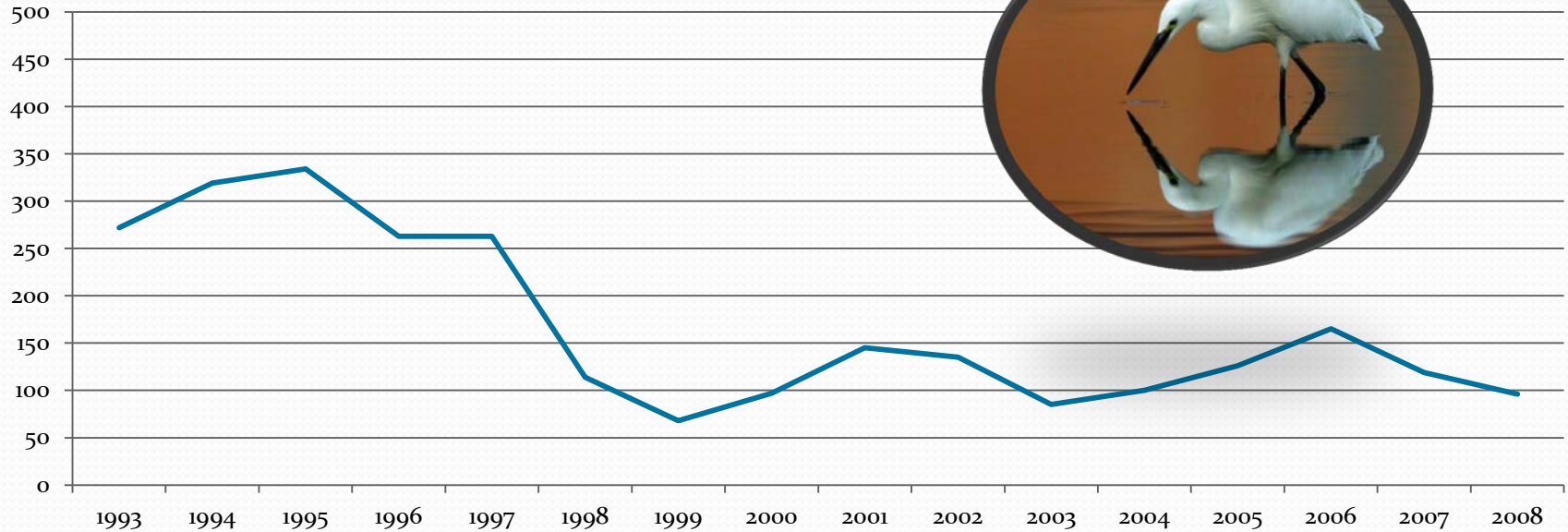
Nycticorax nycticorax

Black-crowned Night Heron



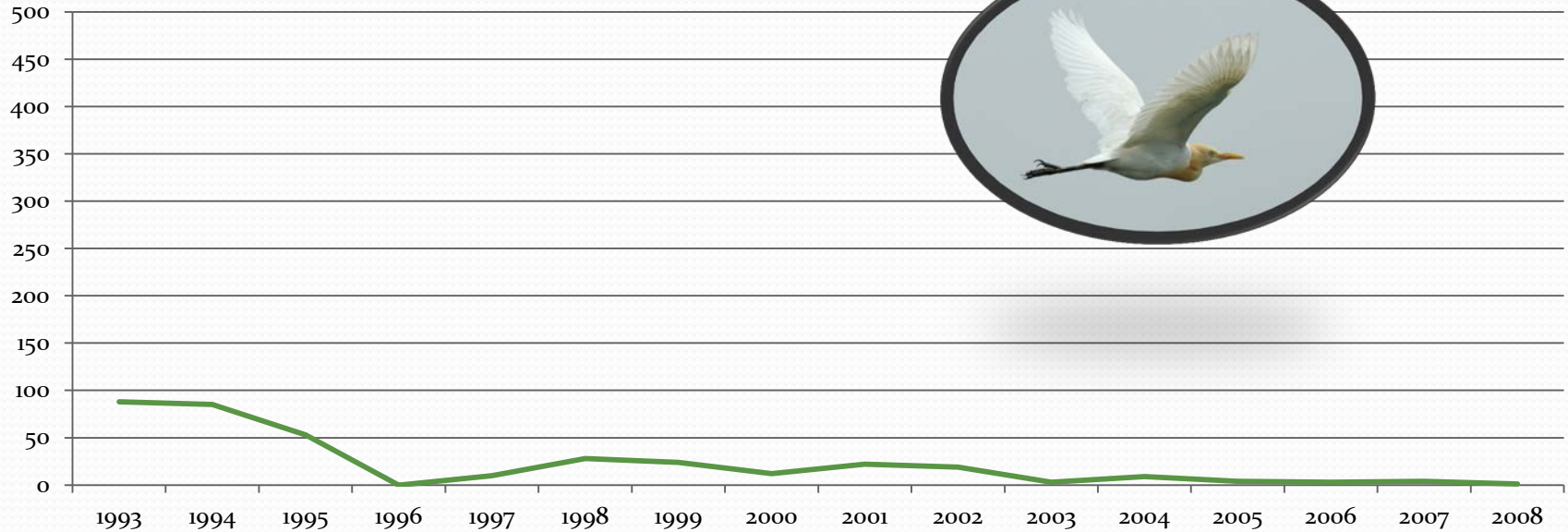
Egretta garzetta

Little Egret



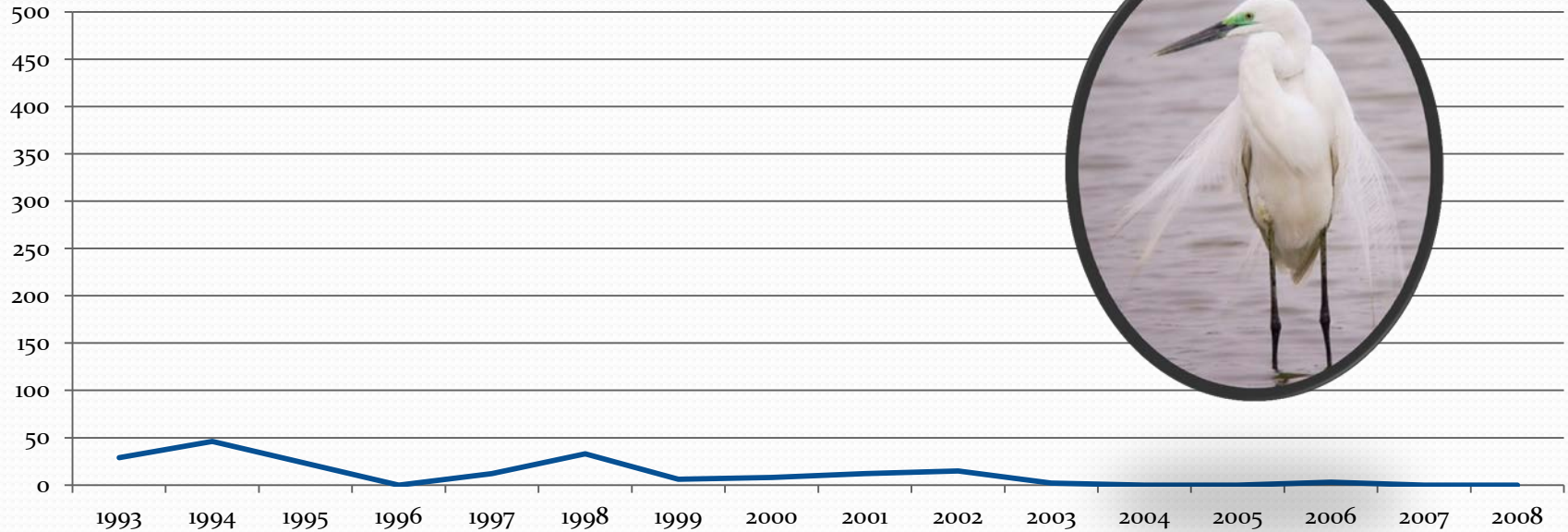
Bubulcus ibis

Cattle Egret



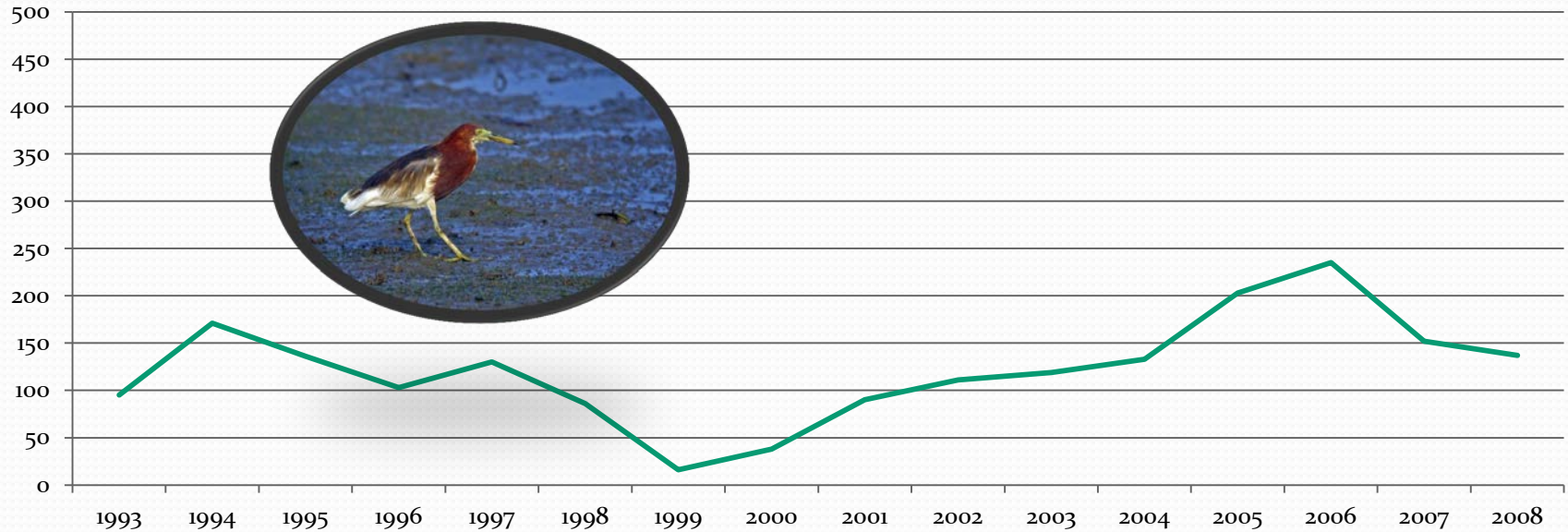
Egretta alba

Great Egret

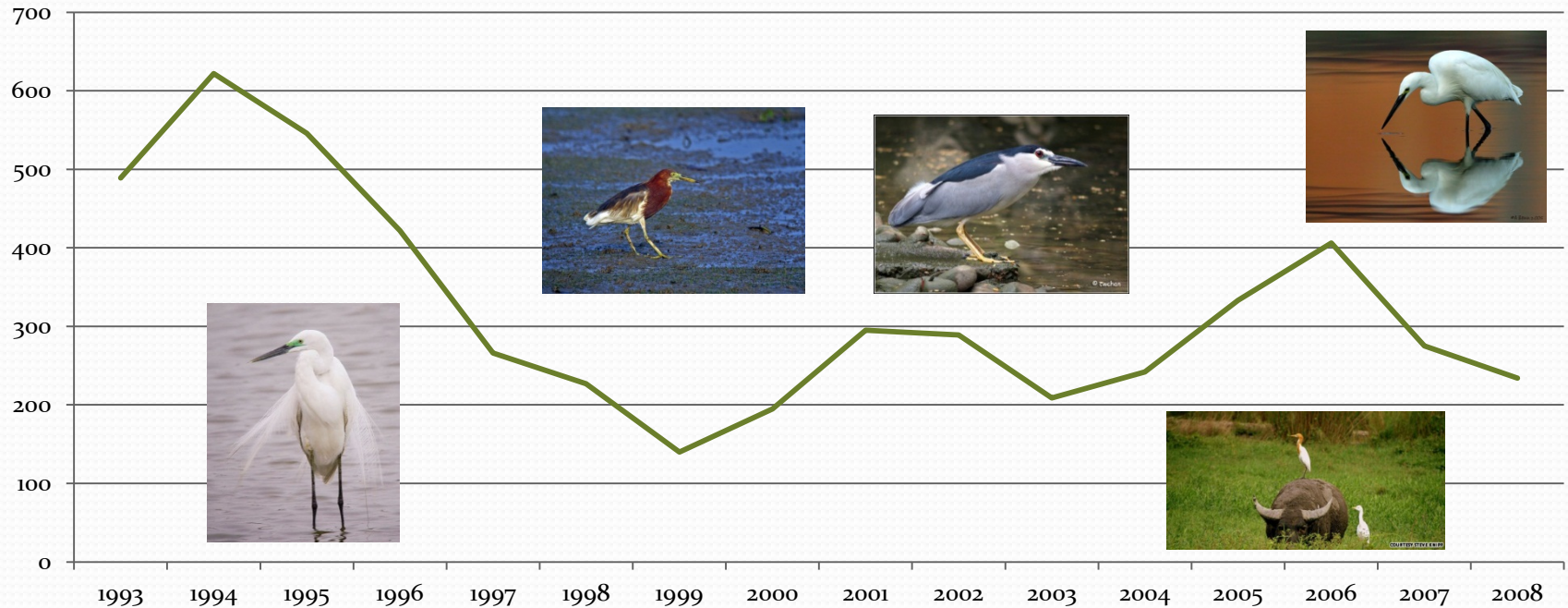


Ardeola bacchus

Chinese Pond Heron



Total number of nesting pairs



Conclusions

- Rapidly urbanizing catchment
- Degradation of wetland habitat
- Decreasing trend of the no. of nesting pair recorded



Conclusions

- Irreversible
- No Net Loss
- Catchment management
- Cross-border cooperation



Thank you!



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