Conservation of the Critically endangered Spoon-billed Sandpiper: a flagship for a flyway

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Autumn Moulting area

Breeding area

Wintering area
Mean rate of decline of 26% a year

Projected in 2010

• Adult survival 0.76
• Fledged young/adult/yr 0.305
• Recruitment/adult/yr 0.05

Recruitment is much too low
First formal estimate of the world population of the Critically Endangered spoon-billed sandpiper *Calidris pygmaea*

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Abstract

The spoon-billed sandpiper *Calidris pygmaea* is a Critically Endangered shorebird that breeds in the Russian arctic and...
Migration sites are being lost

- Largest concentration of migrating SBS at Saemangeum, South Korea - counts of 50 to 200

- Land claim in 2006 now fewer than 15 on nearby estuaries
Habitat Loss in China

PERSPECTIVES

ECOSYSTEMS MANAGEMENT

Rethinking China’s new great wall
Massive seawall construction in coastal wetlands threatens biodiversity

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line along mainland China (1), caused a dramatic decline in internationally shared biodiversity and associated ecosystem services, and will threaten regional ecologi-
Habitat Loss in China
Planned land claim along south Jiangsu coast

Location of Tiaozini mudflats and Dongsha shoals, with respect to planned land claim across wider Jiangsu coast (2010-2020)

Piersma et al. (2017)

Wang eds. (2012)
Area surveyed September 2014

2014

Yellow lines are directions that birds arrive from as the tide rises

Tiaozini
Importance of Tiaozini and Dongsha to Great Knot and Bar-tailed Godwit

Foraging range of 18 satellite tracked Bar-tailed Godwit NT (May 2015 – September 2017) (Chan Y.C.)

Foraging range of 18 tracked Great Knots EN (April 2015 – September 2017) (Chan Y.C.)
Tiaozini land claim is massive

September 2014
How important is Tiaozini?

- 2017 estimate - closed population method
  - 1,476 encounters
  - 194 with flags
  - 12.5% flagged
  - 21 individuals seen
10 days survey - marked birds
How important is Tiaozini?

Model predicts 168 birds at Tiaozini - 40% of the adult world population

Too low because: some birds had already migrated
only 8 of the 15 birds marked there were seen
Tiaozini may not be developed (YET!)

October 2017
China will halt and prohibit all business-oriented land reclamation activities and abolish local governments’ authority over the matter in the strictest-ever control over reclamation, according to the State Oceanic Administration.

Lin Shanqing, deputy director of the administration, said on Jan 17 that the government will nationalize reclaimed land with no structures built on it and will halt reclamation projects that have yet to be opened and are against national policies.
Land claim not the only issue

Non-native *Spartina* = No Mudflat
Spartina removal by clam fishermen
China widespread hunting

2366 Mist nets + trapping
Mist net removal does have lasting effect

2013
HKBS informed Forest Department

147 nets removed by Forest Department police

2014
Only 14 nets found
Education the key to the future of SBS

The largest SBS in the world made from clam shells by school children
China a key stopover
Breeding population at Meina has stabilised.
If we all work together
we will prevent the extinction of this charismatic species.

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