# SAVE International

Fiona Cundy UC Berkeley Symposium October 2011

# it all started with a bird



# Platalea minor Black-faced Spoonbill

#### DESCRIPTION

Black-faced Spoonbills are long-legged, long-necked wading birds that resemble egrets. Their elegant feathers are snow white most of the year, but develop a shaggy, golden-yellow crest and breast patch in the summer breeding season. Their legs, feet and toes are jet-black; faces are black and bare around the eyes and across the forehead. Their black, elongated beaks gradually narrow, then abruptly flare out into a flattened disk with a nail at the tip.

#### CHARACTERISTICS

Philippines.

Length: 27-29 in (70-75 cm)

Weight: Unknown
Clutch size: 3-5 eggs
Incubation: 21-25 days
Diet: Small fishes, crustaceans, insects,
mollusks, occasional plant material
Habitat: Wetlands, marine estuaries
Range: Spoonbills breed in North
and South Korea, China and
Russia; and migrate to
winter in Japan,
Taiwan, Hong Kong,
Vietnam, and the

#### FACTS

Worldwide

status:

Endangered

Class: Aves

Order:

Ciconiiformes

Family:

Threskiornithidae

Subfamily:

Plataleinae

Genus / Species:

Platalea minor

Estimated

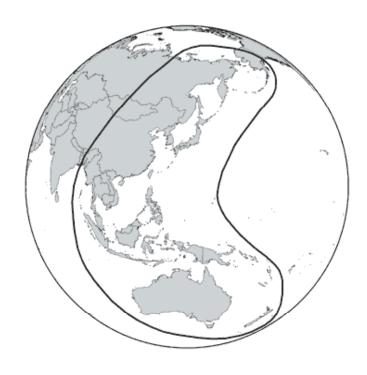
Population:

2,300

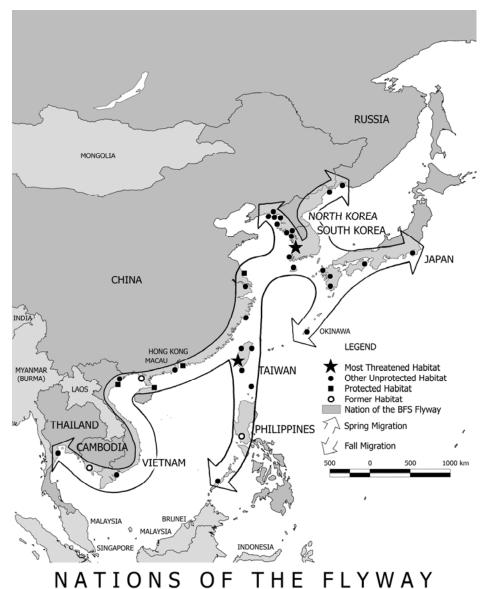
#### **CURRENT STATUS**

Black-faced Spoonbills are the rarest, and least-studied, spoonbills in the world. They have a global population of around 2,000. These birds nest on cliffs with gulls and other seabirds. The only known breeding colonies are on a few small, rocky islands off the coast of the Demilitarized Zone between North and South Korea and China; in the adjacent province of Liaoning in China; and at Furugelm Island (Russia).

# migratory route



The black-faced spoonbill lives and migrates primarily along the East Asian - Australasian Flyway, in North and South Korea, Japan, Taiwan, coastal China, Hong Kong, Macau, Vietnam, and the Philippines.



NATIONS OF THE FLYWAY OF THE BLACK-FACED SPOONBILL

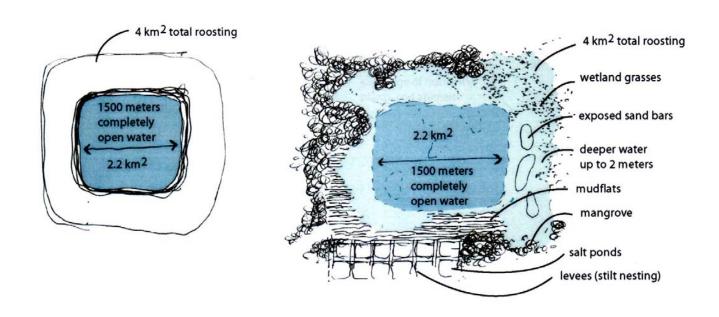
SAVE International, June 2010

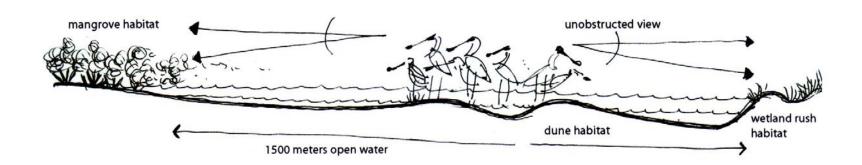
# beginnings in Taiwan



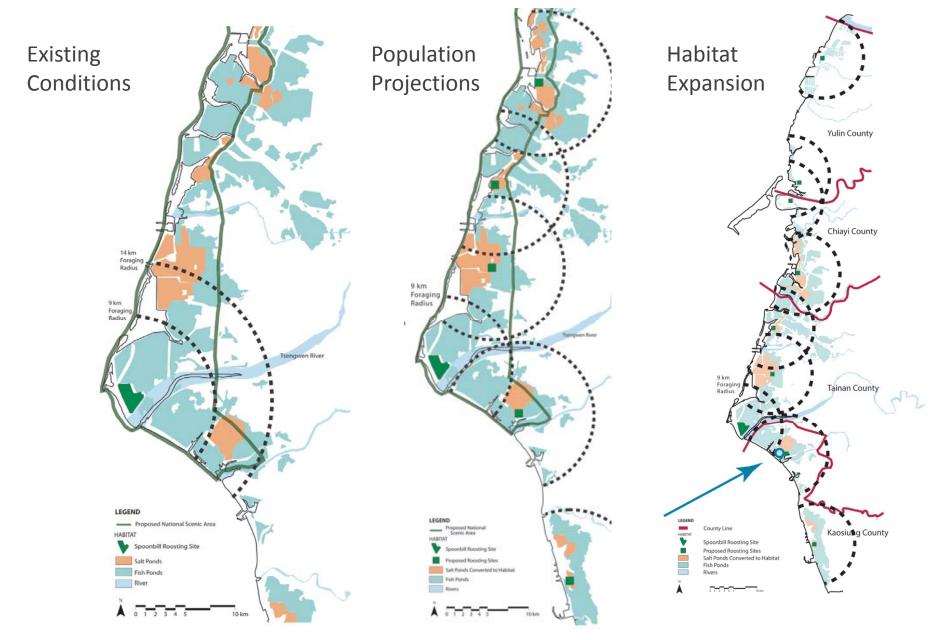
Chiku Development Plan - industrial park announced
 300 Black-faced Spoonbill world population
 Randy Hester goes to Taiwan, joint studio with National Taiwan University
 SAVE forms

# geometries



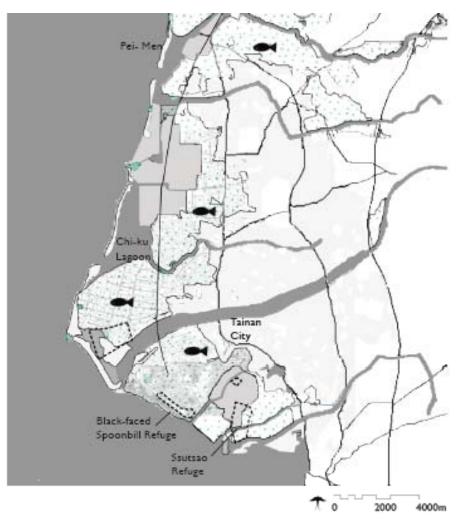


# stepping stone habitat



# Tseng-wen Estuary Refuge

Tainan County, Taiwan









## Who is SAVE International?





#### actions

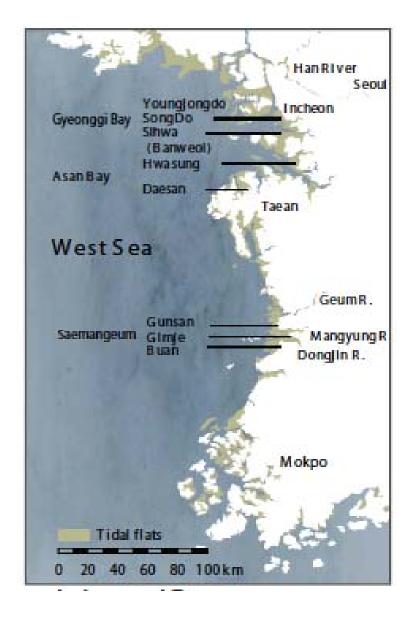
campaign against threats to spoonbill habitat
research habitat requirements for a viable spoonbill population
apply international pressure
promote alternative sustainable development
collaborate with local groups to develop plans for sustainable development where
there is spoonbill habitat

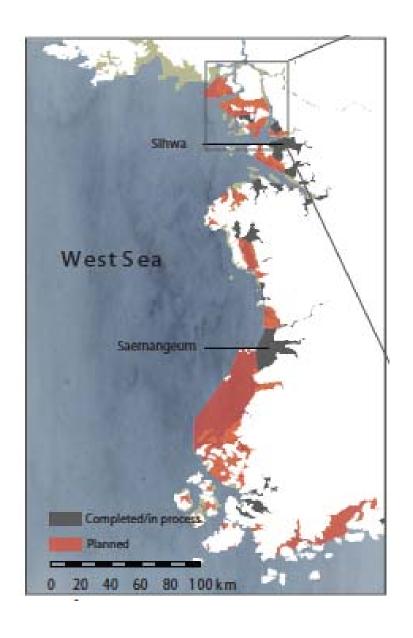






## SAVE in South Korea





# Habitat biodiversity

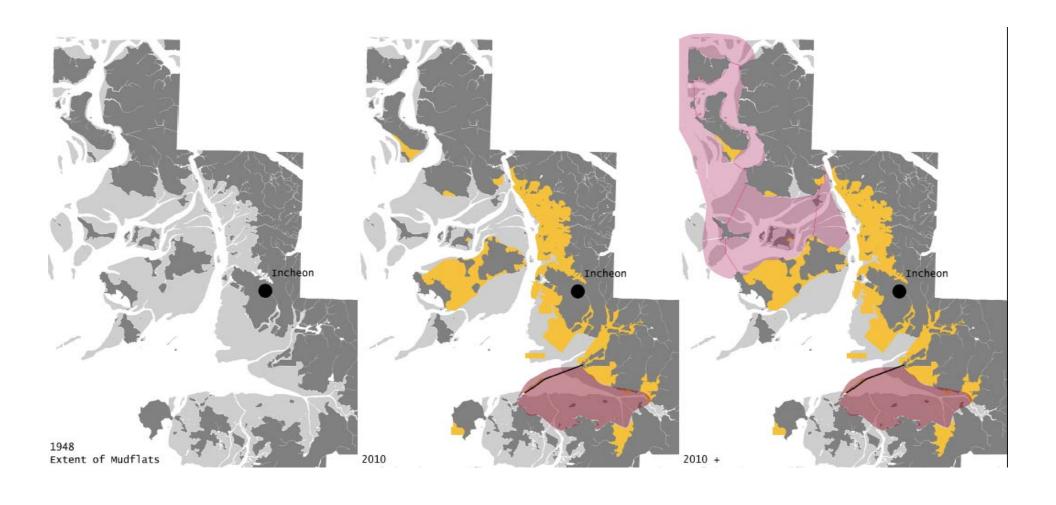




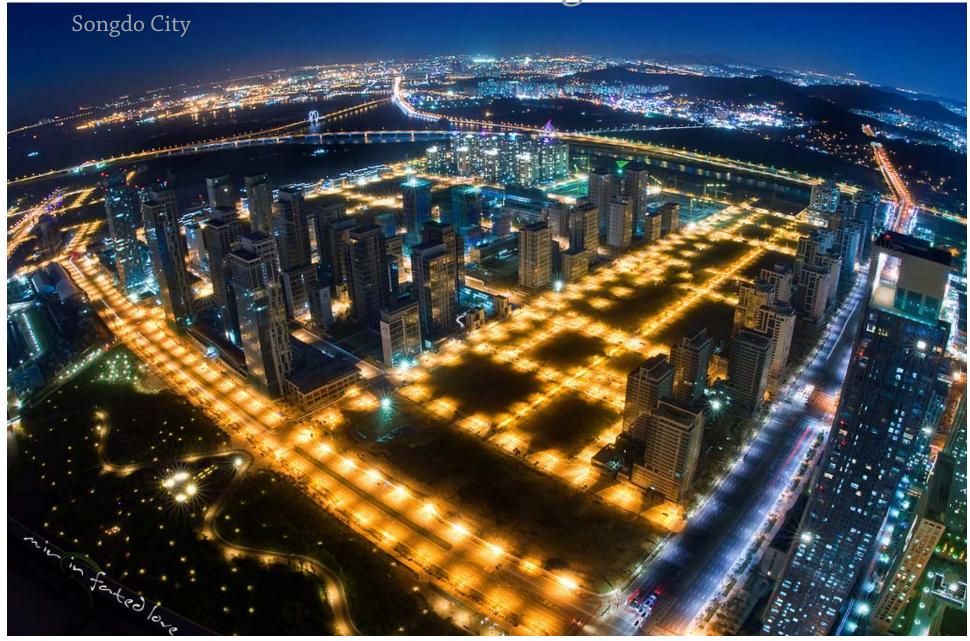
#### Internationally Important Bird Species at Song Do



## Korea's most threatened habitat



South Korea Re-envisioning tidal flats



## SAVE's Alternative Plans



#### Missed Opportunities:

Education
Ecotourism
Quality of Life
Wastewater Treatment





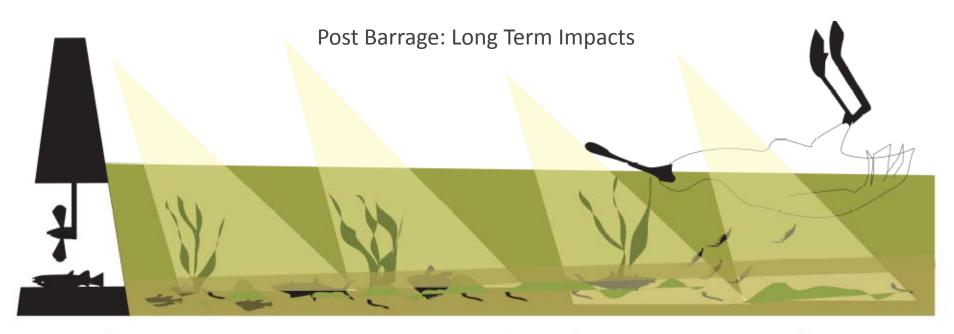
#### American Universities and Schools

at Songdo City

North Carolina State University on hold **SUNY Stony Brook** on hold **UC Berkeley Law School** in discussions **Chadwick Academy** opened 2011 others: USC, University of Missouri, University of Delaware, George Mason University, Georgia Tech, University of Illinois, Carnegie Mellon University, Boston University, Columbia University, UC San Diego...



# Tidal Power Impacts



#### **External Inputs**

#### **Process Responce**

**Biological Responce** 

#### Social Impact

Reduced Tidal Mixing

Excess nutrients from the polluted Han River Decreased Turbidity (increased sunlight penetration)

Reduced Sediment Mobilization

(pollution and excess nutrients settles)

Decreased Dissolved Oxygen (by product of plant decomposition)

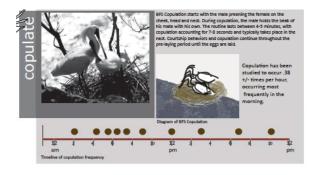
Eutrophication/Hypoxia or Red Tide

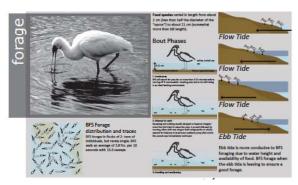
Aquatic Food Web Collapse

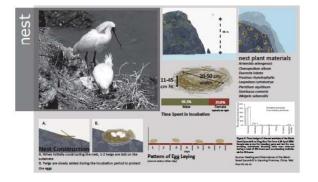
Major Decrease in Migratory Bird Carrying Capacity Collapse of Fishing Economy

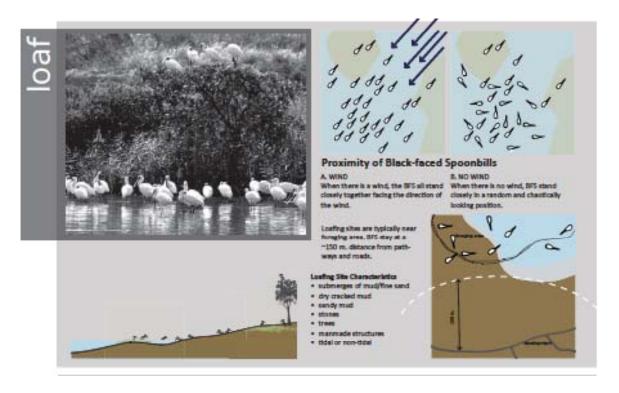
Health Risks Associated with Water Quality and Sea Food

## Summer Habitat Geometries & Behaviors









# SAVE in Japan

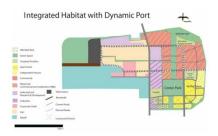
Island City, Fukuoka

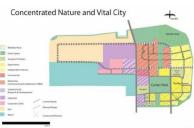




Each of the three plans could improve the 2008 Land Use Plan shown above. The experts conducting the cost-benefit analysis suggested that the three new plan proposals should retain the same amount of land use coverages as the 2008 plan and demonstrate the advantages without loss of the best aspects of the 2008 plan.







## more information

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# thank you!

