

The SSMP

*(Saemangeum Shorebird
Monitoring Program)*

2006 - 2008





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The seawall was finally closed in April 2006





'Farewell to Saemangeum'



Photo © Ken Gosbell / AWSG



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What would this closure mean for the birds and people that were reliant on this rich area?





Impacts were monitored by the Saemangeum Shorebird Monitoring Program 2006 - 2008

A joint Birds Korea / Australasian Wader Study Group initiative



Photo © Jan van de Kam / Birds Korea



Saemangeum Shorebird Monitoring Program (SSMP)

- q **The SSMP was established in 2006 to assess the impact of this massive reclamation through scientifically rigorous surveys of shorebird numbers during the migration period.**
- q **It was developed as a Partnership between the Australasian Wader Studies Group (AWSG), (a Special Interest Group of Birds Australia), and Birds Korea, in 2006.**
- q **Surveys were carried out April to May, 2006, 2007 and 2008 by experienced people from many different countries.**
- q **Results of the surveys are freely available and a report published annually and with the 2008 report released to coincide with the Ramsar Conference of Parties meeting in Korea, October and November 2008.**



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Over 100 international and Korean volunteers 2006-2008



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The SSMP 2006 - 2008

- q **Comprehensive surveys were carried out in Saemangeum, the Geum Estuary and Gomso Bay (combined the SSMP study site).**
- q **The surveys were carried out during northwards migration in April/ May 2006-2008**
- q **A Report of each annual survey was published in Korean and English for wide distribution.**



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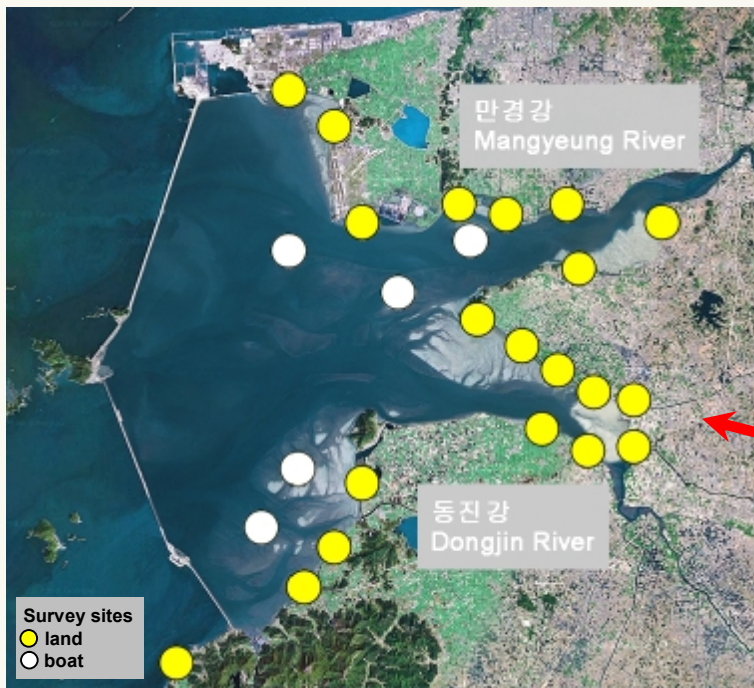
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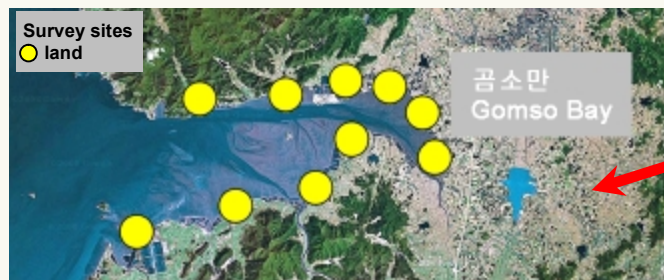
The SSMP study site



Saemangeum



Geum estuary



Gomso Bay





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What is happening to these birds?



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Two iconic species supported by Saemangeum

Great Knot



Photo © Jan van de Kam / Birds Korea



Photo © Danny Rogers /AWSG

Spoon-billed Sandpiper



Impact on.....Tidal mudflats



Photo © Jan van de Kam / Birds Korea



Photo © Danny Rogers / AWSG



Photo © Jan van de Kam / Birds Korea



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..... and on Shorebirds



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..... and on Local communities



Photo © Jan van de Kam / Birds Korea



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A summary of Findings

q Some of the key findings include:

- ∅ Tidal range decreased from >7m to 25cm resulting in almost 95% destruction of former tidal flats.
- ∅ Dramatic impacts on landscape and ecology (food availability).
- ∅ Shellfish industry in collapse with 90% of the former 20,000 fisher folk having lost their livelihoods.
- ∅ Massive declines in shorebird abundance for many species



Photo © Jan van de Kam / Birds Korea



Photo © Jan van de Kam / Birds Korea



A summary of Findings

- q Some of the key findings include (cont.):
 - ∅ 15 out of 24 species have declined, some to an alarming extent eg Great Knot has declined by 85% in Saemangeum or 77% in the total study area.
 - ∅ These include several endangered species eg Spoon-billed Sandpiper
 - ∅ Total numbers have declined by 100,000 in just 2 years.



Photo © Jan van de Kam / Birds Korea



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Habitat changes in Saemangeum

Before seawall was built:

Ø 7m tidal range

**Ø 300km² tidal flats and
100km² sea shallows**

**Green-shaded area = area
selected for Saemangeum
reclamation project. It was
used by c. 400,000 staging
shorebirds and c. 20,000
people (shellfishers making
a living from the tidal flats).**





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2006 - Mass shellfish die-off on upper tidal flats



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2007 - Seawall now closed. Tidal range only a few centimetres, so only about 10% of former tidal flats remained.



Geum Estuary. Grey-brown areas = tidal flats (note how little of this habitat remained in Saemangeum).

Upper tidal flats no longer received tides and became dry land.



2008 - Dry upper tidal flats were replanted with halophytes; now they are dry saltmarshes and scrubby grasslands rather than recognisable tidal flats.



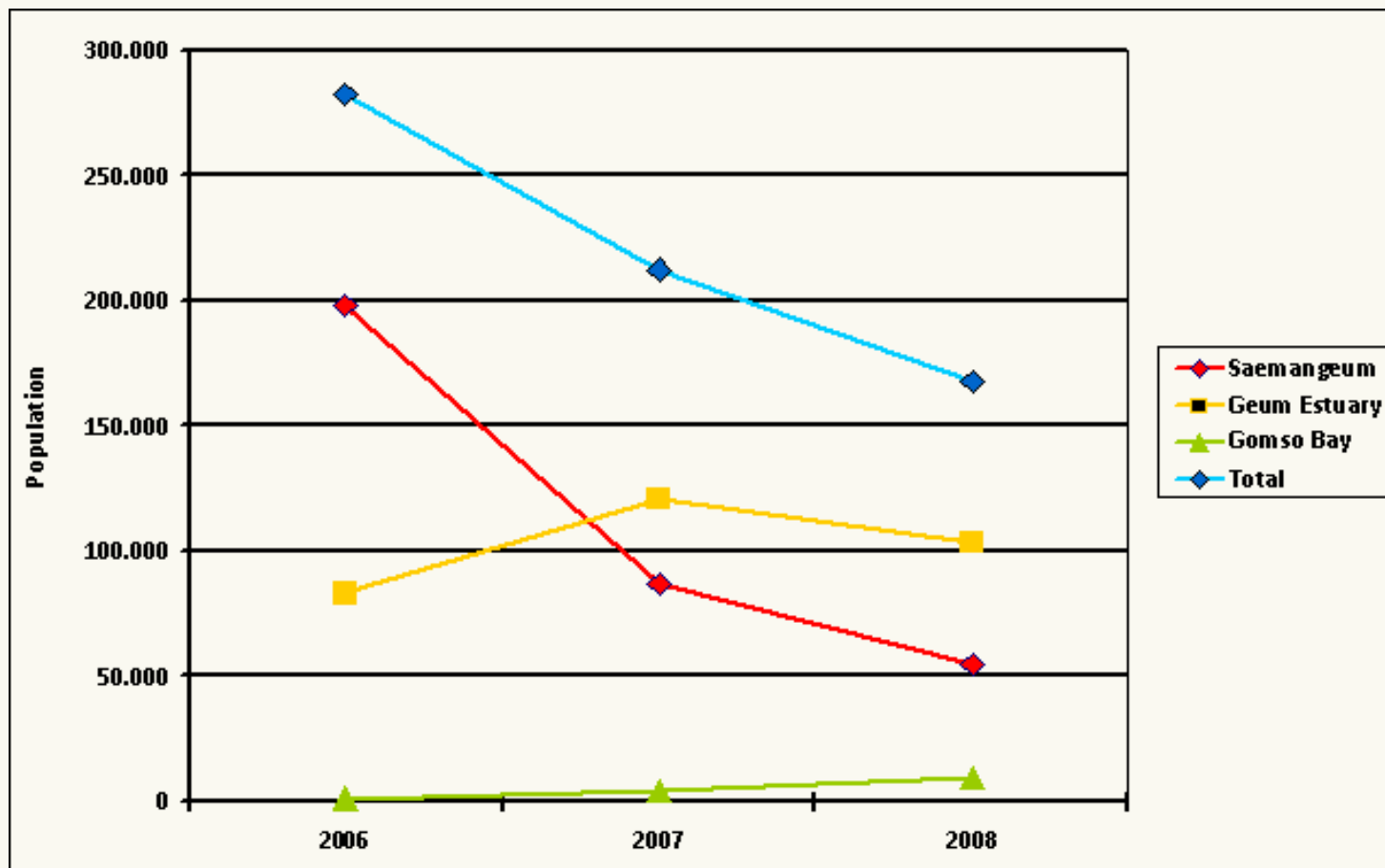
2006



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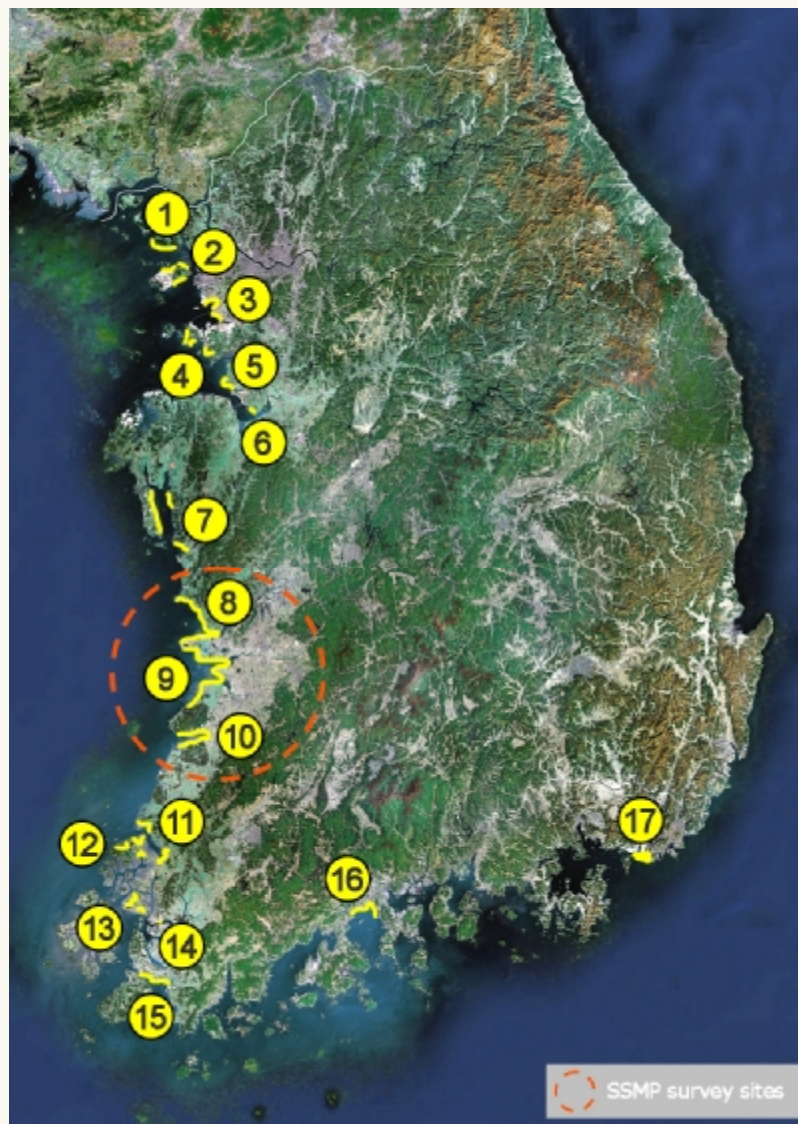
What we have found at Saemangeum



Total shorebirds in SSMP Study Area



A National survey of the most important shorebird sites was carried out in 2008.





The National Survey found:

- q **Declines in shorebird numbers at 11 internationally important sites over the last 10 years.**
- q **Almost all sites had been impacted by reclamation.**
- q **Significant declines in Great Knot and Black-tailed Godwit**
- q **Unlikely that birds 'lost' from Saemangeum have relocated successfully.**



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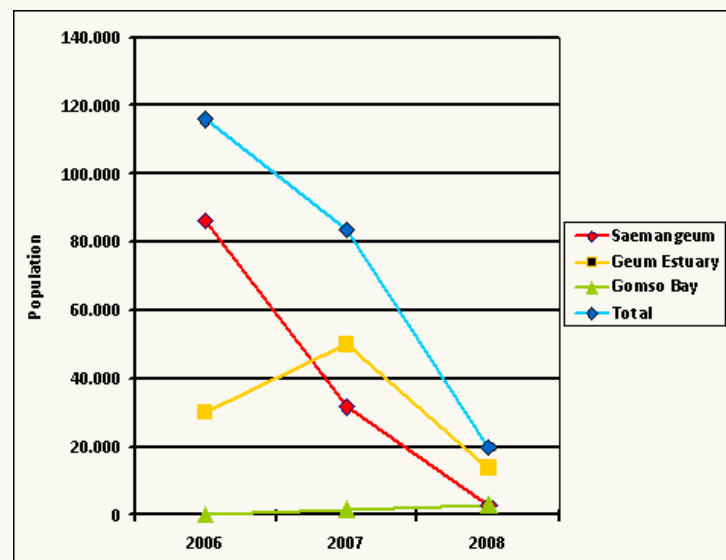


Especially worrisome species: Great Knot

- q Saemangeum used to be the most important staging site for this species in the flyway.
- q With very few shellfish remaining in Saemangeum, numbers there have crashed, from c.87,000 in May 2006 to c. 2,500 in May 2008. NB Counts of 12,500 in April 2008 were inflated by birds that fed outside Saemangeum, but flew into the area to roost.
- q A ROK wide survey showed that nearly all other Great Knot sites have also been to or degraded by reclamation.
- q In a large survey area in North-western Australia (Roebuck Bay, plus 60 km of Eighty-mile Beach), Great Knot numbers declined from c. 90,000 in Nov. 2005 to 70,000 in Nov. 2007. We expect further declines this season.



Photo © Jan van de Kam / Birds Korea





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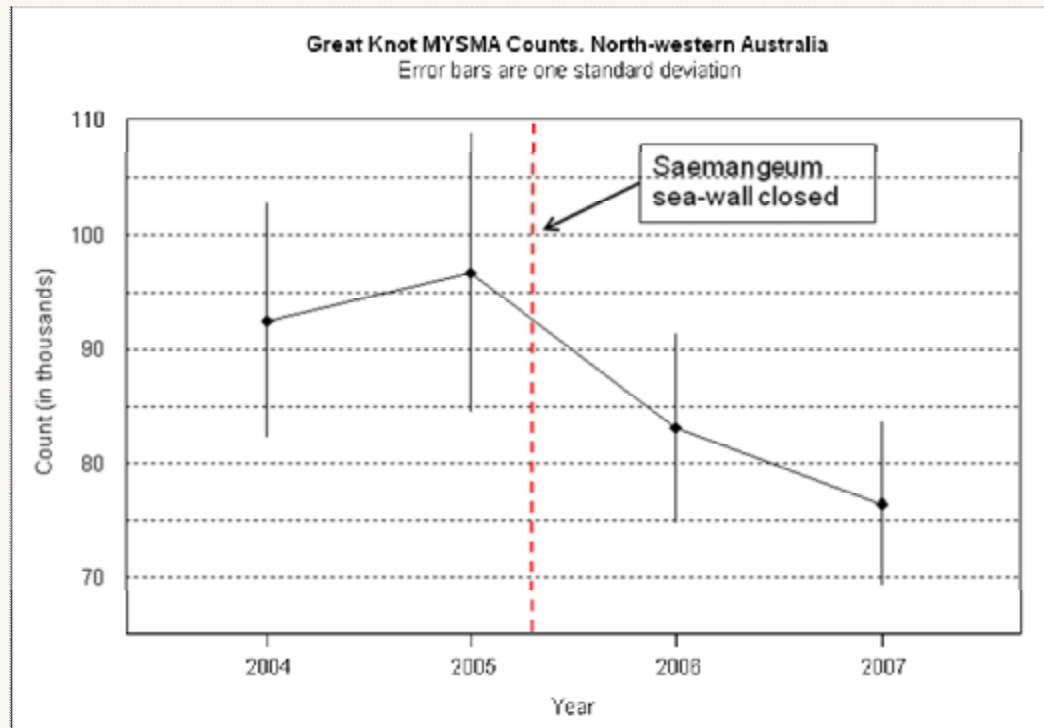
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MYSMA (Monitoring Yellow Sea Migrants in Australia)

- The loss of 22,980 North-western Australian Great Knot from Saemangeum staging grounds coincided with the loss of 17,800 Great Knot from North-western Australia.
- It looks like most birds were unable to find alternate staging areas and perished.





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Especially worrisome species: Spoon-billed Sandpiper

- q A Critically Endangered species with a world population estimated between 250 and 300 pairs.
- q Saemangeum used to be the most important staging site known for this species – up to 250 had been seen in one flock.
- q All other records of flocks > 200 were also from South Korea, from sites that have now been reclaimed.
- q There were 31-34 Spoon-billed Sandpipers in Saemangeum in 2006 and 2007, mostly at Simpo. In 2008, despite exhaustive searches, we could only find 3 birds.

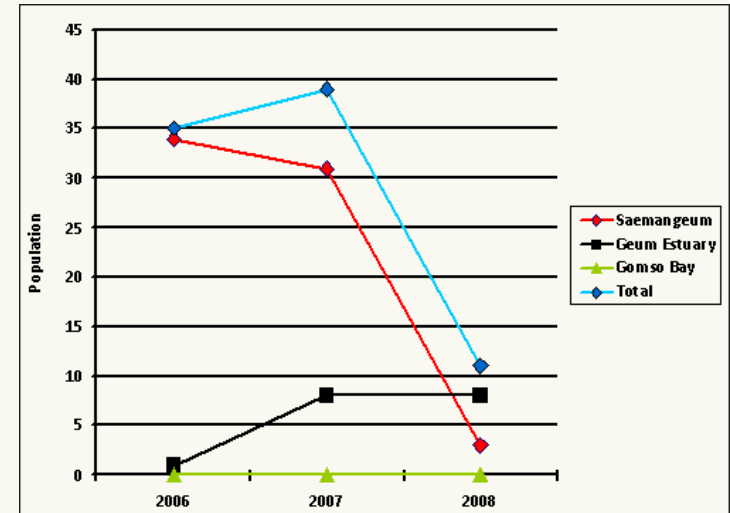


Photo © Danny Rogers / AWSG



Some Key findings 2006 - 2008

- q **> 300,000 shorebirds use this area for refueling on northward migration**
- q **One third of the world's Great Knot population is potentially threatened; 90,000 Great Knot missing from Study area**
- q **Internationally important for 19 species including the Critically Endangered Spoon-billed Sandpiper**



Photo © Richard Chandler / Birds Korea



Photo © Danny Rogers / AWSG



BUT how do we measure the loss of a thriving, living place?

... the wall has blocked the life-giving ebb and flow of the sea



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- q We can all do something for Saemangeum.
- q The SSMP report recommends ten actions including returning tidal flow to Saemangeum and designating the Geum Estuary as a Ramsar site.
- q We aim to repeat the SSMP in 2010. The data will be used to assist decision makers.
- q Contact us and get involved.



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