

Conservation status and GAP analysis of spotted seal (*Phoca largha*) in China and North-East Asia

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FIRST INSTITUTE OF OCEANOGRAPHY, MNR



Wednesday, September 13,
2023

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Outlook



SPOTTED SEAL

Larga seal, Largha seal

- **KINGDOM**
Animalia
- **PHYLUM**
Chordata
- **SUBPHYLUM**
Vertebrata
- **CLASS**
Mammalia
- **ORDER**
Carnivora
- **SUBORDER**
Caniformia
- **CLADE**
Pinnipedia
- **FAMILY**
Phocidae
- **GENUS**
Phoca
- **SPECIES**
Phoca largha

POPULATION SIZE

640,000

LIFE SPAN

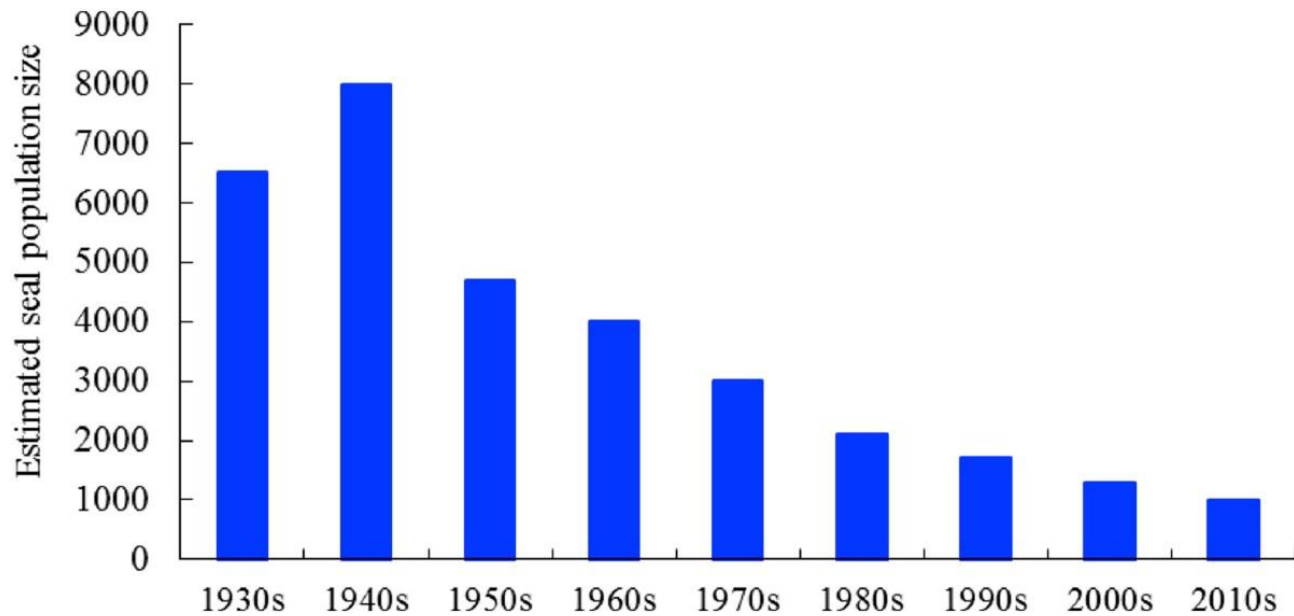
35 YEARS

WEIGHT

81-109 KG | LBS

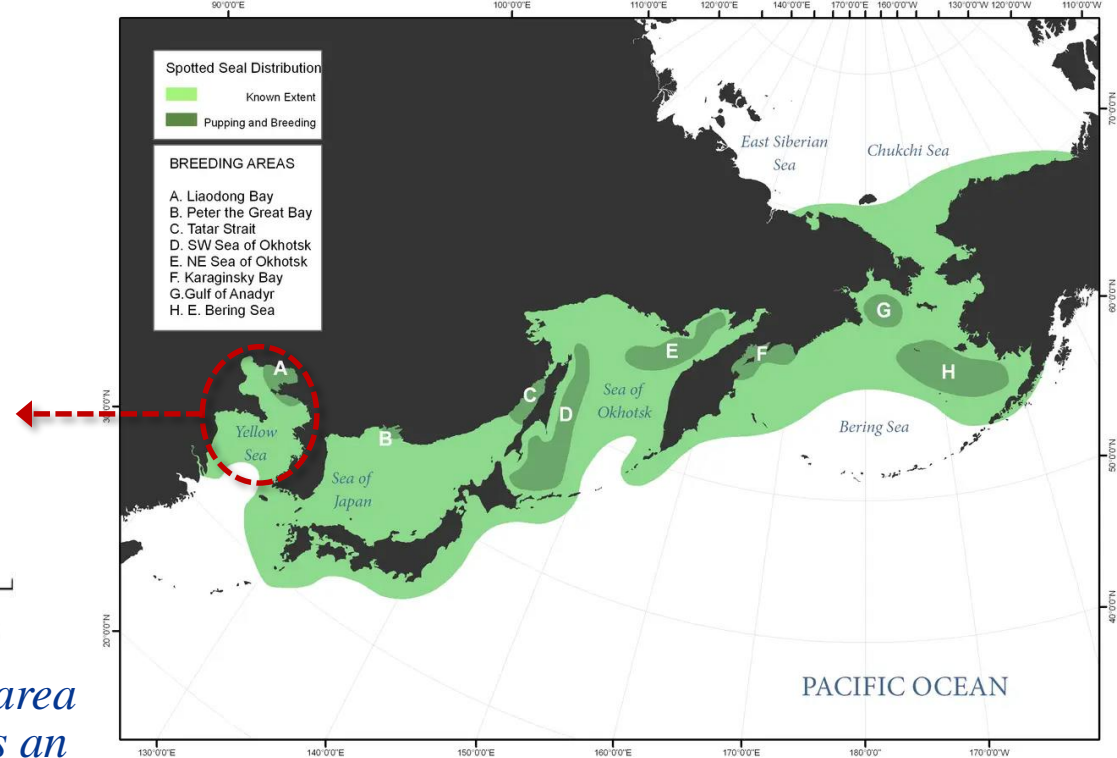
LENGTH

1.5-2 M | FT



- *Liaodong Bay is considered to be the southernmost breeding area of spotted seals in the world, and the population living there is an independent evolutionary branch.*

□ Due to threats such as hunting, habitat destruction and climate change, the population size has declined by 80%.





NEAR THREATENED	VULNERABLE	ENDANGERED	CRITICALLY ENDANGERED	EXTINCT IN THE WILD
NT	VU	EN	CR	EW

CHINA	RUSSIAN FEDERATION
<ul style="list-style-type: none"> • VU species • 1st Category SKPWAS ◆ <i>Dalian Spotted Seal National Nature Reserve</i> ◆ <i>Liaoning Shuangtaihekou National Nature Reserve</i> ◆ <i>Miaodao Islands Spotted Seal Provincial Nature Reserve</i> 	◆ <i>Far Eastern Marine Reserve</i>
	REPUBLIC OF KOREA
	<ul style="list-style-type: none"> • EN species • Protected Marine species • Natural Monument
	JAPAN



- **Where are they ?**
- **How's the protection ?**
- **Is it worth protecting ?**



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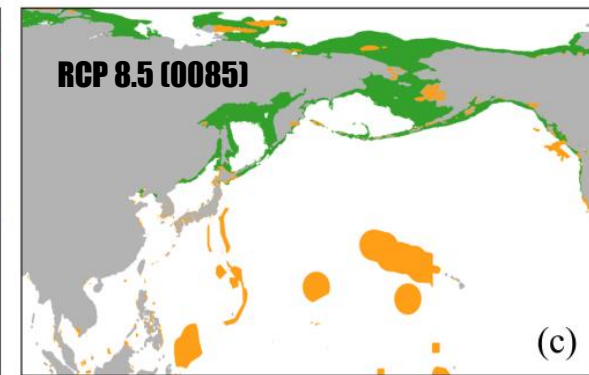
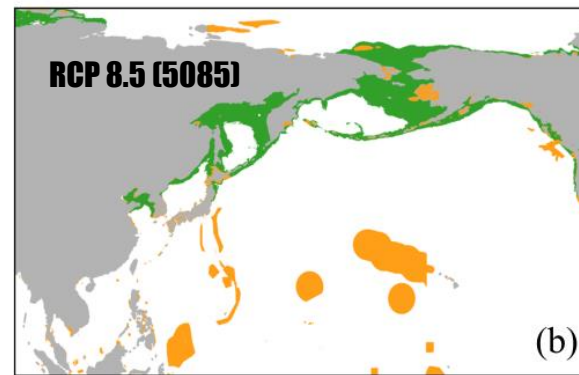
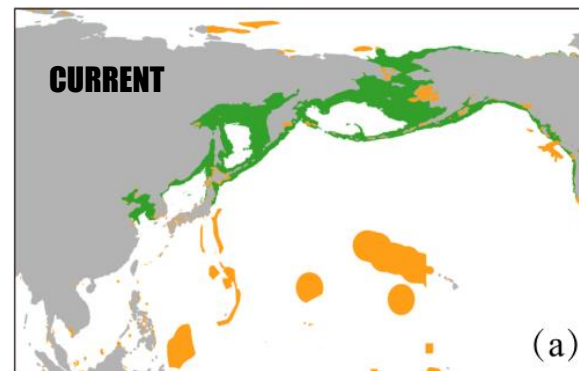
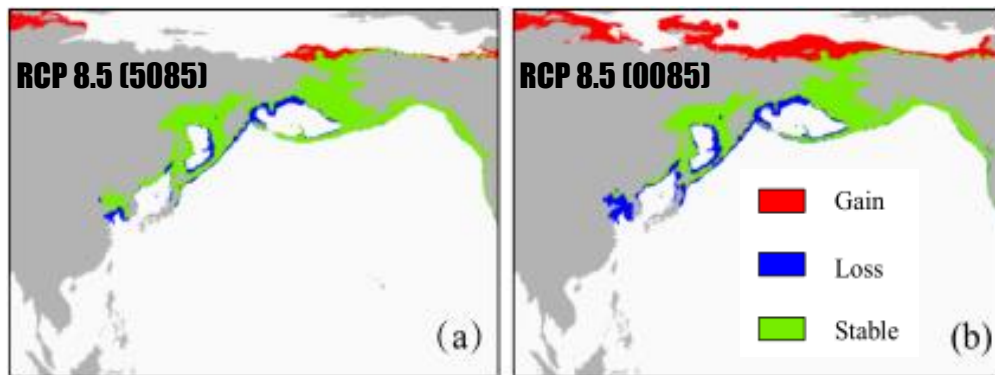
Conservation GAP

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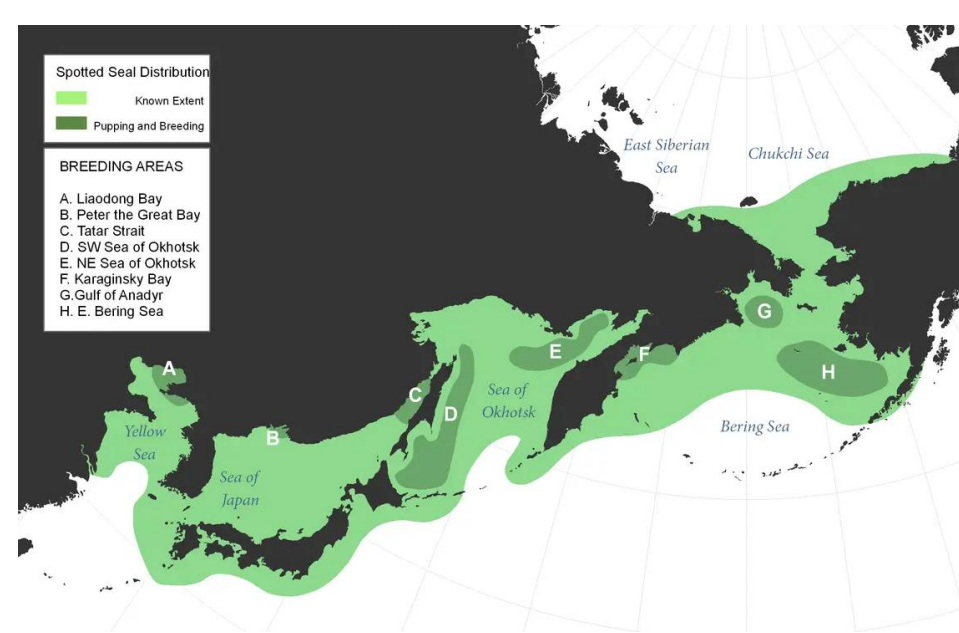
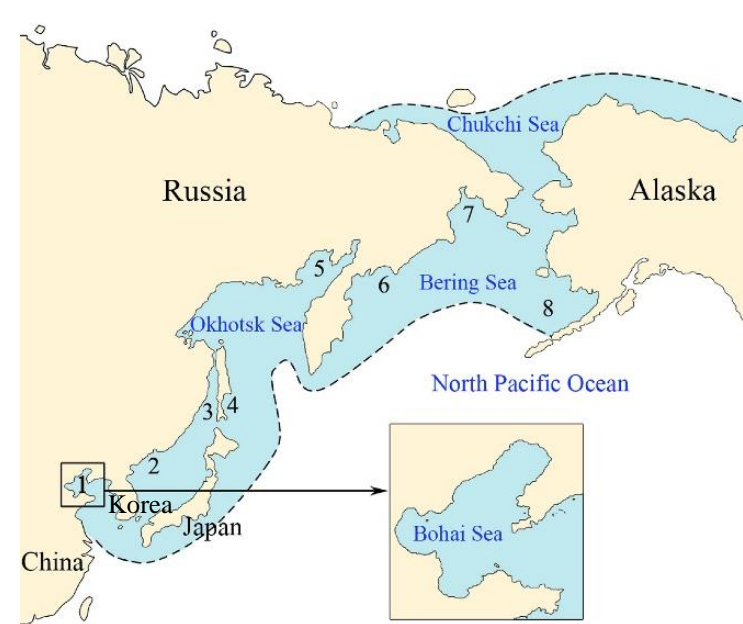
Outlook

□ Global: *Where are they ? / How's the protection ?*

- Habitat tended to migrate to higher latitudes under climate change and the southernmost Liaodong Bay habitat was gradually lost.
- The nearshore habitat was the most stable habitat.
- Approximately 94% of habitats (*current and future*) were not covered by existing MPAs.



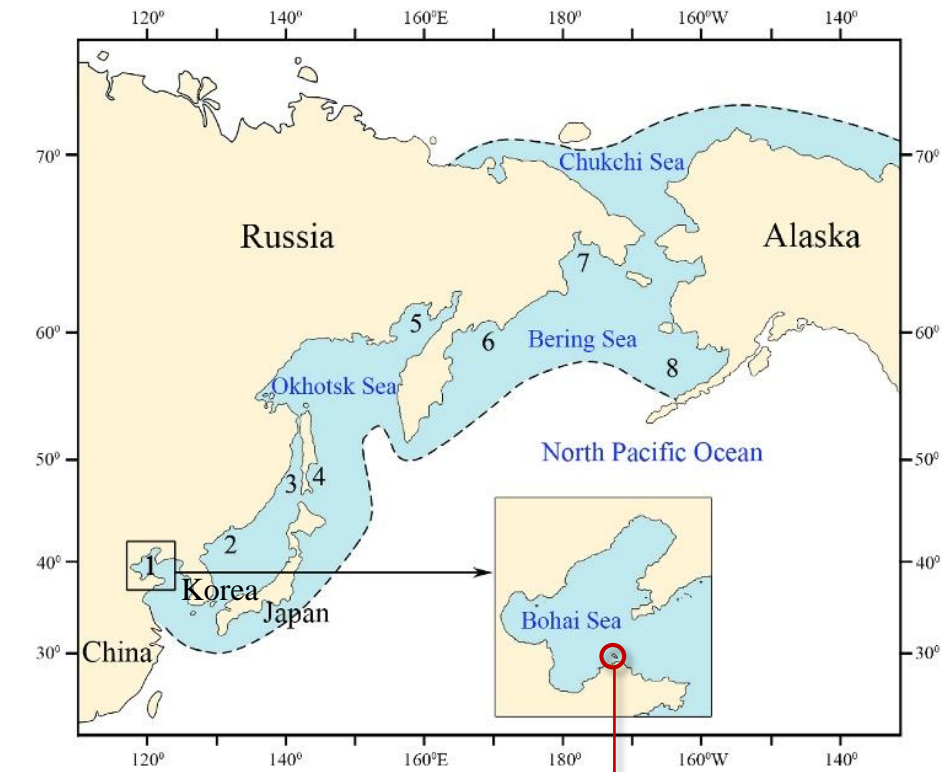
- Predicted absence
- Predicted presence
- Marine protected areas



- ❑ Traditional static modeling lacking time dimensions cannot help to protect dynamic habitats or migratory marine species in a changing ocean.
- Current (*global scale*) spatial distribution is still insufficient to guide regional *in-situ* conservation actions.
- Lack of understanding of fine scale conservation gap.

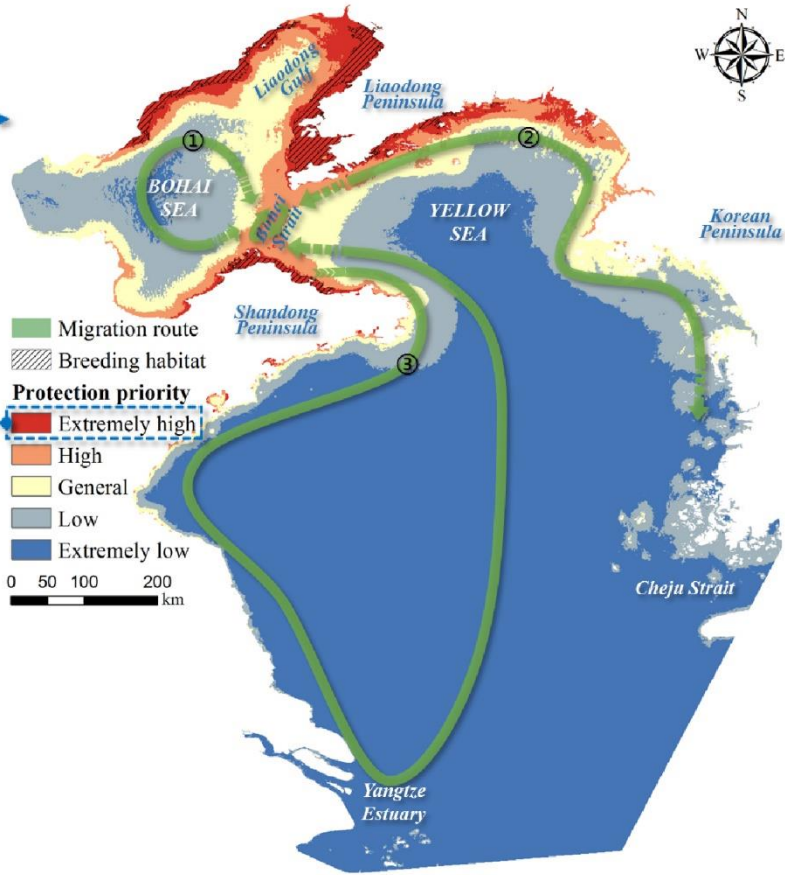
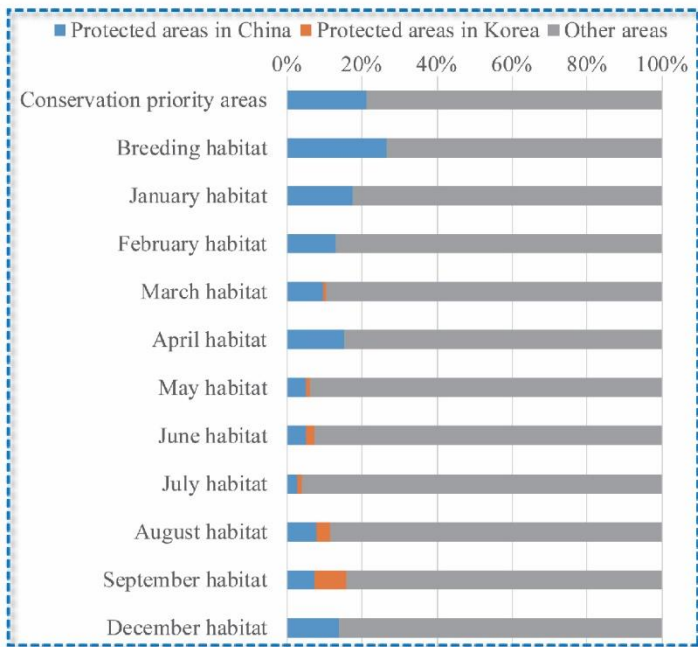
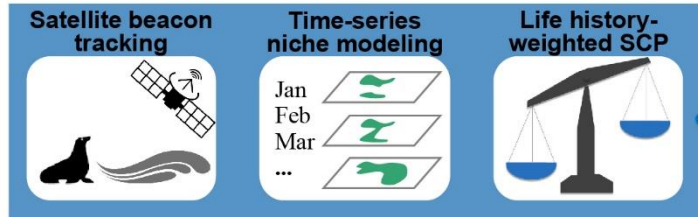


Spotted Seal
Phoca largha



Location: Changdao, Yantai, China

Time: March 30, 2023, 16:00

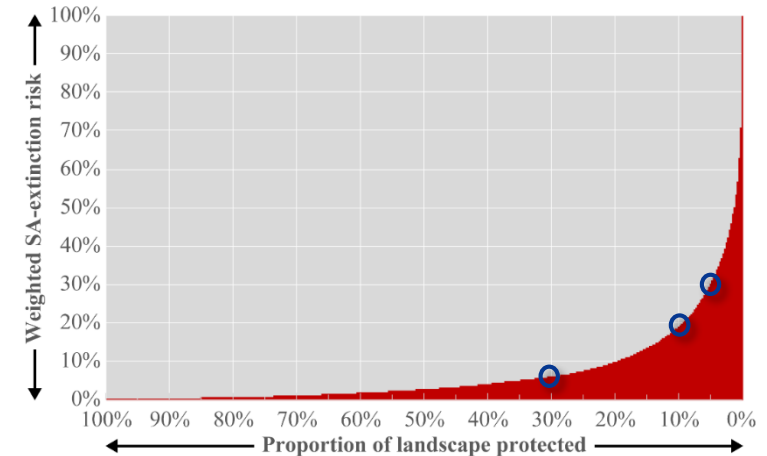


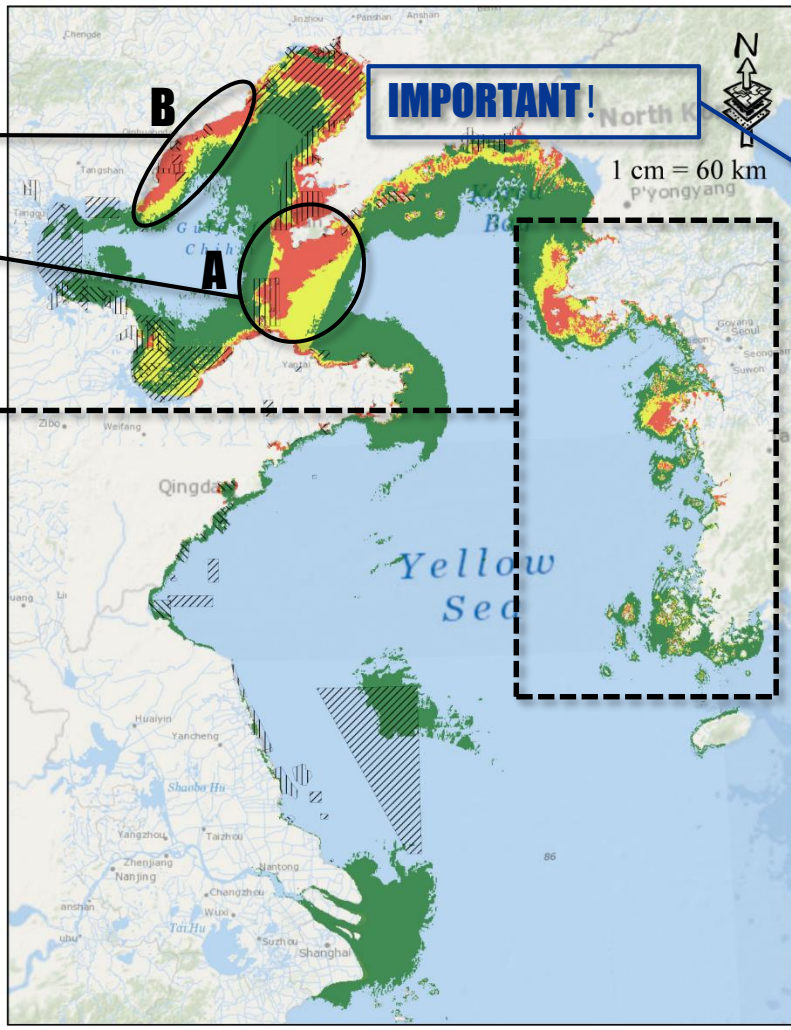
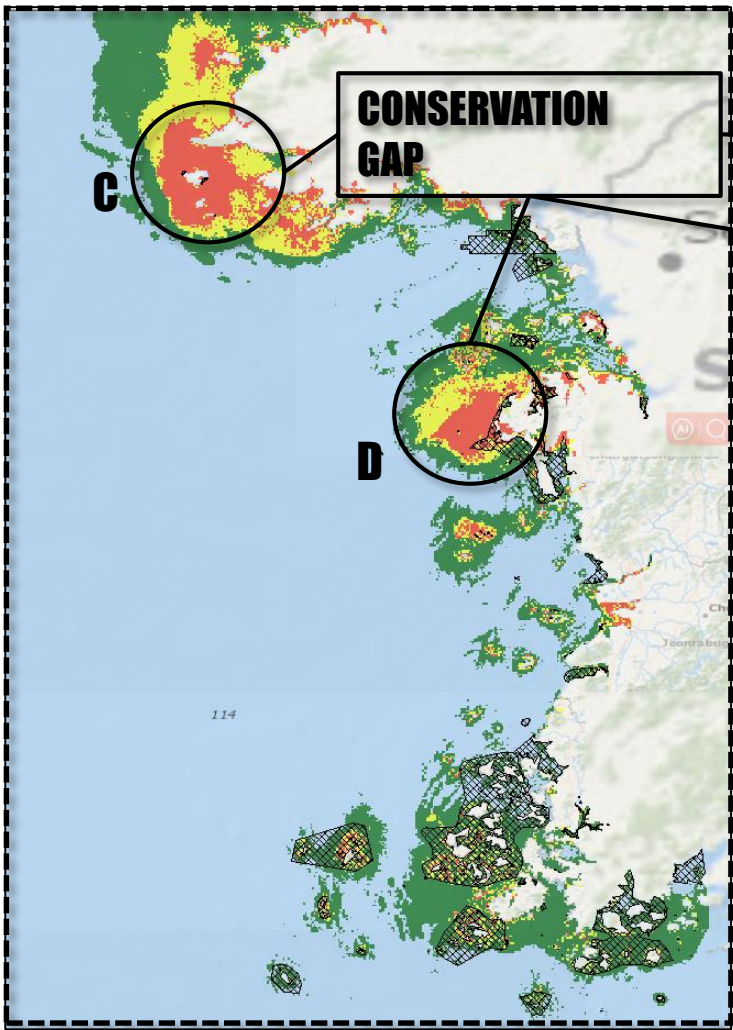
Local: *Where are they?*
How's the protection?

Monthly habitats, conservation priority areas and migration routes were identified.

The distribution of CPA was consistent with breeding habitats.

China's MPAs have contributed the most.



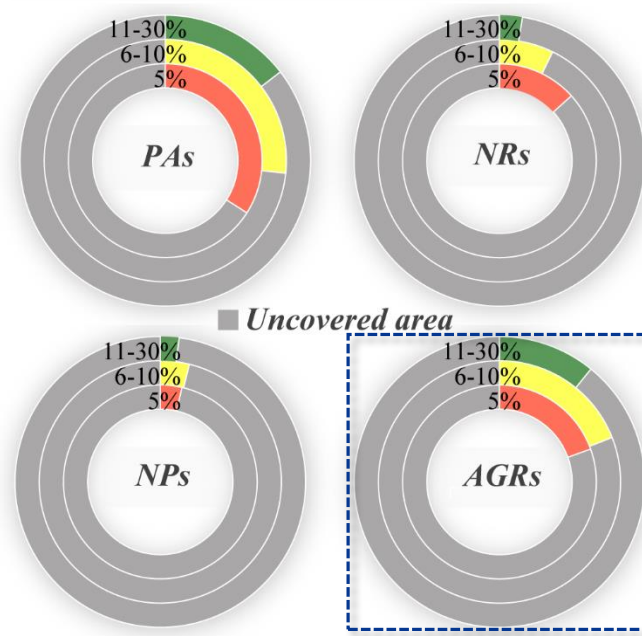


Protected area (PAs)

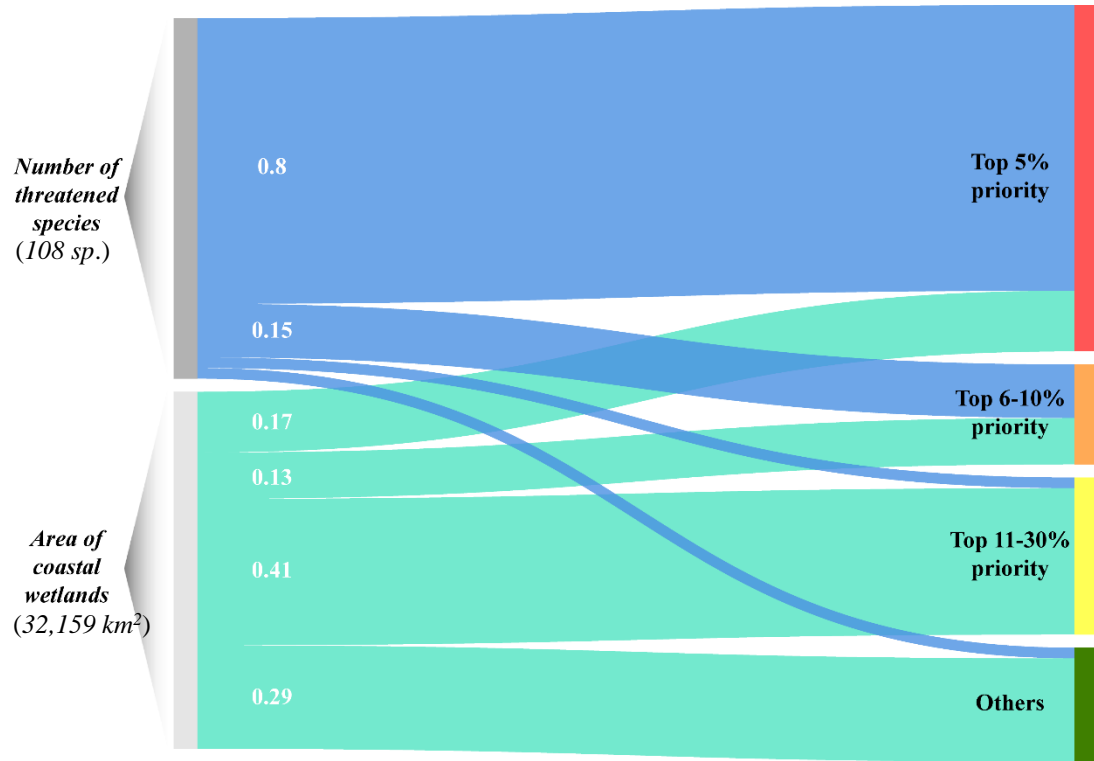
- Nature Reserve (NRs)
- Nature park (NPs)
- Aquatic germplasm reserve (AGRs)

Priority

- 5%
- 6-10%
- 11-30%



Priority	PAs	NRs	NPs	AGRs
5%	8397 (34%)	3285 (13%)	887 (4%)	4806 (19%)
6-10%	6621 (27%)	1801 (7%)	961 (4%)	4722 (19%)
11-30%	15360 (15%)	2685 (3%)	2195 (2%)	11444 (11%)



□ Local: *Is it worth protecting ?*

- Top 5% CPA covered 80% of IUCN threatened species (108) and 17% of coastal wetlands in the YSE.
- By reaching 30%, 97% of threatened species and 71% of coastal wetlands would be within the umbrella protection range of spotted seals.





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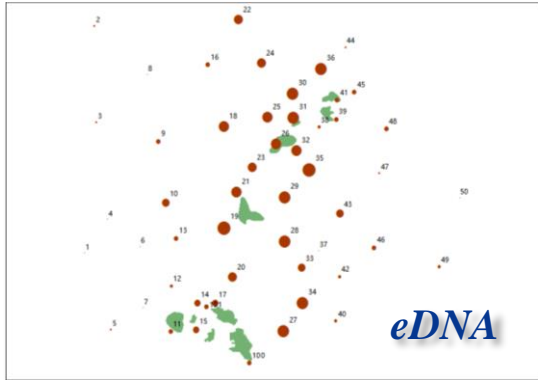
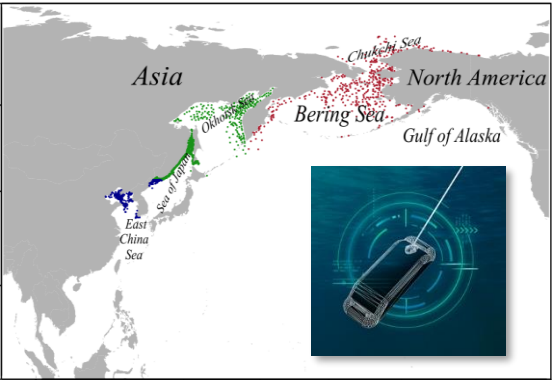
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Conservation GAP

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Outlook

- **Strengthening the investigations and monitoring:** population observation, migration route, reef habitat, sea water environment, especially in CPA, breeding habitat, key node in the migration route.
- **Promoting data and technology sharing to identify important habitats on a regional scale.**
- **Addressing existing conservation gaps and implementing seasonal protective measures.**
- **Let's work together even more closely to tackle the impact of human activities and climate change.**



Thank you for your listening.

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