Current status and management of spotted seals in JAPAN

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Distribution of spotted seals around Hokkaido

Spotted seals

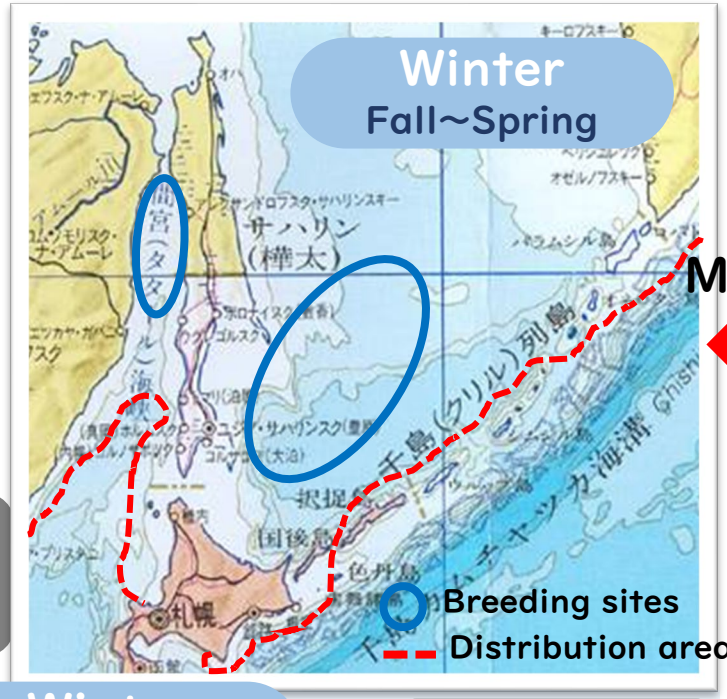
Phoca Largha

Breeding on ice

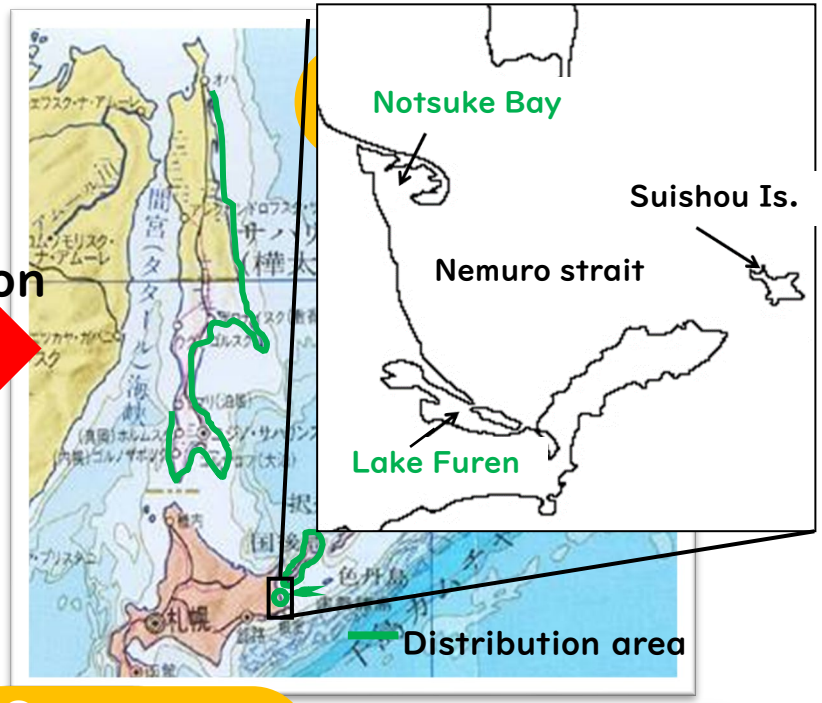
Along with the movement of drift ice move over a wide area

Win. Sum.

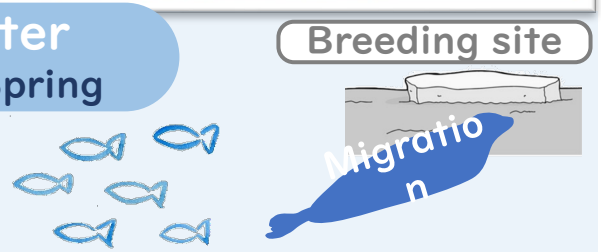
Different life



Migration



Winter
Fall~Spring



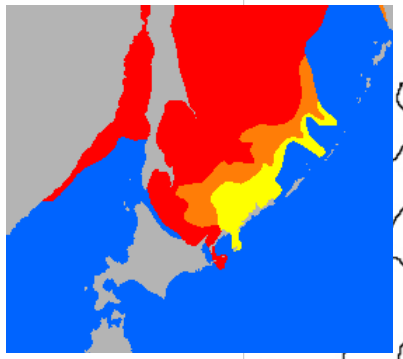
Preparing for the cold winter and breeding = Mainly foraging

Summer
Later spring~Fall

Rest life = Mainly landing

11 12 1 2	3 4 5	6 7 8 9 10	(M)
Hokkaido coast	On drift ice	Northern than Hokkaido	

Changes in distribution in Hokkaido.

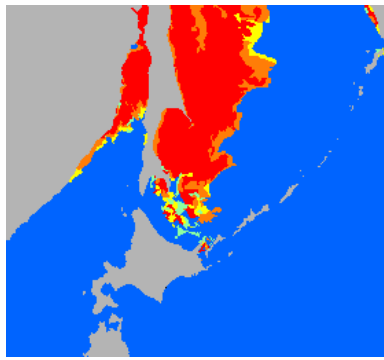


1990s

Rebun
Todo island
Sea of Okhotsk
Saroma Lake
Notori
Cape
Rausu
Abashiri Lake
Notuke Bay
Furen Lake
Akkeshi Lake
Daikoku island
Erimo Cape
0 100km

2000s

Rebun
Soya
Reshiri
Bakkai
Sea of Okhotsk
Teuri
Yagishiri
Saroma Lake
Notori
Cape
Rausu
Abashiri Lake
Shakotan
Notuke Bay
Ishikari
Furen Lake
Otaru
Akkeshi Lake
Daikoku island
0 100km

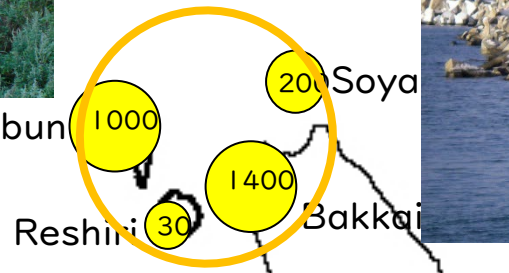


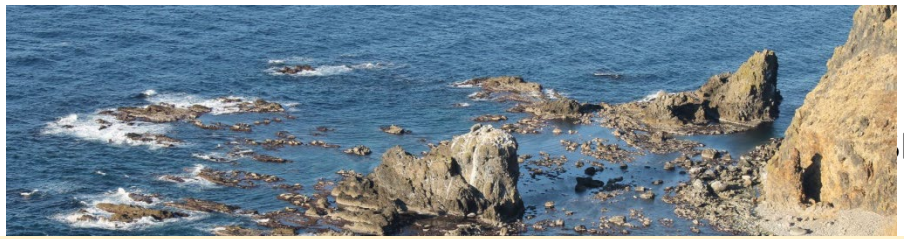
	1990s	2000s
Sea of Japan	: Dec.～ next Mar	Nov .～ next May
Sea of Okhotsk	: Dec.～next Mar	Nov ～ next May
Pacific Sea	: Feb.～ next Mar	Feb.～ next Mar
Nemuro Channel	: Jun.～ next Feb.	Jun.～ next Feb

more than 1,000
100～999
1～99

More southern distribution and increase hauled-out sites

Biological changes of spotted seals in Hokkaido, JAPAN





◎Haul-out sites: Concentrate northern area

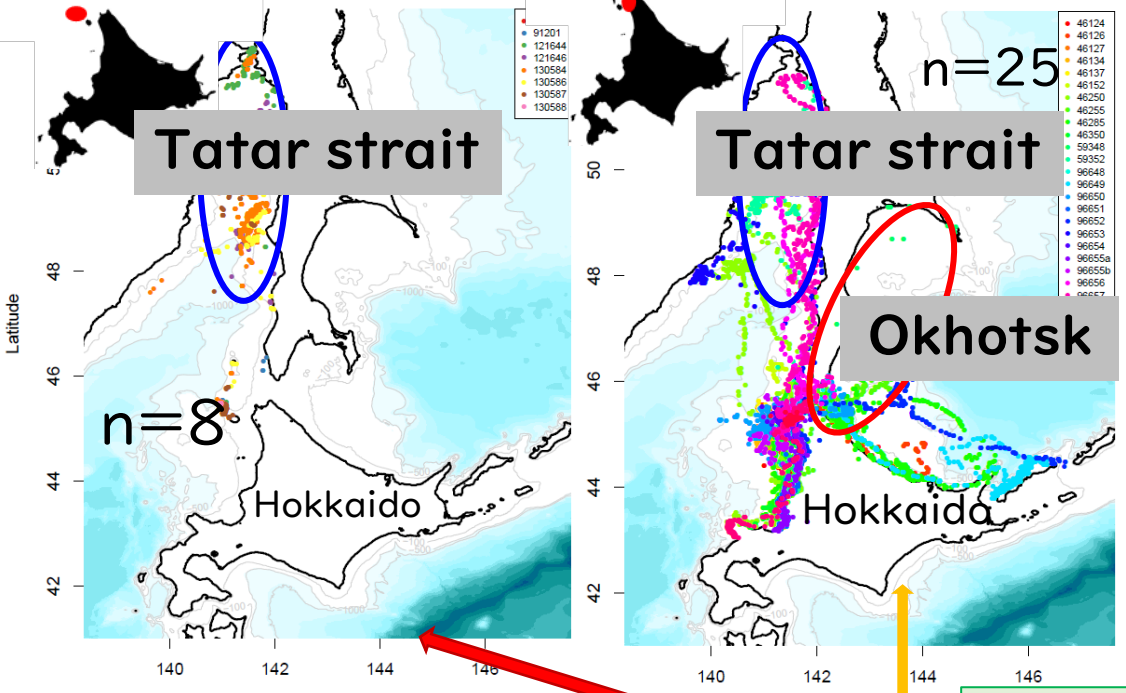
◎The number: Increasing year by year

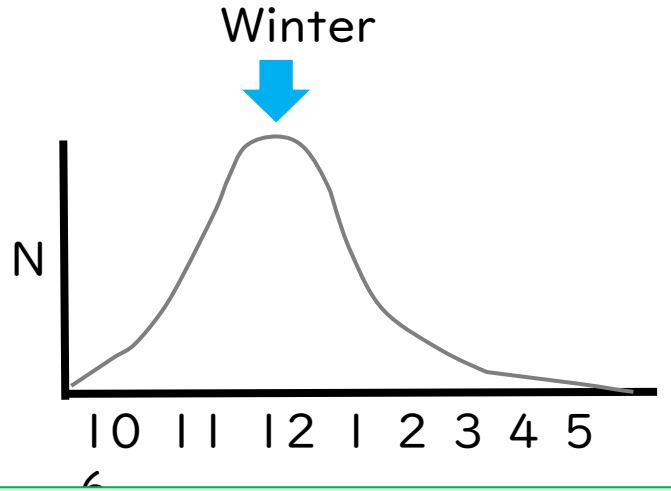
◎Visiting periods:Longer year by year

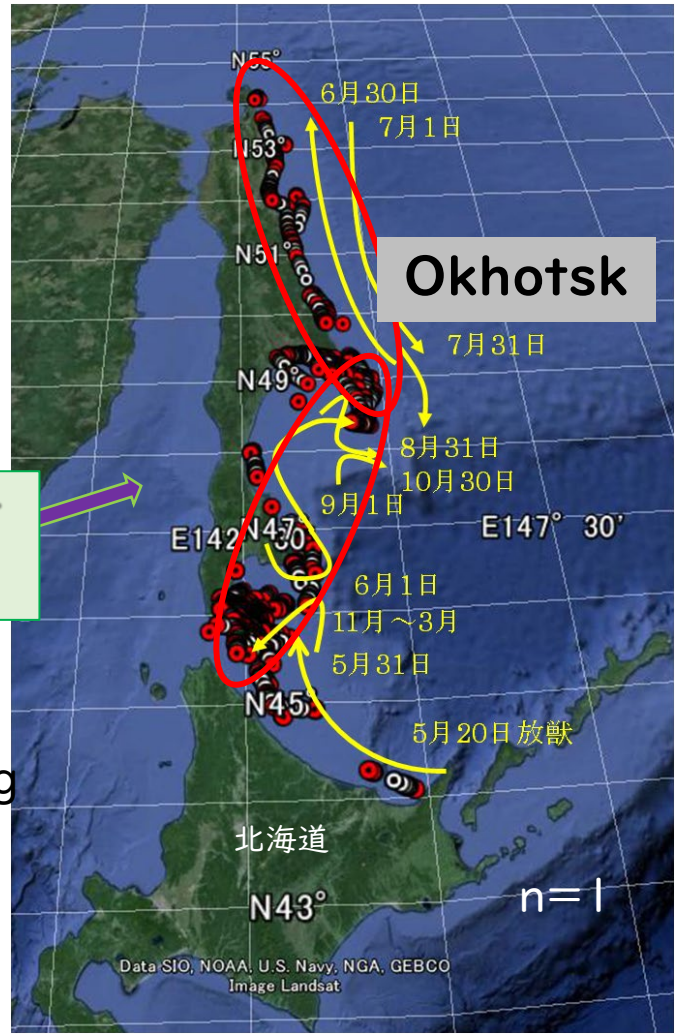
(more than 400 stay in Rebun all year round)

◎Visiting individuals :Not only sub-adults but also adults

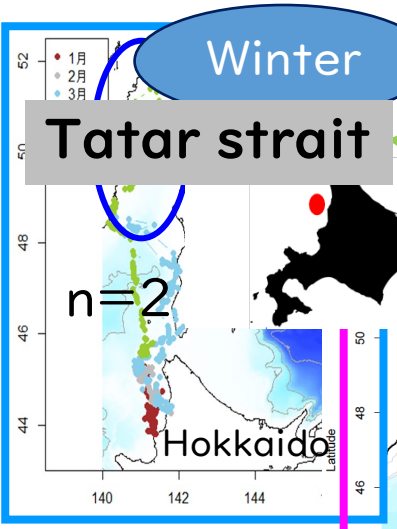
What is the origin?

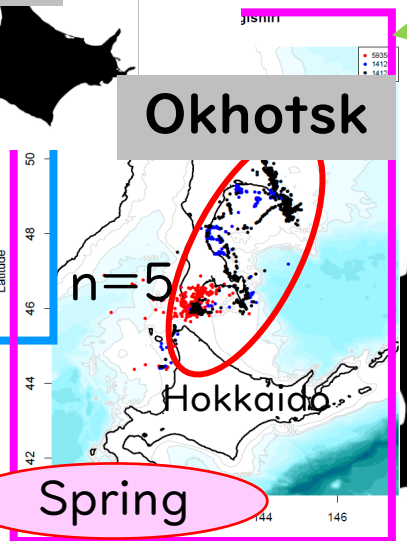




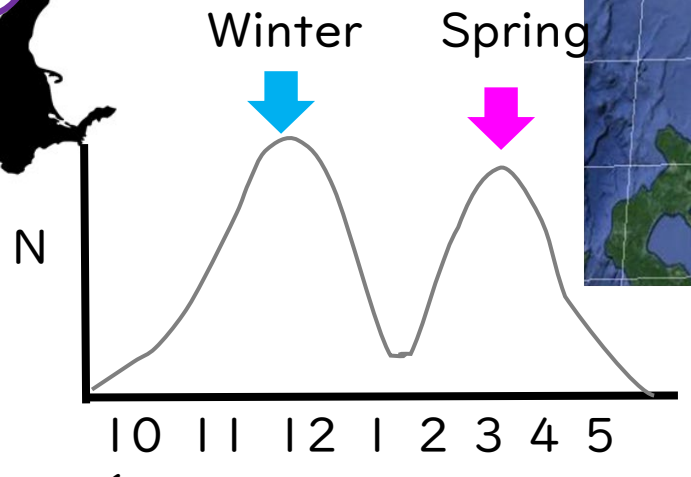


Not only from the Okhotsk, but visit from the Tartar Strait

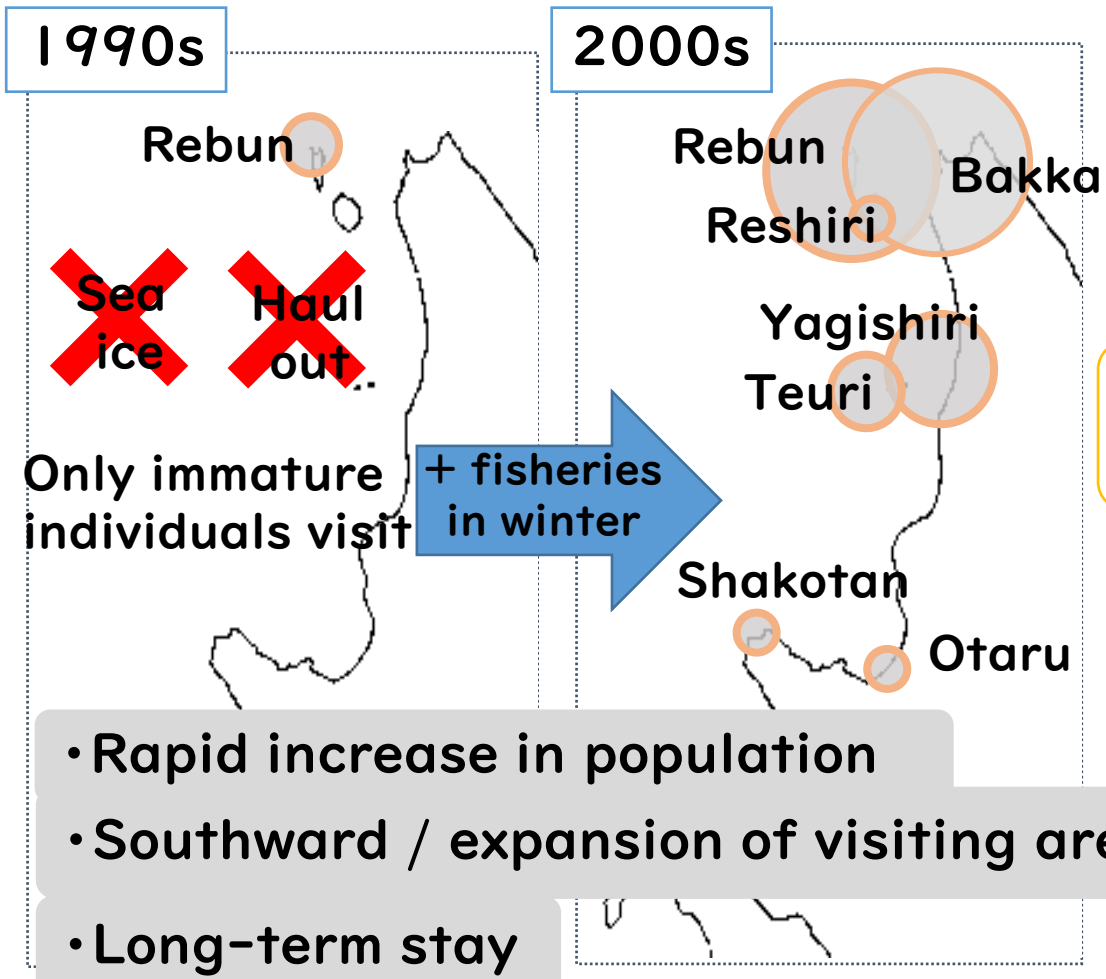




Hokkaido



Fishery damage caused by Biology changes



- Rapid increase in population
- Southward / expansion of visiting area
- Long-term stay
- New haul-out sites
- Adults also come

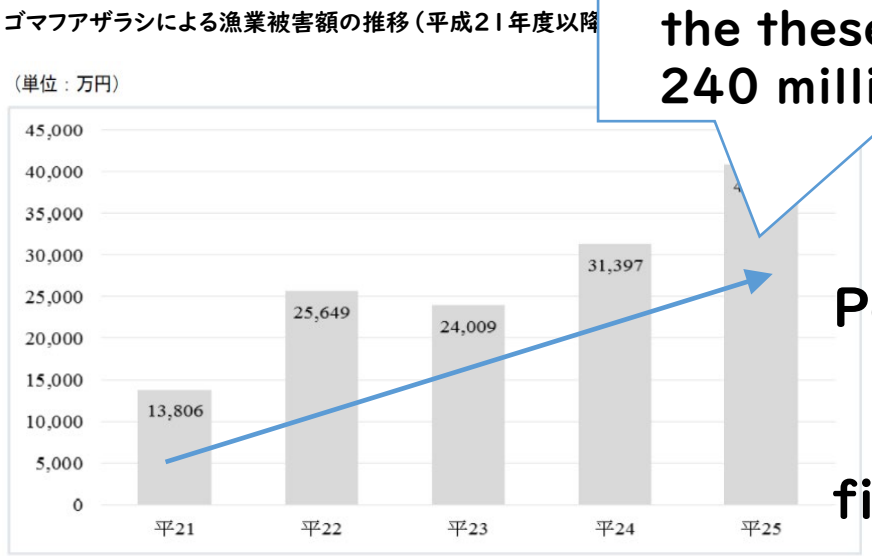
Rapid increase in population

Long-term stay

In an area that has never existed before Many individuals stay for a long time

Serious fishery damage

The amount of damage in the these area is about 240 million yen (2013)



「漁業被害の状況」「北海道アザラシ管理計画（素案）」より引用

Pause of fixed nets, of Octopus fishing

A lot of conflict between seals and fishing.

Gillnet is the main fishery on the Sea of Japan

⇒ Gillnet is less likely to leave damage

The actual damage is unknown

☞ But

Seals management plan in Hokkaido in 2013

(Background)

Five species of seals inhabit the coast of Hokkaido, but in recent years, the number of harbor seals and spotted seals has increased significantly, the range of habitat has expanded, and fishery damage has become more serious.

(Management plan)

Recovery of migratory nature of spotted seals (individuals in Hokkaido throughout the year) that stay on the coast of the Sea of Japan even in summer.

☞ Examination of capture (extermination) / expulsion methods and verification of effectiveness.

"Global warming ≒ Decrease in drift ice"

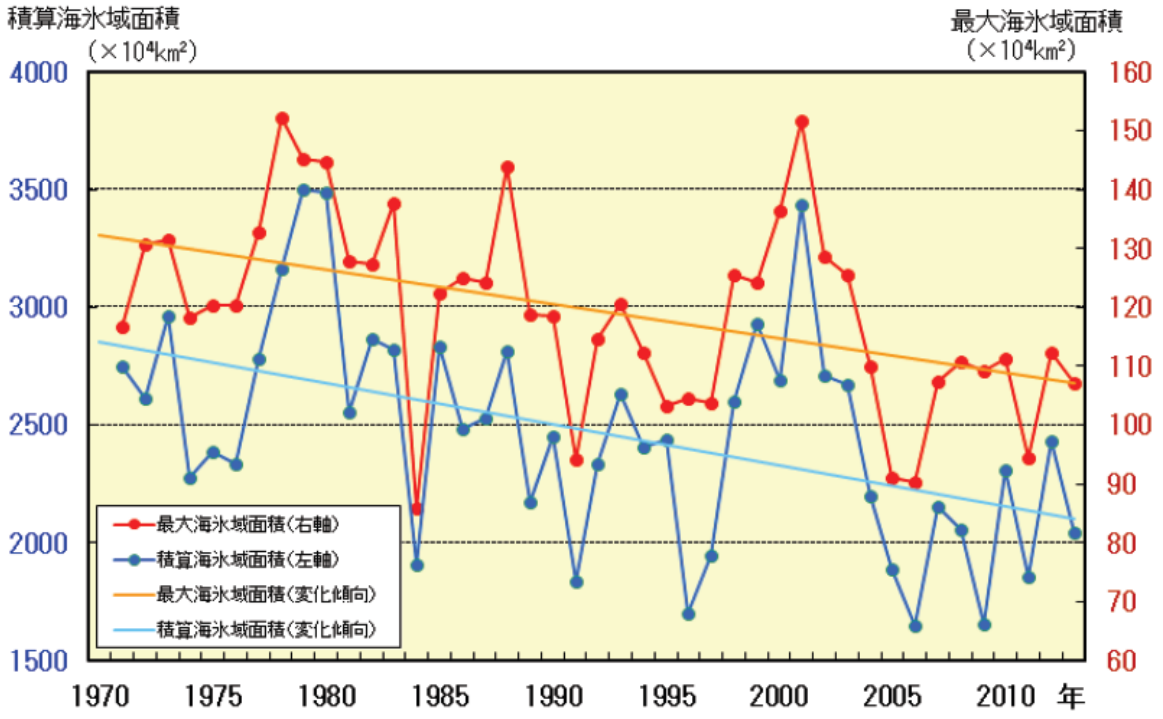


図1.3.2-2　オホーツク海の海氷域面積の経年変動（1971～2013年）
積算海氷域面積は前年12月から5月までの5日ごとの海氷域面積の合計値。最大海氷域面積は前年12月から5月までの5日ごとの海氷域面積のうちの最大値。水色の線は積算海氷域面積の変化傾向、橙色の線は最大海氷域面積の変化傾向を示す。平年値は1981～2010年の30年平均値。

Maximum and total sea ice areas of drift ice are both decreasing.

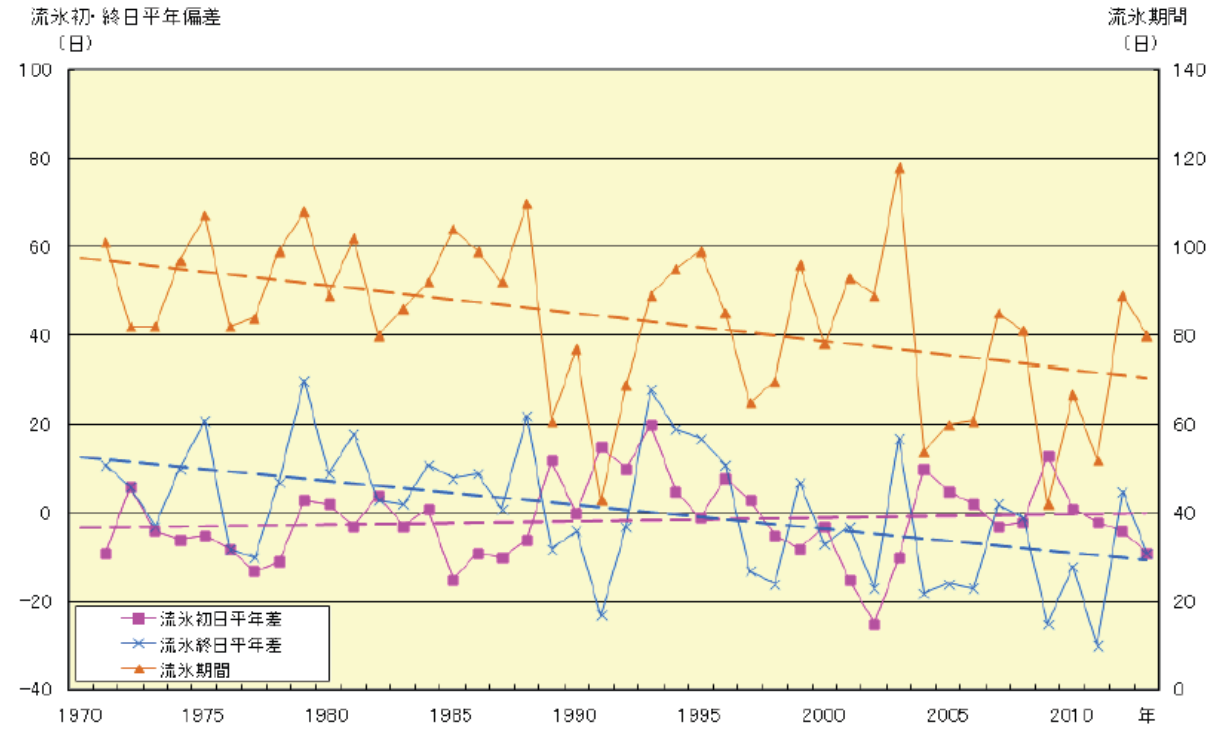
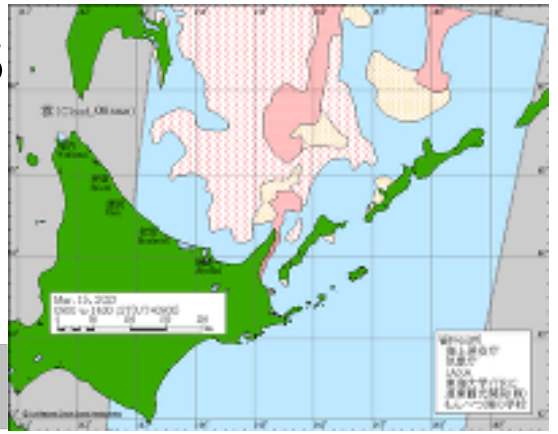


図1.3.2-4　網走の流氷期間・流氷初日・流氷終日の経年変化（1971～2013年）
流氷初日・流氷終日の平年差が正の値のときは平年より遅いことを、負の値のときは平年より早いことを表す。

Shorter drift ice period — unchanged start, earlier end.

Further ecological changes in 2020s

2020s



Tatar strait

Okhotsk

Rebun

Bakka

Teuri・Yagishiri

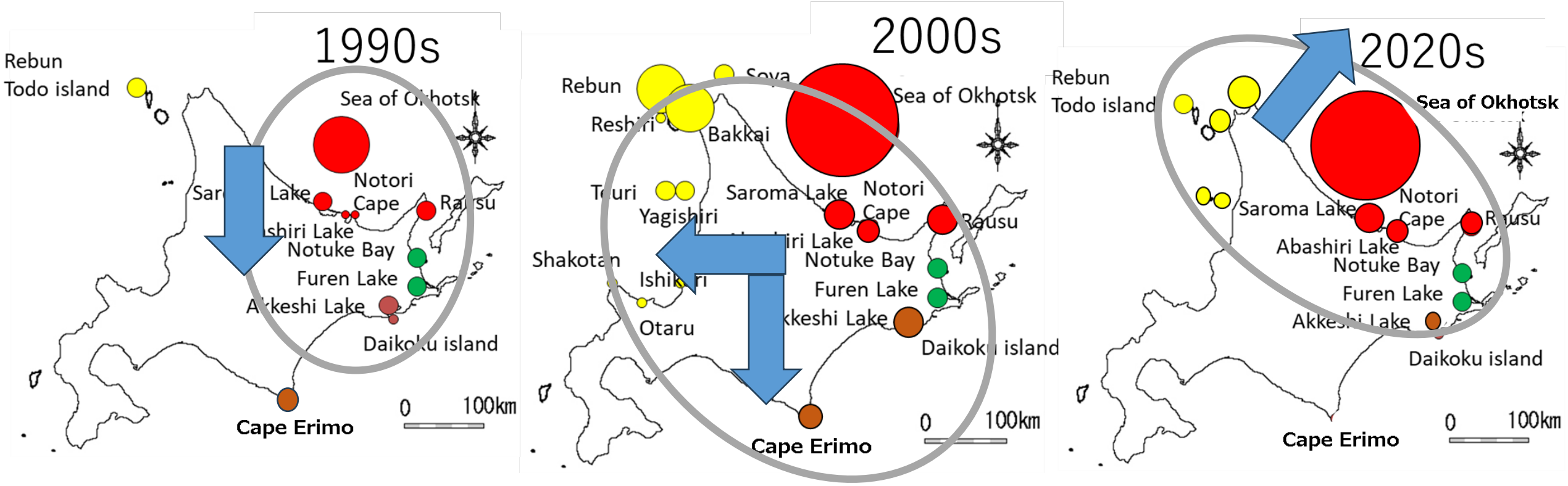
10 11 12 1 2 3 4 5 6

10 11 12 1 2 3 4 5 6

N

SPR

Further ecological changes in 2020s



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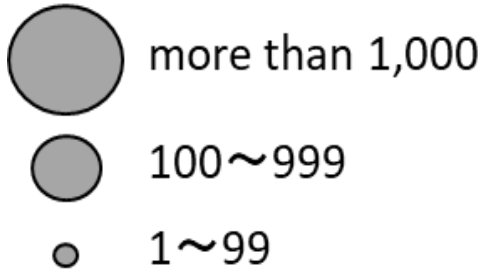


Thank you for your attention.