



Evolution of the Russian Arctic network of Protected Areas as a tool to build resilience of biodiversity to rapid arctic change

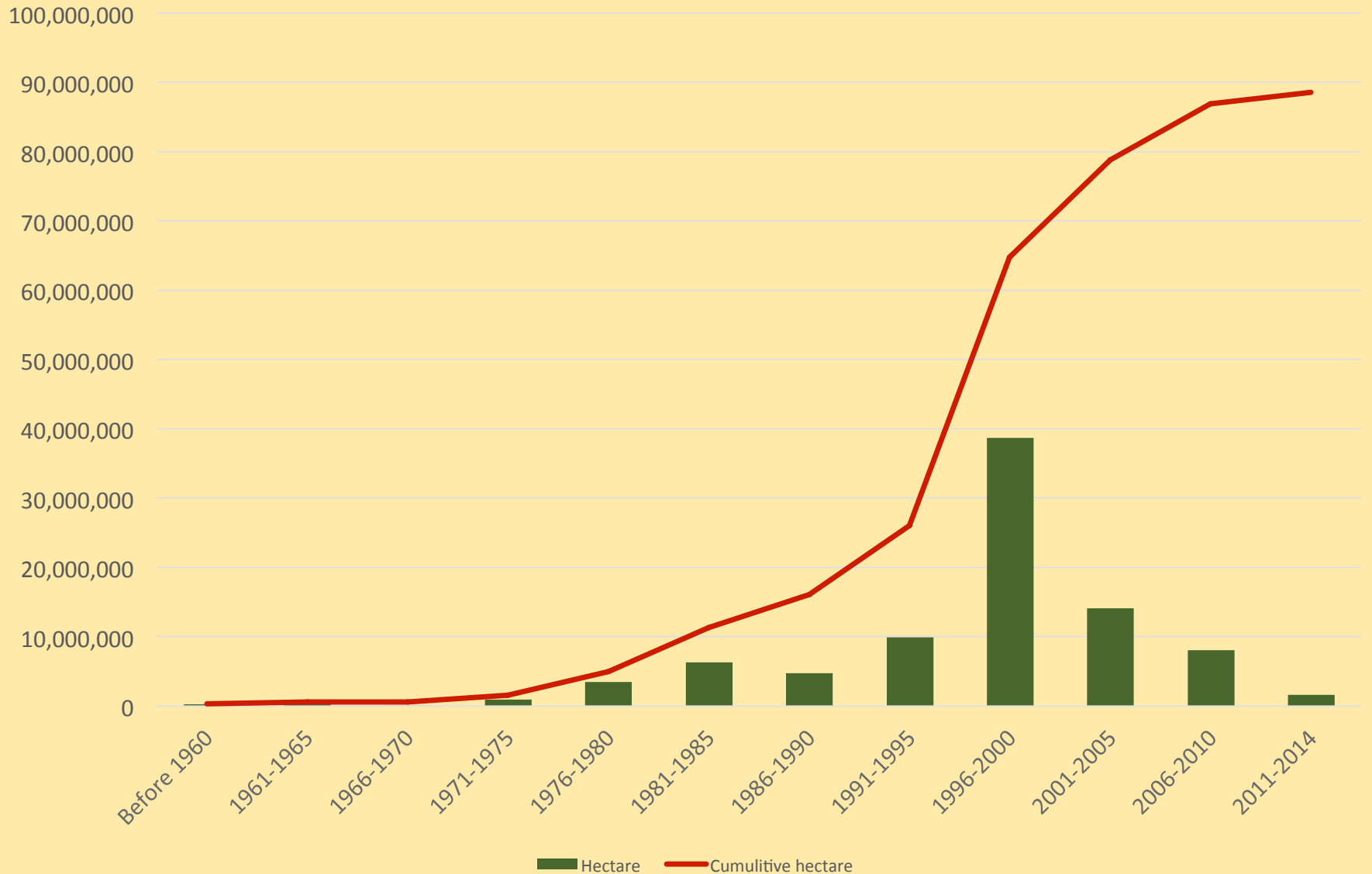
Mikhail Stishov & Gert Polet

CAFF Biodiversity Congress
Trondheim 2 – 4 December 2014





Russian Arctic Protected Area Network

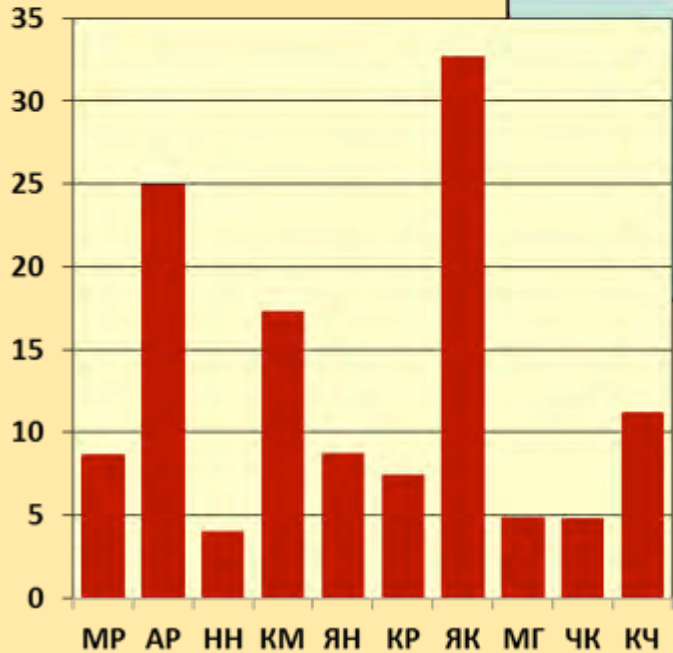




Russian Arctic Protected Area Network



PAs = 16.2%



450 protected areas (**301** within CAFF boundaries)
94 600 000 hectares (**88 544 917** within CAFF boundaries)
Smallest: 0,1 ha (Glacial boulder Nature Monument)
Largest: 6,052,688 ha (Lena Delta Resource Reserve)
Oldest established in 1932: (Kandalaksha Reserve)
Latest established in: 2013 («Onezskoe Pomorie» NP)



Russian Arctic PA Network: Targets and Goals

What we want:

PA Network guarantees conservation of arctic biodiversity under current conditions by elimination or minimizing human impacts;

PA Network serves as the backbone of ecological networks (Econet) which provide for NATURAL processes like species migrations & ecosystems transformation which are expected to take place because of rapid climate change

What to do:

To design and establish complete and comprehensive PA Network;

To link it into Econet where it's needed according to current, planned and proposed socio-economical activities.



Russian Arctic PA Network: Gap-Analysis & Perspective Scheme

Defining **criteria** of representative and comprehensive Protected Area Network



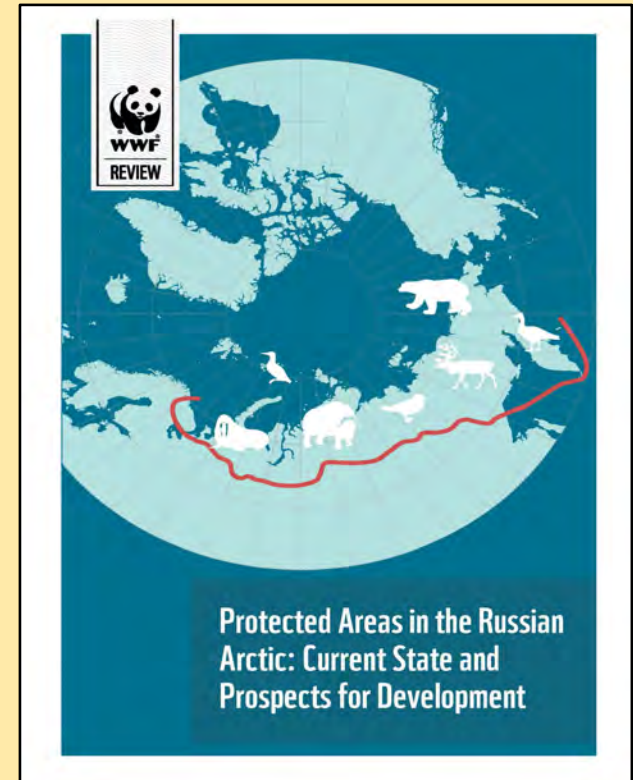
Representativeness assessment – estimation of the adequacy of existing PA network to fit with criteria of representativeness and comprehensiveness



Gap-analysis – searching the “gaps” which could provide higher representativeness being included into PA network



Designing of **prospective PA network** fitting representativeness criteria



Limitations:

Only **terrestrial** PA Network was analyzed and planned;

Geophysical features & processes underlying resilience of ecosystems functioning not explicitly integrated in this analysis.



Criteria for comprehensive and representative PA Network of Russian Arctic

Criteria:

2012 Rate:

- Network covers at least 10% of each significant landscape/ecosystem variety of each climate and biogeographical division (zones, provinces) of each landscape and vegetation types in each of geographical regions;
- Network includes all key habitats of species from National and Regional Red Data books as well as local endemics which require spatial protection;
- Network protects all especially valuable nature objects and complexes of international, national and regional importance, including areas important for reproduction of biological resources.

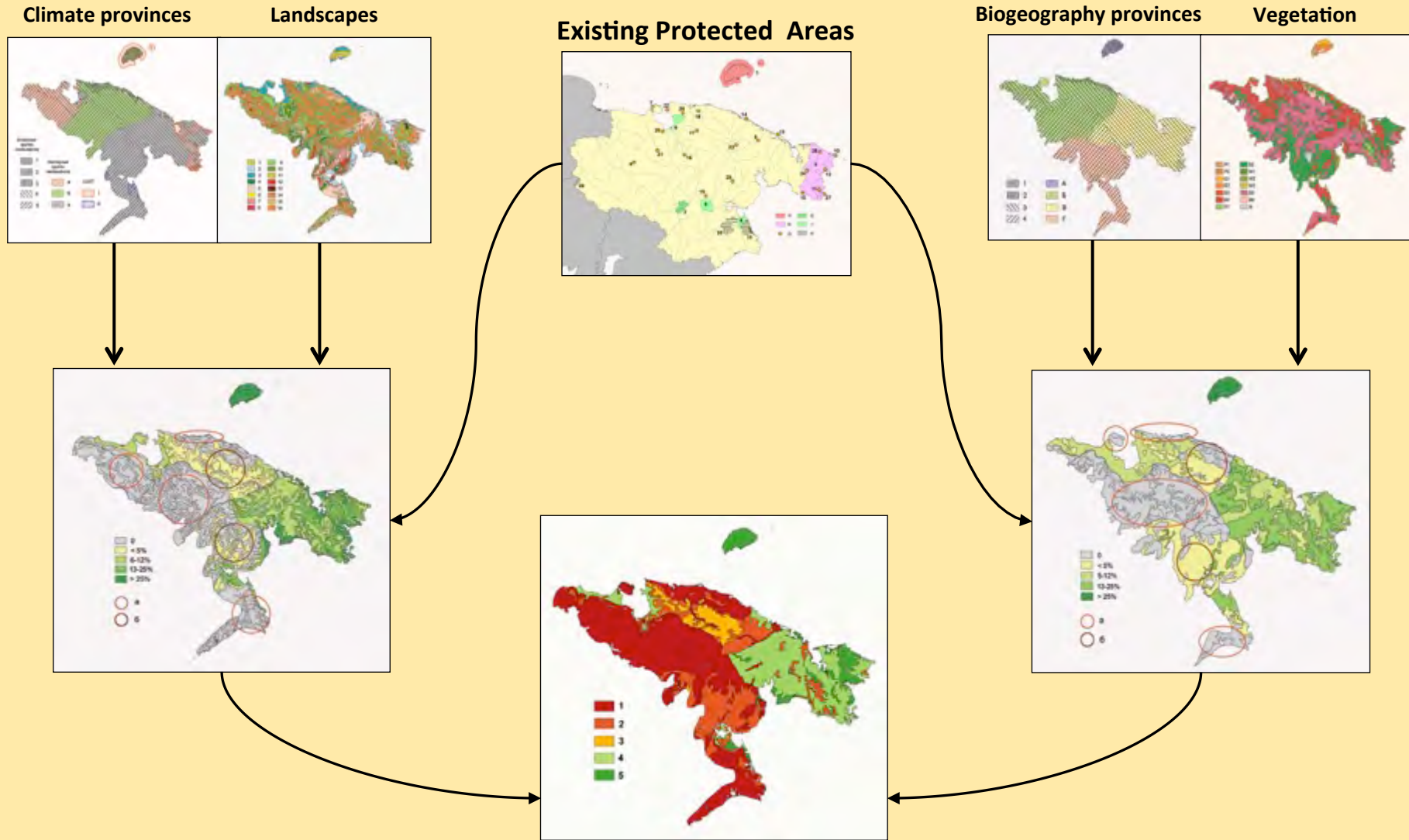
67%

64%

49%

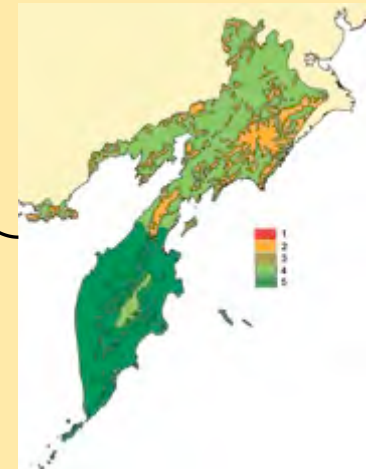
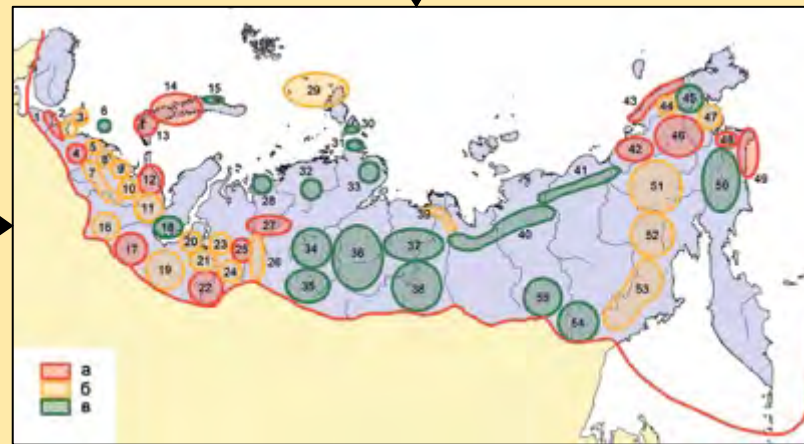
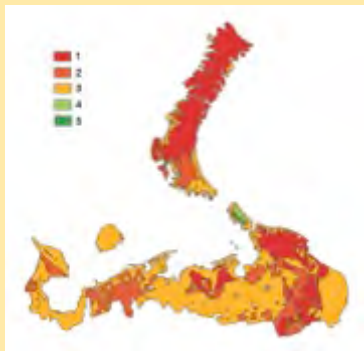
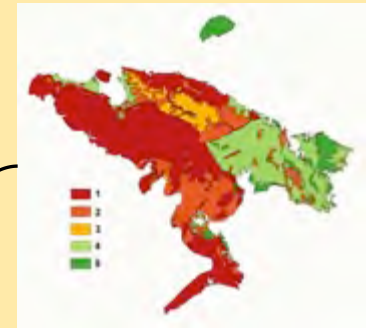
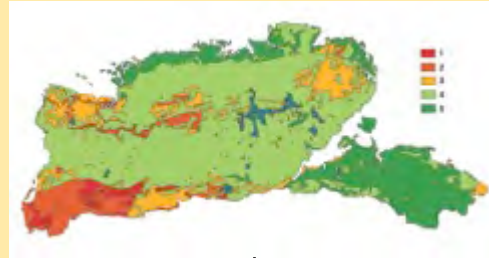
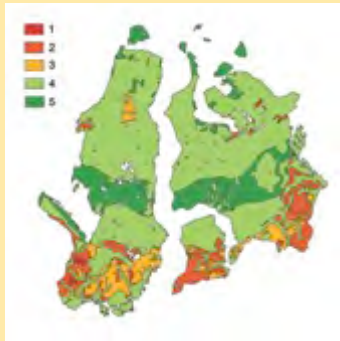


Russian Arctic PA Network: Landscape & Ecosystem representativeness





Russian Arctic PA Network: Landscape & Ecosystem gaps





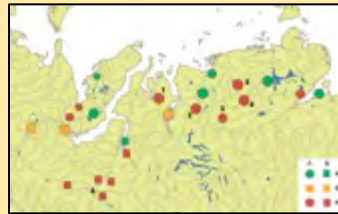
Russian Arctic PA Network: Completeness for rare species conservation & species gaps

Ivory Gull



Birds

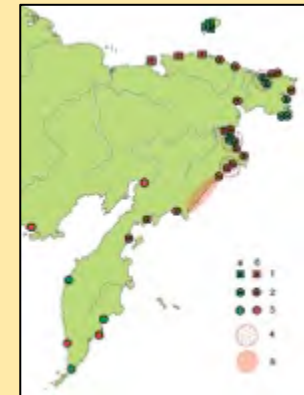
Red-breasted Brant



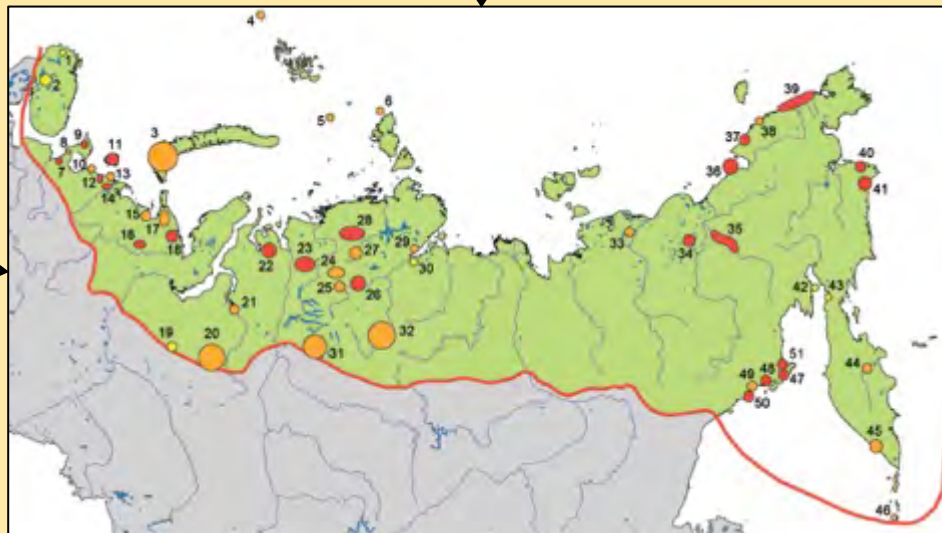
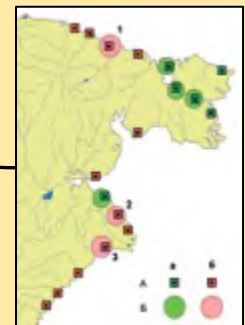
Siberian Crane



Buff-breasted & Spoon-billed Sandpipers

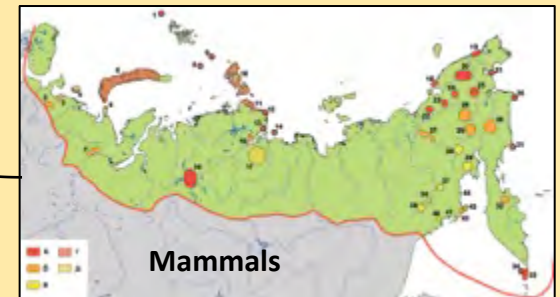
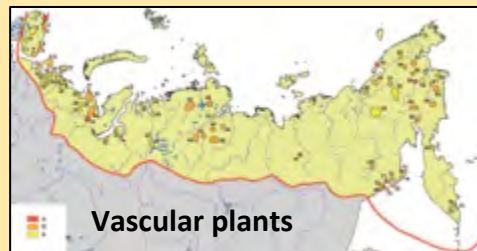
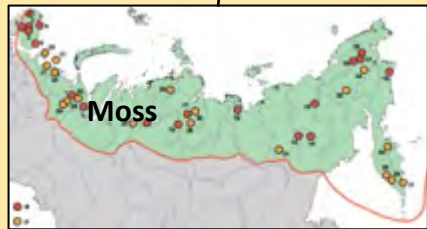
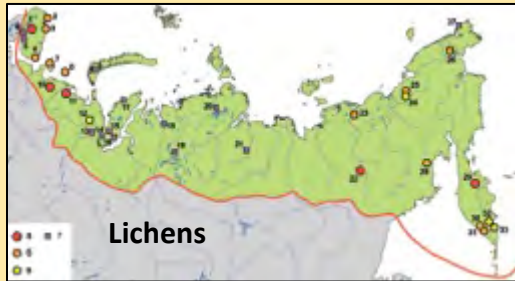


Emperor Goose





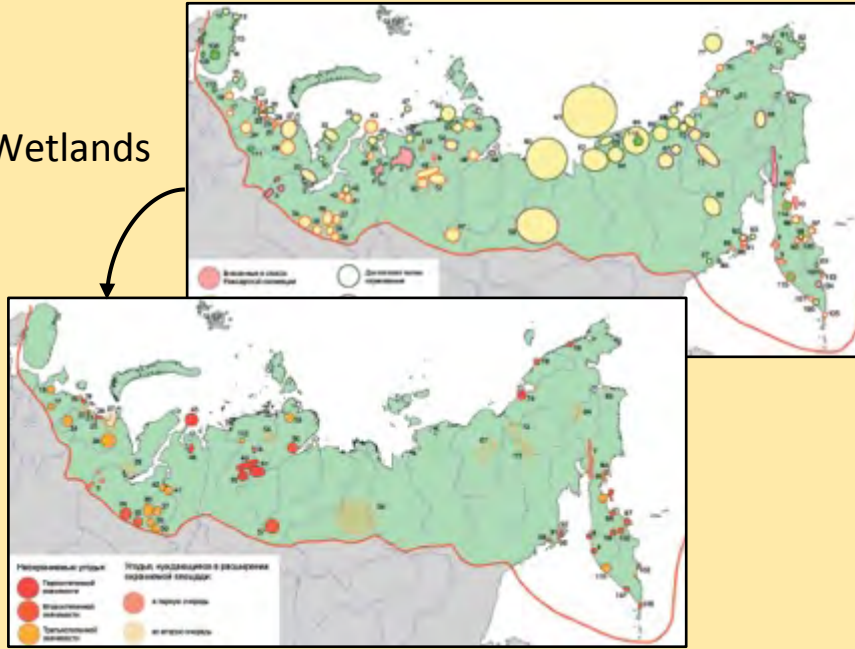
Russian Arctic PA Network: Rare & endemic species gaps



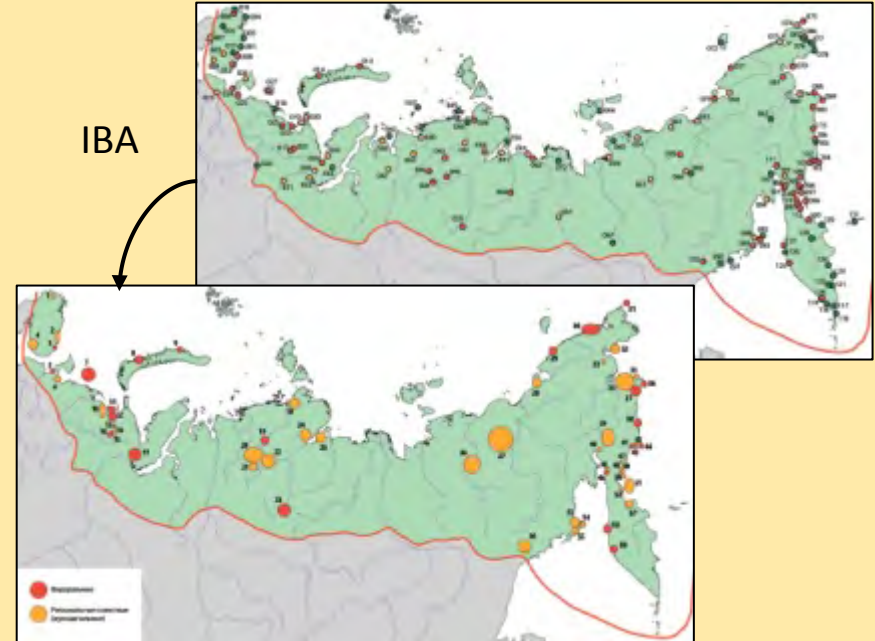


Russian Arctic PA Network: Representativeness of areas and natural features of especial value

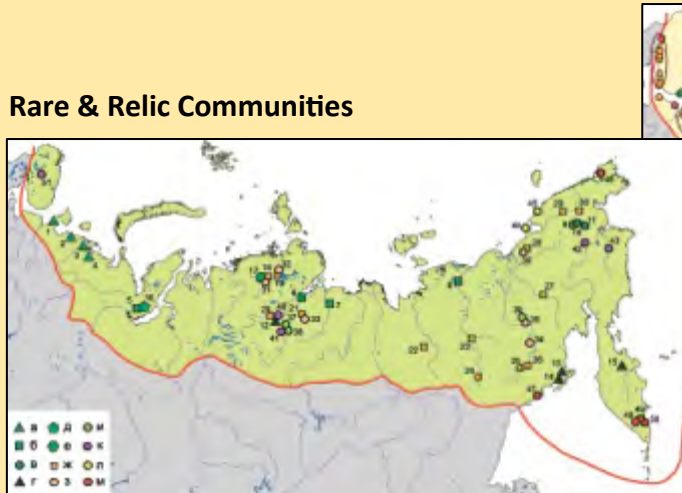
Wetlands



IBA



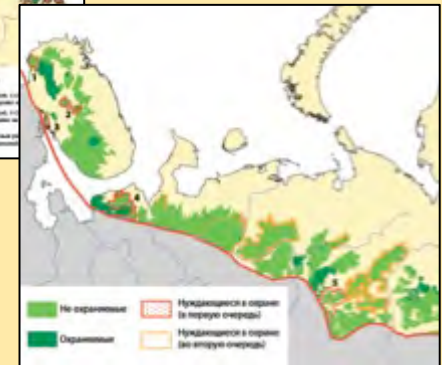
Rare & Relic Communities



Virgin Forest

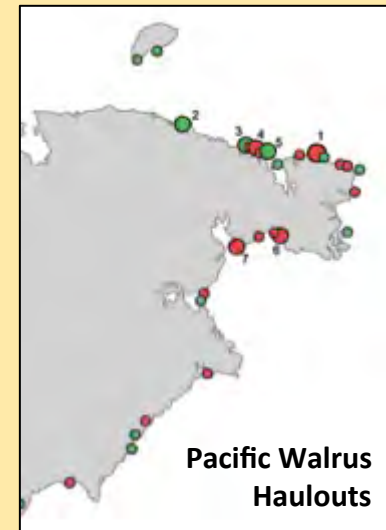
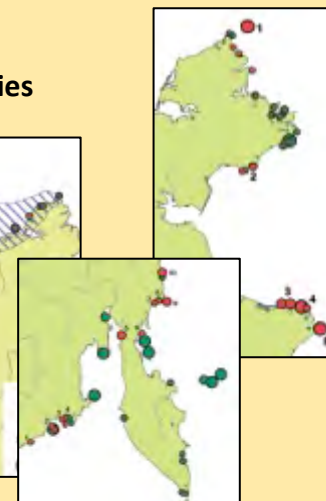
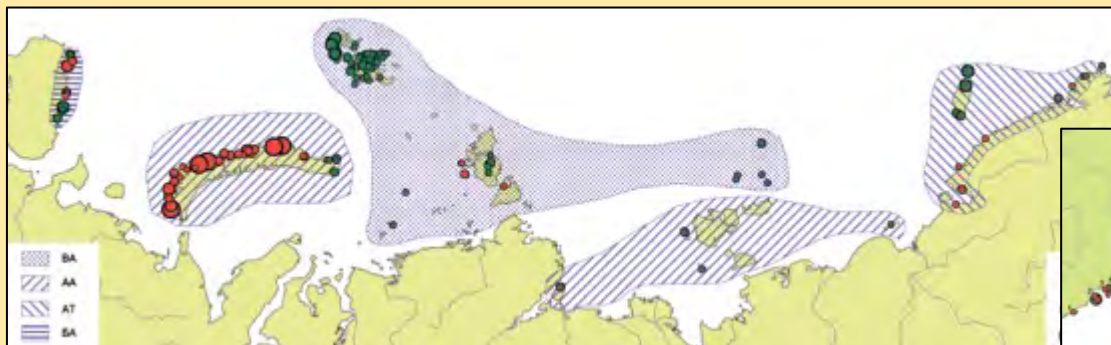
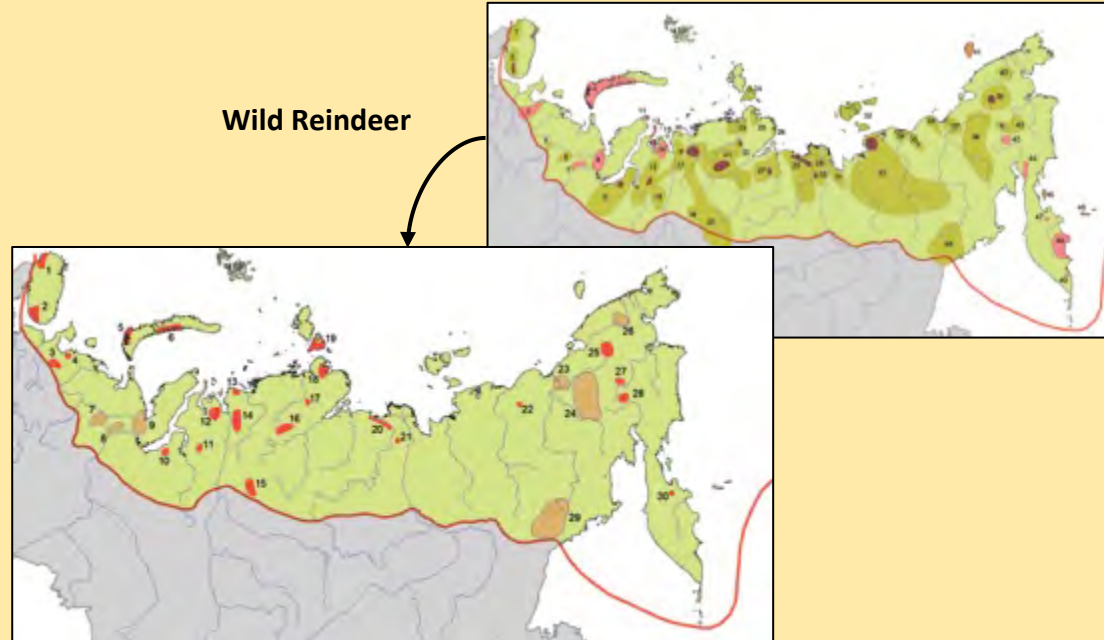
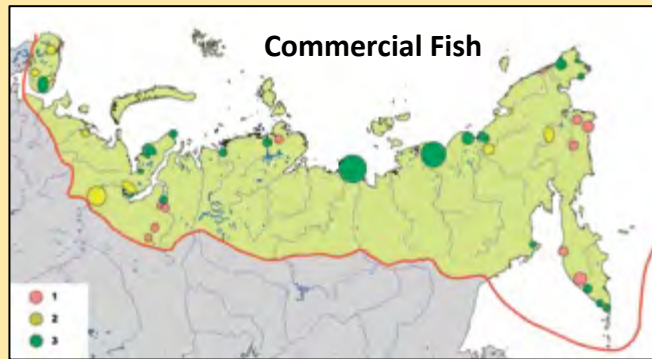


Coastal Marshes



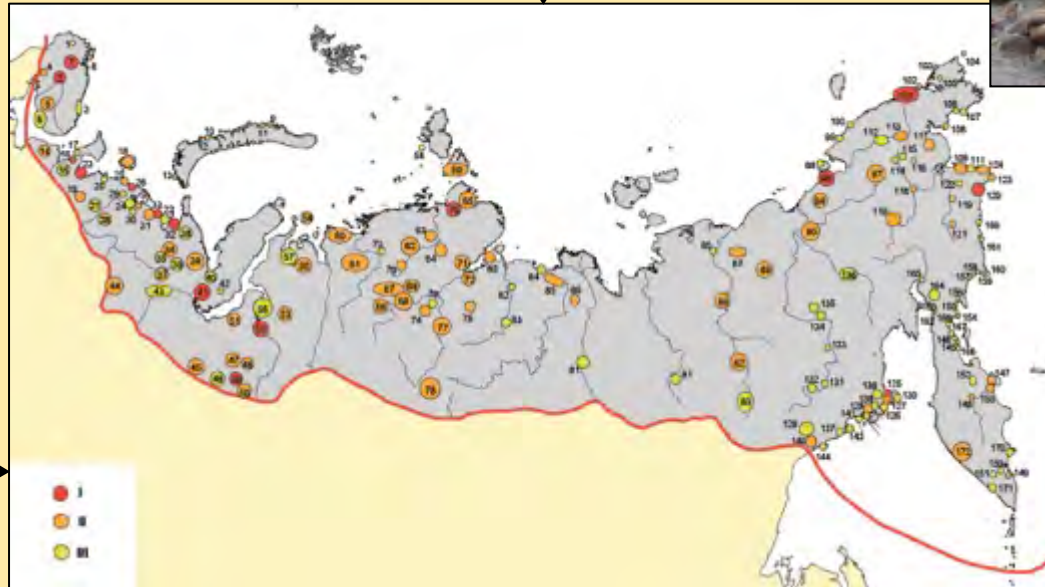


Russian Arctic PA Network: Representativeness of areas and natural features of especial value



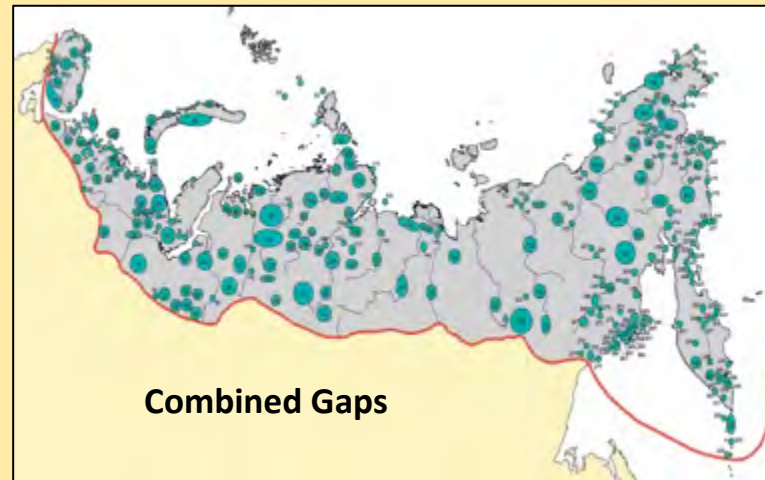
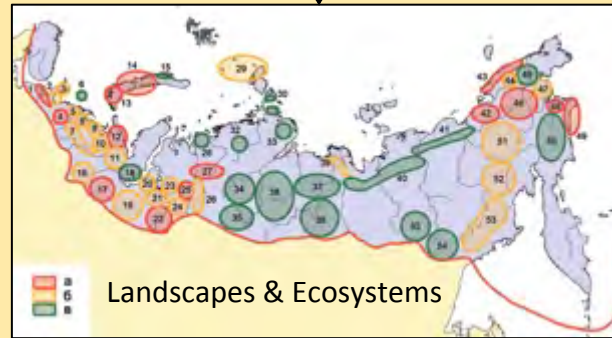
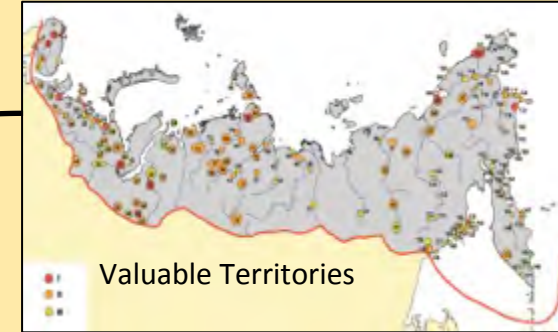
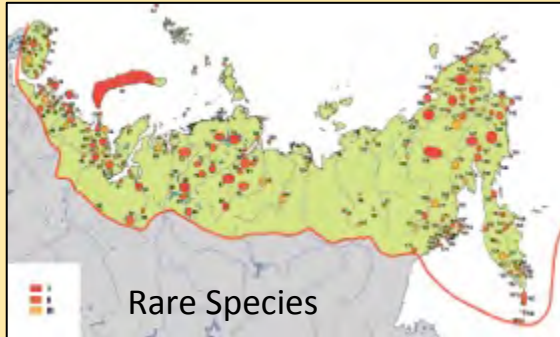


Russian Arctic PA Network: Areas and natural features of especial value gaps





Russian Arctic PA Network: Gaps

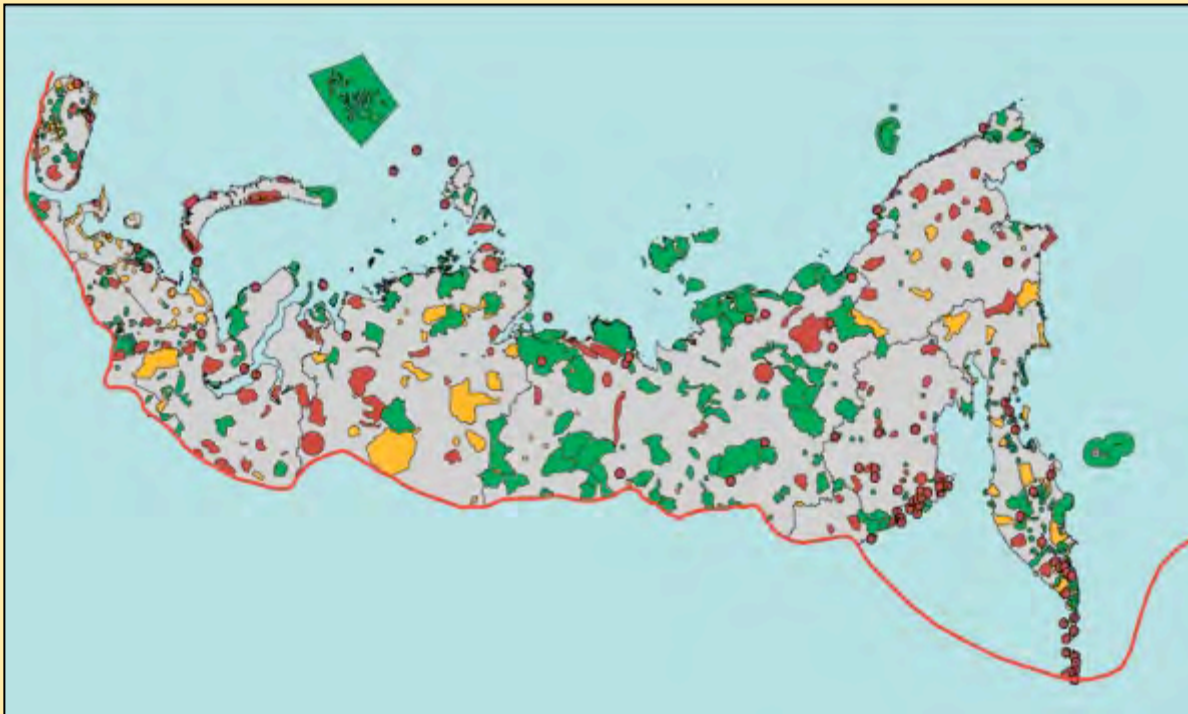




Russian Arctic PA Network: Prospective Scheme

Existing PA Network: **450** PA, **95** million ha,
16% of total arctic area

Already planned and proposed **272** new PA, on **44** million ha
including **156** (about 50%) of the identified gaps.



296 Gaps

Final proposal:
establishing of **376**
new PAs and
expanding of **19** PA
on **59** million ha

826 PA on **153**
million ha =
26% of total arctic
area



Russian Arctic PA Network: Proposal Promotion & Implementation

- All administrative regions have received proposals for developing or correction their perspective schemes for PA networks development;
- 4 administrative regions (from 10) already adopted prospective schemes PA networks establishment (up to 2020) based on or using WWF proposals;
- More than 10 proposed PAs already established and another 12 are in the process of designation;



Next Steps

- 1) Further promoting & implementation of developed plans and proposals on terrestrial Protected Areas Networks;
- 2) Comparative analysis with the long-terms plans of socio-economic development to identify need in planning and establishing of ecological corridors;
- 3) Developing the prospective scheme and proposals of MPA Network within Russian Exclusive Economical Zone:
- 4) Undertake a climate vulnerability assessment to ensure robustness of the PA Network under rapid ecological change.

- Identifying valuable areas;
- Vulnerability assessment;
- Proposals on protection measures/regimes;





Thank you!

