Arctic Invasive Alien Species Strategy

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Photo Reidar Hindrum

CAFF Conservation of Arctic Flora and Fauna

ARCTIC COUNCIL

What is Invasive Alien Species?

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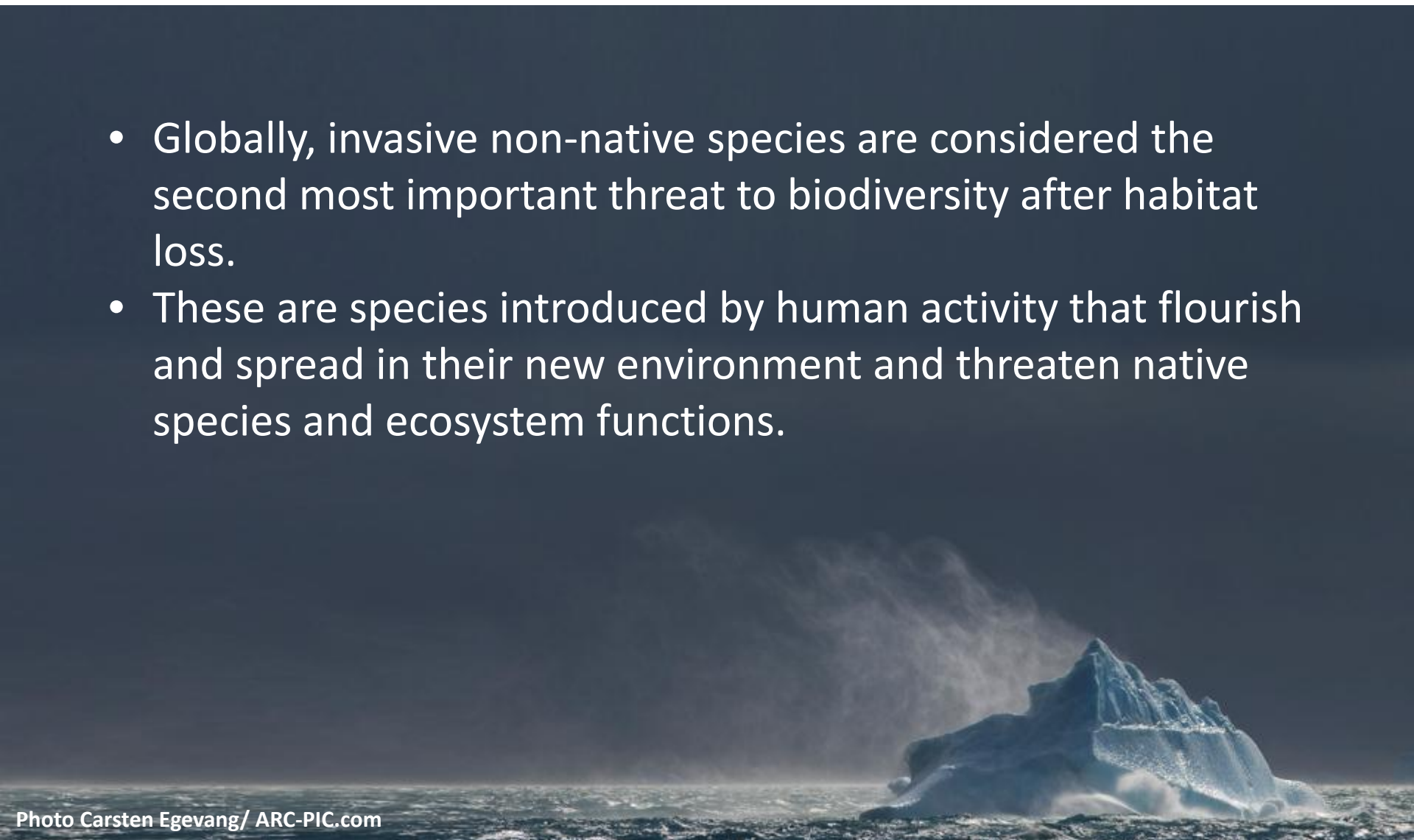
- Globally, invasive non-native species are considered the second most important threat to biodiversity after habitat loss.
- These are species introduced by human activity that flourish and spread in their new environment and threaten native species and ecosystem functions.



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- Invasive alien species benefit greatly from a warming Arctic.
- Rapid increase and expansion in human activity and transit, and energy development in the region is increasing the chance of introduction of invasive alien species.

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What is the situation?
An example from Svalbard

- The Alien Species Database contains information about 79 alien species in Svalbard
- The majority have come as a stowaway, and are currently non reproducing
- Alien species constitute an increasing problem also in the marine environment. Especially when it comes invertebrates and algae
- Economic activity is increasing and it is not unlikely that tourism is an important vector

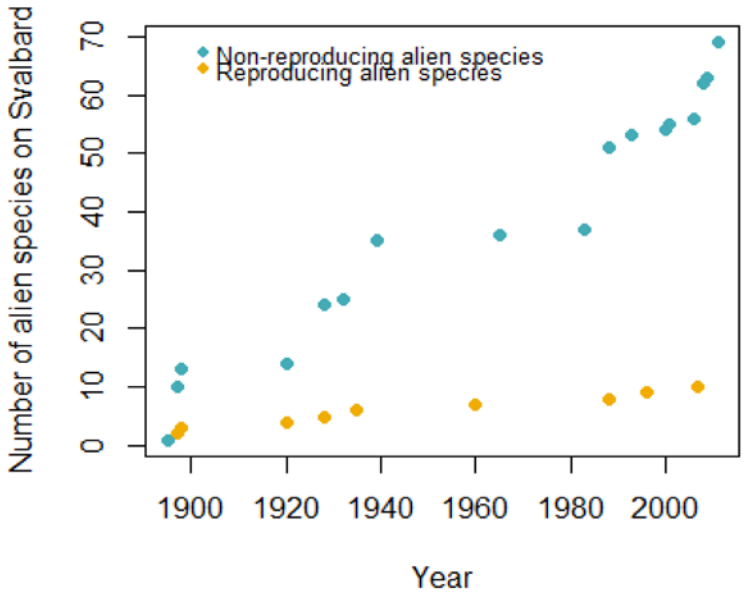

Figure 21. Development in number of alien species and non-reproducing alien species registered from Svalbard during 1895-2011. Source: Hendrichsen et al. in prep

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- The Arctic Invasive Species Strategy project has been launched by CAFF (led by U.S.A. and Norway) to develop a strategy to prevent the introduction of invasive species in Arctic ecosystems.
- CAFF is working with the PAME on the marine components of the strategy.

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CAFF and PAME are working on follow-up actions as agreed to in:

- **The 2009 Arctic Marine Shipping Assessment (AMSA),**
- **The 2013 Arctic Ocean Review Final Report,**
- **The Arctic Marine Strategic Plan (AMSP) 2015-2025, and**
- **The Actions for Arctic Biodiversity 2013-2021**

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Arctic Biodiversity Assessment (ABA)

The ABA Recommendation #9 states that there is a need to:

- *Reduce the threat of invasive alien/non-native species to the Arctic by developing and implementing common measures for early detection and reporting, identifying and blocking pathways of introduction, and sharing best practices and techniques for monitoring, eradication and control.*
- *This includes supporting international efforts currently underway, for example those of the International Maritime Organization to effectively treat ballast water to clean and treat ship hulls and drilling rigs.*

ACTIONS FOR ARCTIC BIODIVERSITY:

Address two projects for Arctic invasive Species:

- 9.1 (2015-2017): Develop a strategy for the prevention and management of invasive species across the Arctic, including the identification and mitigation of pathways of introduction of invasions. Include involvement of indigenous observing networks, which include invasive and new species reporting, to assist with early detection.

- 9.2 (2017-2019): Incorporate common protocols for early detection and reporting of non-native invasive species in the Arctic into Circumpolar Biodiversity Monitoring Program (CBMP) monitoring plans.

QUESTIONS TO BE ADDRESSED IN THE ARCTIC INVASIVE SPECIES STRATEGY

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- How and where are living organisms likely to be introduced to Arctic ecosystems?
- Which species are both likely to be introduced and likely to be harmful?
- Which high value locations are especially vulnerable to invasion?
- How can the different layers of information gathered be integrated to identify locations and practices that are most likely to prevent future harm from invasions?
- What management activities and polices have been adopted to improve management of invasions?

CAFFS WORK ON THE PROJECT ENTAILS:

- Develop a strategy for the prevention and management of invasive species across the Arctic
- Building a baseline of data available
- Considering trends in extinction risks for native species impacted by invasive species
- Building a risk atlas
- Developing response options and management recommendations including protocols for early detection and monitoring

PAMES WORK ON THE PROJECT ENTAILS:

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- Providing information on marine aquatic invasive alien species and management measures
- Participating in the Steering Committee and in the March 2016 workshop for the CAFF initiative
- Reviewing and as appropriate providing comments on CAFF project outcomes and key findings
- Helping to develop policy recommendations and any related voluntary best practice guidelines pertaining to marine aquatic invasive alien species

Arctic Invasive Species project Steering Group

- David Lodge, USA - co-lead
- Phil Andreozzi, USA - co-lead
- Denny Lassuy, USA
- Gilbert Castellanos, USA
- Tomas Holmern, Norway - co-lead
- Marthe Margrethe Haugan, Norway
- Bruno Paris, Canada
- Martin Schiøtz, Kingdom of Denmark (Greenland)
- Tom Christensen, Kingdom of Denmark (Greenland)
- Inge Thaulow, Kingdom of Denmark (Greenland)
- Johanna Niemivuo-Lahti, Finland
- Melanie Josefsson, Sweden
- Pawel Wasowicz, Iceland
- Carolina Behe, ICC-Alaska
- Kári Fannar Lárusson, CAFF Secretariat
- Peter Oppenheimer, PAME
- Soffia Guðmundsdóttir, PAME Secretariat

Arctic Invasive Species project Steering Group

CAFF Conservation of Arctic Flora and Fauna

PAME Protection of the Arctic Marine Environment

NEXT STEPS

- Host project workshop: Akureyri Iceland, March 30- April 1
- Develop a baseline containing the strategies applied in each country and data available
- Circulate a request for this information using a common template
- Develop a map describing the relevant species and pathways
- Create an outline for the strategy and decide who will be responsible for what, prior to Akureyri workshop

Invasive Species Initiative Report Outline

- Risk analysis framework: risk assessment and risk management
- Pathways of introduction of terrestrial, marine, and freshwater nonindigenous species to the Arctic and within the Arctic
  a) Transportation-related pathways
  b) Commerce in living organisms, including parasites and pathogens of intentionally introduced species
- Lists of nonindigenous species that are established and their impacts (Marine, Freshwater, Terrestrial)
- Identification and mapping of high value locations
- Ranking risk across pathways based on previous sections
- Survey of policies and management
- Recommendations

For more information please visit:
www.caff.is

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Thank you!

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