

CLIMATE CHANGE, ENVIRONMENT AND THE ARCTIC ROUTE

Arctic Route: challenges and opportunities Circle S.p.A Webinar 27.10.2020

Assistant Professor (Maritime Business and Policy),

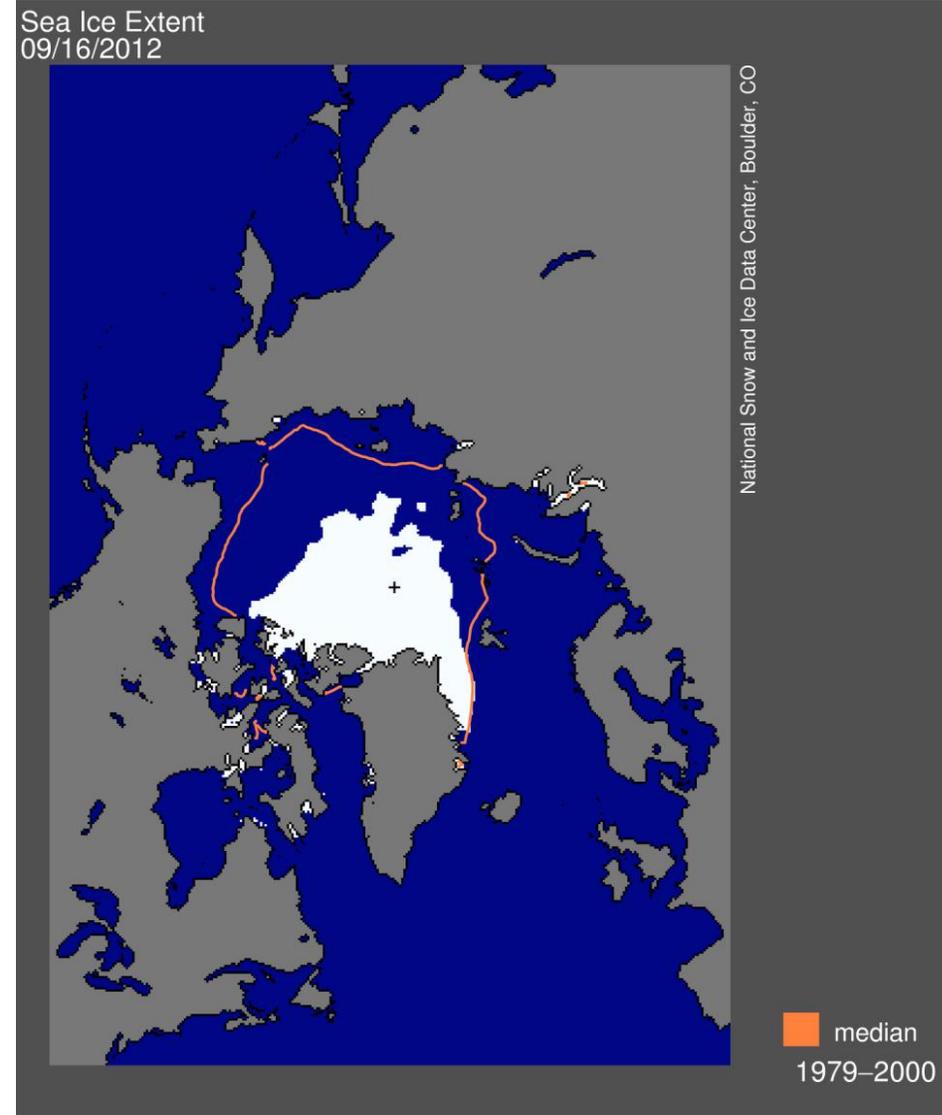
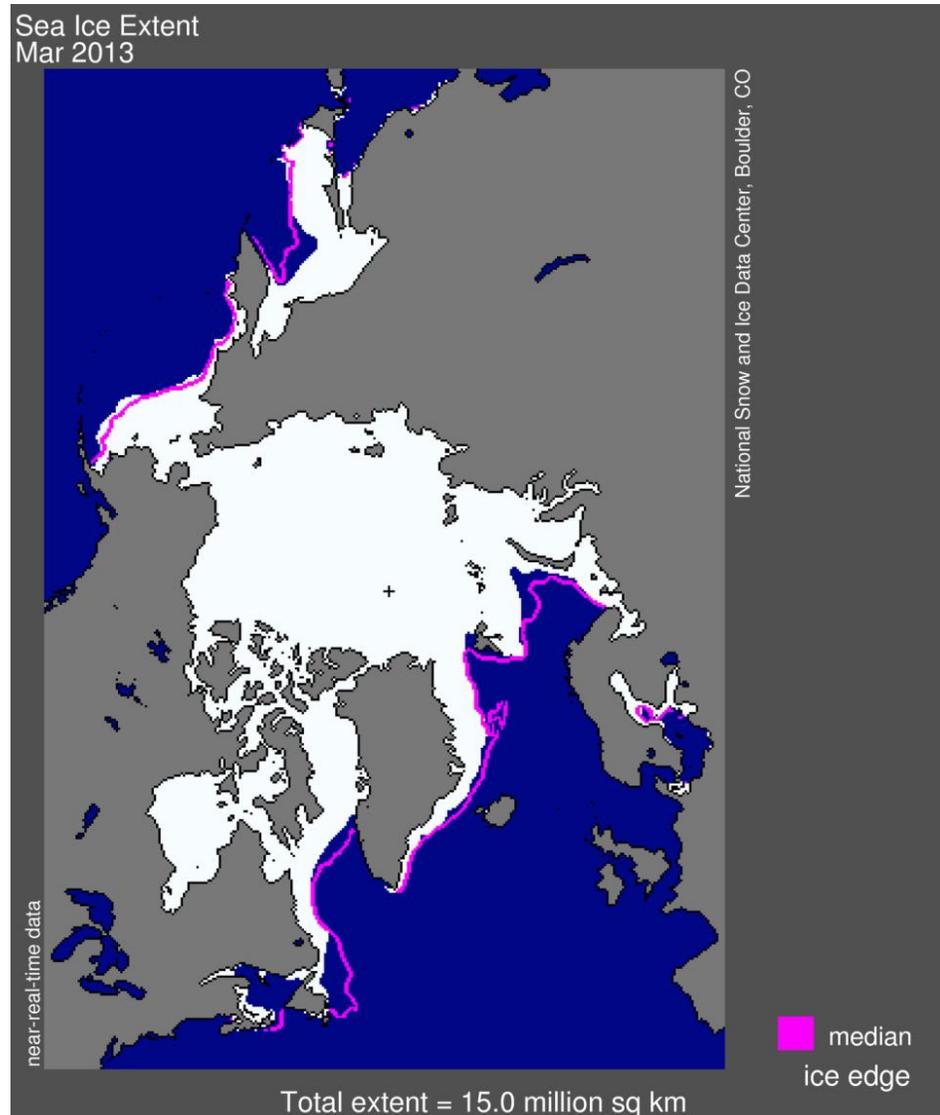
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Climate change from the perspective of arctic shipping

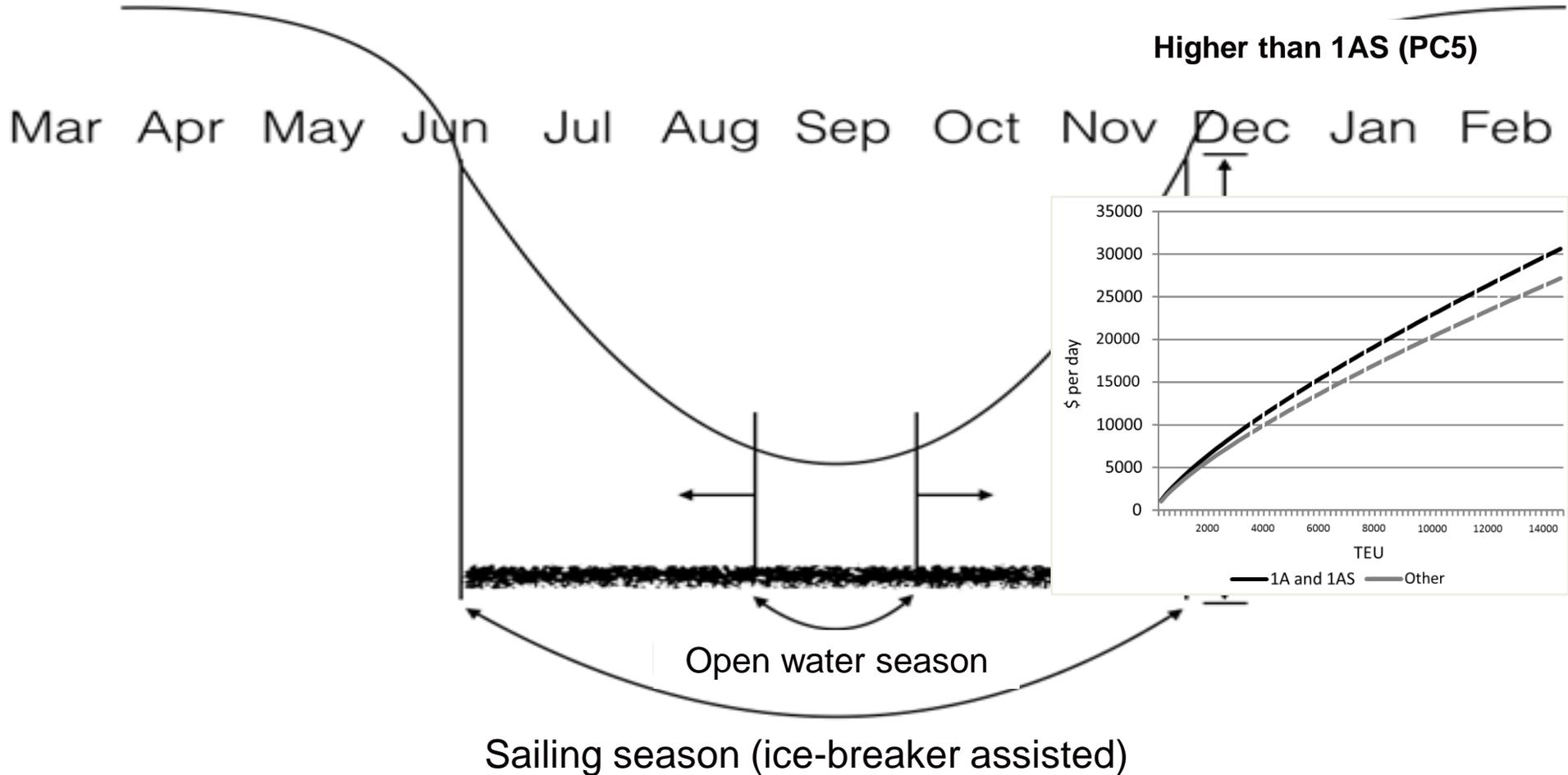


Source: NSIDC 2013

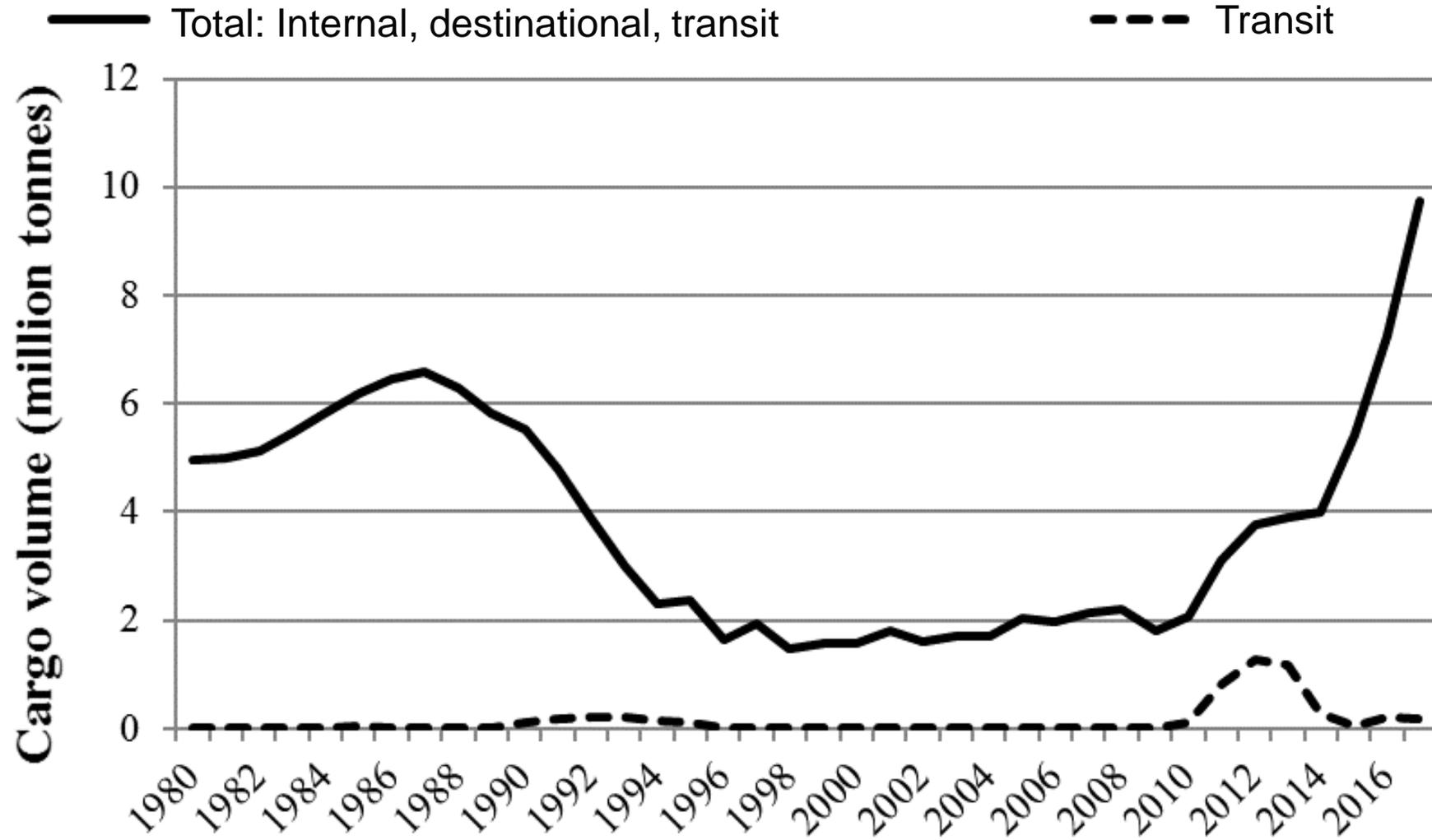
Climate and NSR

- Traffic on the NSR mainly seasonal
- Sailing season of the NSR June-November
 - Icebreaker assisted sailing season around 150 days
 - Open water (currently around 1-1,5 months) season expected to become longer
 - In 2050 Arctic Sea expected to be ice free during summer?
- Ice cover expected to remain during the winter season
 - Ice thickness around 1.5 m during December-May
 - Ice strengthened (and more expensive) vessels also during open water
 - Ice breaking capacity a critical bottleneck (even with Arktika and Lider –classes)

Illustration of conditions in the Arctic route



NSR TRAFFIC FLOW BY TYPE 1980-2017



Environmental considerations?

- From the perspective of emissions NSR is a double-edged sword
 - Shorter distance has potential for emissions reduction
 - Black carbon increases the effects of climate change and melting of ice
- The vulnerability of the Arctic Ecosystem
 - Possible HFO spills would do irreparable damage
 - Practically no possibility for cleanup and recovery in case of an accident



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Questions?

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