



AWAIT

Arctic Waters at stake from Alien Invasive species Threats

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7th March 2023



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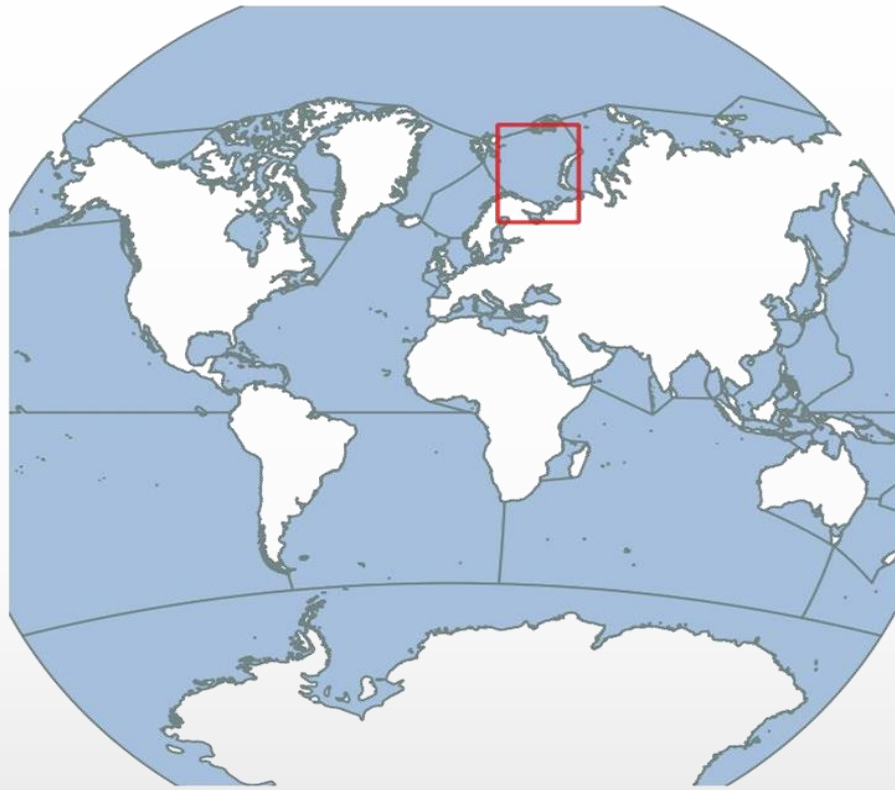
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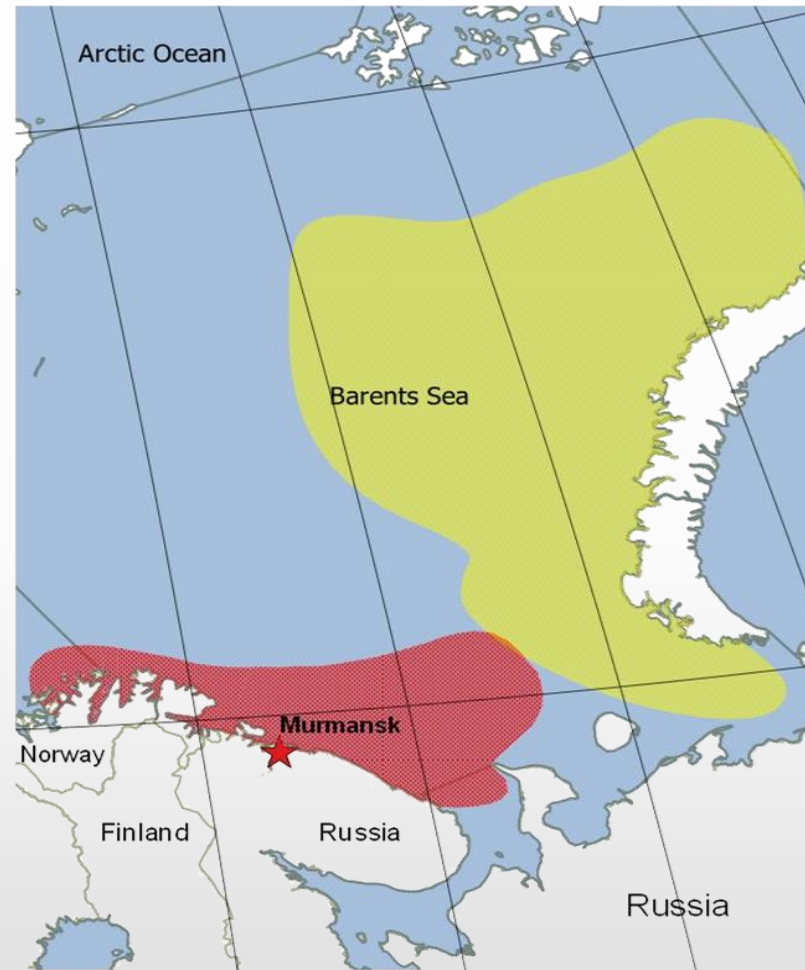
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Crab invasions as simultaneous nuisances and profitable invasions



- Yellow box: Snow Crab distribution
- Red box: Red King Crab distribution
- Red star: RKC intro point



Chionoecetes opilio
Snow Crab (SC)



Paralithodes camtschaticus
Red King Crab (RKC)

Kourantidou, M., et al., (2022). Invasive alien species as simultaneous benefits and burdens: trends, stakeholder perceptions and management. *Biological Invasions*, 24(7), 1905-1926.

Kaiser, B. A. and **Kourantidou, M.** (2021). Invasive alien species in changing marine arctic economies and ecosystems. *CAB Reviews*. 16(022), 1-12.

Research questions answered & to be answered (I)

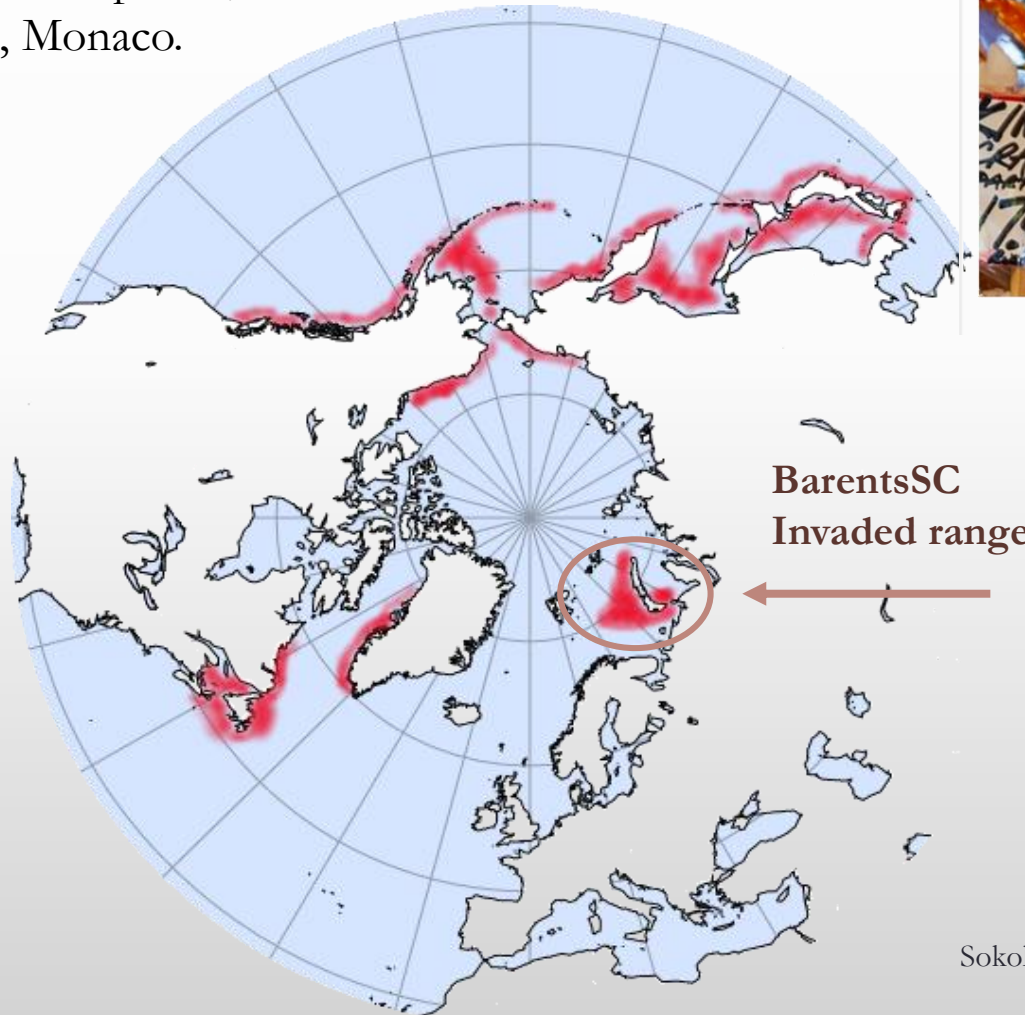
- **Kourantidou, M., Kaiser, B. A., & Fernandez, L. M. (2015).** Towards Arctic Resource Governance of Marine Invasive Species. *Arctic Yearbook*, 175, p. 175-194.
- **Kourantidou, M., & Kaiser, B. A. (2019).** Research Agendas for Profitable Invasive Species. *Journal of Environmental Economics and Policy*, 8(2), 209-230.
- **Kourantidou, M., & Kaiser, B. A. (2021).** Allocation of research resources for commercially valuable invasions: Norway's red king crab fishery. *Fisheries Research*, 237, 105871.
- Skonhøft, A. and **Kourantidou, M. (2021).** Managing a natural asset that is both a value and a pest. Cooperation vs. competition: The Barents Sea red king crab. *Marine Resource Economics*, 36, 229-254.
- **Kourantidou, M. and Kaiser, B. A. (2019).** Sustainable seafood certifications are inadequate to challenges of ecosystem change. *ICES Journal of Marine Science*, 76(4), 794-802.

Research questions answered & to be answered (II)

Kaiser, B. A., **Kourantidou**, M. (2018). Invasive Crab Species in the Barents Sea: Stakeholder Perceptions, Incentives, and Path Dependencies. *CIESM Report No. 50. Marine Species Interfering with Human Activities - Scientific Vs. Stakeholder Perceptions*, N° 50 in *CIESM Workshop Monographs* [F. **Briand**, Ed.], Monaco.

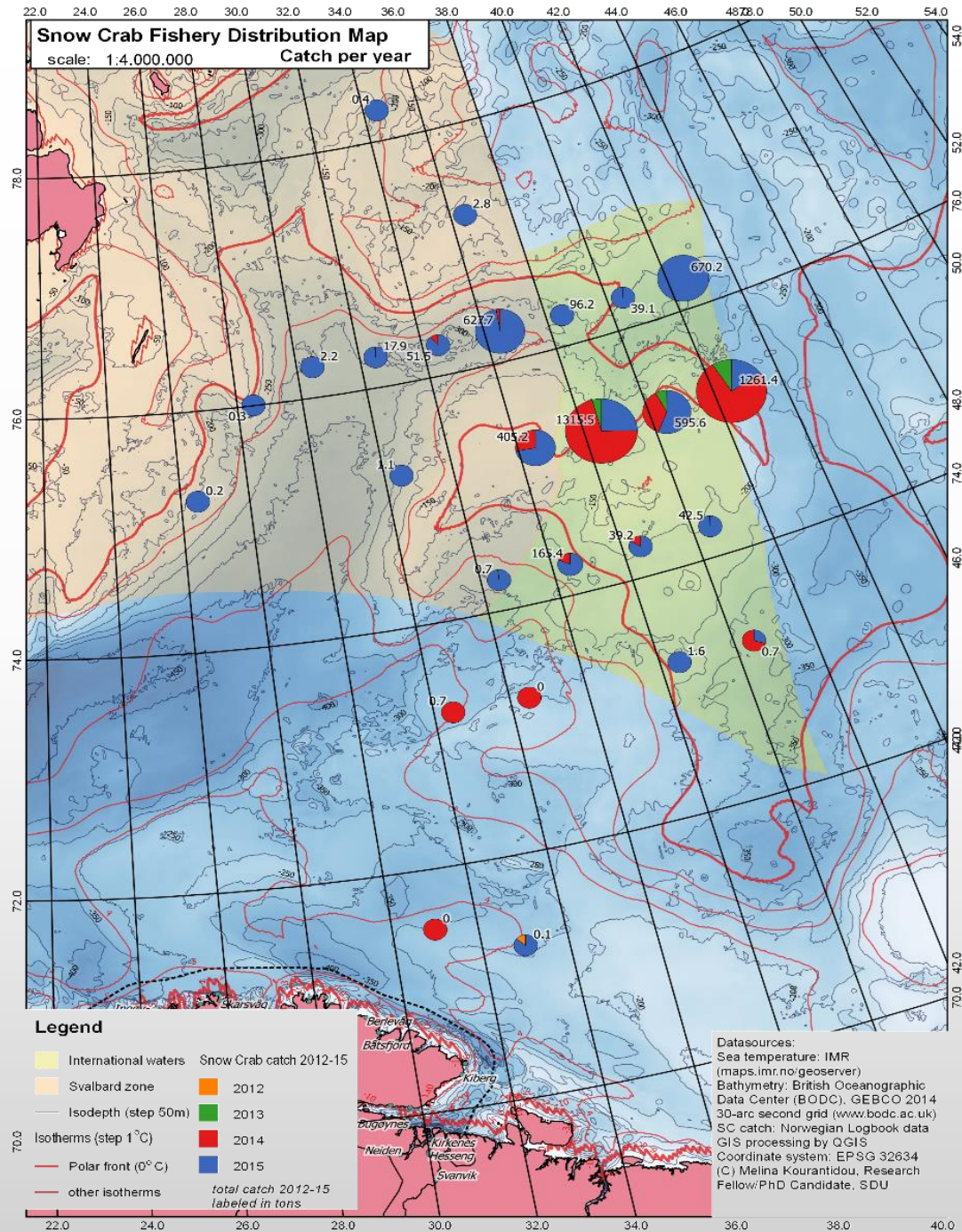
Kaiser, B. A., **Kourantidou**, M., Ahsan, D., Bakanev, S., Burmeister, A., Eckert, G., et al. (2021). Global ecological and economic connections in Arctic and sub-Arctic crab markets. *Marine Policy*, 127, 104442.

Kaiser, B.A., **Kourantidou**, M., Fernandez L.M. (2018). A Case for the Commons: The Snow Crab in the Barents. *Journal of Environmental Management*, 210, 338-348.



Global Ecological and Economic Connections in Arctic and Sub-Arctic Crab Fisheries





From open-access to private property

- ✓ Open-access (2012 - 2015): Invasion frontier
- ✓ Closure: Invasion spread & economic turmoil (RU: Sept. 2016; NO: Jan. 2016/2017)



Fisheries economics literature

Dogma: Closing the commons enhances profits with private, decentralized or common property management regimes

Concerns: Shifts in equality & distribution of benefits rather than overall benefits

Details of ecological processes matter in determining net benefits

- ✓ Ecological, Economic, Legal, Climatic framework

Thank you very much
for your attention.

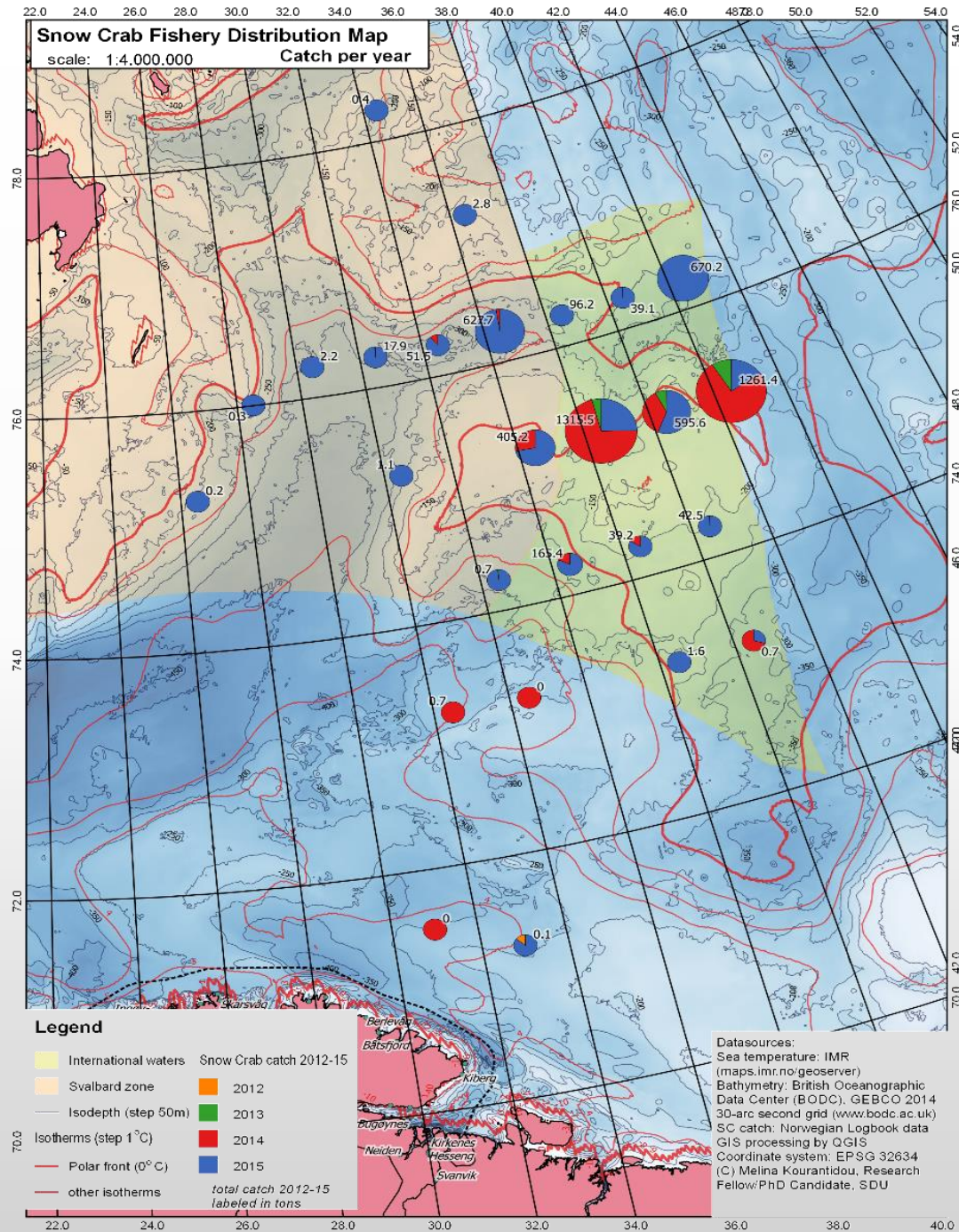
Workshop ?!

Climate shifts; Arctic fish stocks distributions; policy & management; invasive species; resilience; adaptation



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• Impacts

- Competition with bottom feeding fish & benthic species
- Overlap with Northern shrimp fishery

• Spread & Potential

- 50-75,000 tons, 2.5 bil. NOK
- NorthWest towards Svalbard FPZ

• Sedentary or Water Column species?

- Adheres to the continental shelf & not EEZs
- 85% of Loophole on Russian continental shelf
- No requirement for cooperative management
- 1920 Svalbard Treaty

• Other concerns

- Continental shelf resources: Oil & gas, minerals
- Worldwide markets: Increasing prices, declining quotas & stocks (Alaska & Canada)

