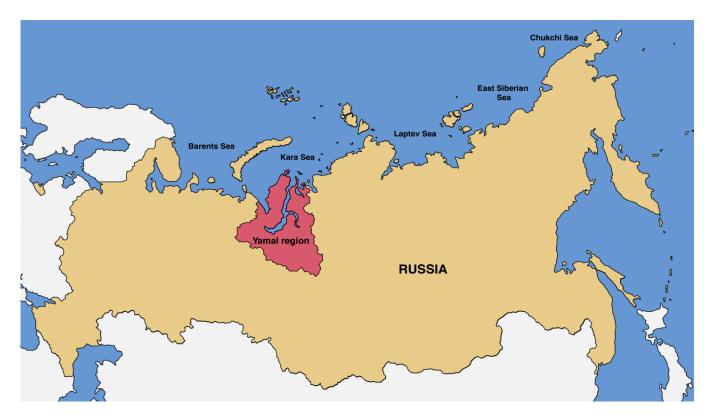




Main Goals

- Develop greater capacity among stakeholders to adapt to climate change and
- To proactively prepare for alternative and uncertain futures of the Yamal region



Source: IASS/Olga Lukianova, adapted from: https://en.wikipedia.org



Key features

- Strategic Foresight method
- Three workshops
- Participants: Indigenous peoples and environmental NGOs, local communities, Yamal business, media, scientists etc.)
- Three complex scenarios and srategic options



Photo: Julia Baronina, IMEMO



The Yamal region in 2040: Gas Boom

- In the early 2020s, several large-scale climatic disasters shook the world and motivated the international community to increase efforts in climate change mitigation.
- Demand for LNG in general and Yamal LNG in particular is steadily on the rise until 2040. LNG is promoted as a transition fuel and is widely used for shipping.
- In a gradual process starting in 2030, a consensus on Crimes

Impact of climate change

- By 2040, the effects of climate change in Yamal have not been as severe as many expected. However, the mean temperature still has increased by 3°C.
- · Precipitation has increased slightly.
- Coastal erosion is at a steady 1-2 meters per year.
- · Yamal is still subjected to extreme weather events and

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Yamal 2040: Scenario "Reinventing itself"

Part of the Blue-Action Research Project



Valeeva V., Gabriel J., Stephen K., and Nikitina E.





The Yamal region in 2040: Reinventing itself Impact of climate change

- Breakthroughs in energy storage technologies changed the global energy market. The demand for Yamai gas sharply declined.
- Due to shrinking job opportunities, Yamal's population dropped. Only about 200.000 people are left in the region.
- The impacts of man-made climate change have taken their toll and Yamal is doubly affected.
- By 2040, the mean temperature in Yamai is reaching a level of 4°C warmer in comparison to pre-industrial times. In summer, temperatures are frequently higher than 30°C.
- This rise in mean temperature leads to an increase in precipitation. But the distribution is uneven throughout the year: most of the region gets an increased amount of precipitation in winter and autumn but sees less rain during

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Yamal 2040: Scenario "Snow Oueen"

Part of the Blue-Action Research Project

Foresight Intelligence



Valeeva V., Gabriel J., Stephen K., and Nikitina E.

The Yamal region in 2040: Snow Queen

- In 2040, the Yamal and European climate is much cooler than expected
- Prices for oil and gas are high due to a stalemate in the globenergy transition and higher global energy consumption rates.
- The continuing sanction regime imposed by Western states hipromoted industrial diversification and home-grow innovation in Russia (and Yamal).
- · Russia has enjoyed high growth rates originating from the

Impact of climate change

- Regional climate impainable
 have been rath
 unexpected
- Starting in 2018, a series of extremely cold winters in particular in Europe put demand for Yamai gas and its





Thank you!



The Blue-Action project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 727852



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