



Bills & Acts - India's Polar Endeavours

For Prelims: Arctic Council, Climate Change, Arctic Region, India's Arctic Policy.

For Mains: India's Arctic Policy. Significance of Arctic for India, Threat to Arctic Region.

India has played an increasingly prominent role on the world stage and this has also been evident in the polar regions as well. In this contrast, India has unveiled [India's Arctic Policy](#), titled '**India and the Arctic: building a partnership for sustainable development**'.

- India holds **one of the 13 positions as the Observer in the [Arctic Council](#)**.
 - The Arctic Council is an **intergovernmental body** that promotes research and facilitates cooperation among Arctic countries on issues related to the environmental protection and sustainable development of the Arctic region.

What is India's Arctic Policy?

▪ **Background:**

- India's engagement with the Arctic began when it signed the Svalbard Treaty in 1920 in Paris between Norway, the US, Denmark, France, Italy, Japan, the Netherlands, Great Britain, and Ireland, and the British overseas Dominions and Sweden concerning Spitsbergen.
 - Spitsbergen is the largest island of the Svalbard archipelago, part of Norway, in the Arctic Ocean.
 - Spitsbergen is the only permanently inhabited part of Svalbard. More than 50% of the land is covered in ice year-round. Together with the glaciers, it is mountains and fjords that define the landscape.
- Ever since then, India has been closely monitoring all the developments in the Arctic region.
- India initiated its Arctic research program in 2007 with a focus on **[climate change](#)** in the region.
 - The objectives included studying teleconnections between Arctic climate and **[Indian monsoon](#)**, to characterise sea ice in the Arctic using satellite data, to estimate the effect on global warming.
- India also focuses on conducting research on the dynamics and mass budget of Arctic **[glaciers](#)** and **[sea-level changes](#)**, carrying out an assessment of the flora and fauna of the Arctic.

▪ **Six Central Pillars:**

- Science and research
- Environmental protection
- Economic and human development
- Transportation and connectivity
- Governance and international cooperation
- National capacity building

▪ **Objectives:**

- It **aims to strengthen national capabilities and competencies** in science and exploration, climate and environmental protection, maritime and economic cooperation with the Arctic region.
- It **seeks to strengthen institutional and human resource capacities** within the government and academic, research and business institutions through inter-ministerial coordination in pursuit of India's interests in the Arctic.
- It **seeks to enhance understanding of the impact of climate change** in the Arctic region on India's climate, economic and energy security.
- It **aims to promote better analysis**, prediction and coordinated policymaking on the implications of ice melting in the Arctic on India's economic, military and strategic interests related to global shipping routes, energy security and exploitation of mineral wealth.
- It **seeks to study the linkages between polar regions and the Himalayas** and deepen the cooperation between India and the countries of the Arctic region under various Arctic forums, drawing expertise from scientific and traditional knowledge.
- The policy also **seeks to increase India's participation in the Arctic Council** and improve its understanding of the complex governance structures in the Arctic, relevant international laws and geopolitics of the region.

What is the Arctic?

- The Arctic is a polar region **located at the northernmost part of Earth.**
- Land within the Arctic region has seasonally varying snow and ice cover.
- It **consists** of the Arctic Ocean, adjacent seas, and parts of Alaska (United States), Canada, Finland, Greenland (Denmark), Iceland, Norway, Russia, and Sweden.

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What is the Significance of the Arctic Region?

- **Economic Significance:**
 - **Mineral Resources and Hydrocarbons:** Arctic region has rich deposits of coal, gypsum and diamonds and also substantial reserves of zinc, lead, placer gold and quartz. [Greenland](#) alone possesses about a quarter of the world's rare earth reserves.
- **Geographical Significance:**
 - The Arctic helps circulate the world's [ocean currents](#), moving cold and warm water around the globe.
 - Also, Arctic sea ice acts as a huge white reflector at the top of the planet, bouncing some of the sun's rays back into space, helping keep the Earth at an even temperature.
- **Geopolitical Significance:**
 - **Countering China From Arctic:** The melting Arctic ice is also raising the geopolitical temperatures to levels not seen since the Cold War. China referred to trans-Arctic shipping routes as the Polar Silk Road, identifying it as a third transportation corridor for the [Belt and Road Initiative \(BRI\)](#) and is the only country apart from Russia, to be constructing nuclear ice-breakers.
 - As a result, it is crucial to counter China's soft power manoeuvres in the Arctic, in line India is also taking a keen interest in the Arctic states through its Arctic policy.

What are the Threats to Arctic Region?

- **Climate Change:**
 - The release of greenhouse gasses from the burning of fossil fuels and other sources is causing temperatures in the Arctic to **warm at twice the rate of the rest of the world**, resulting in lower levels of sea ice, [melting permafrost](#) and rising sea levels all over the world.
 - The decrease in volume and extent of Arctic sea ice has serious implications for marine mammals that depend on the ice for their survival, such as ringed seals and [polar bears](#).
- **Drilling for Oil and Gas:**
 - Much of the world's untapped [oil reserves](#) lie offshore, beneath the Arctic's biologically productive waters. Exploring and developing these resources in the remote and unforgiving Arctic comes with extreme risks.
 - [Oil spills](#) can kill birds, fish and marine mammals, as well as the smaller organisms that provide food for these larger species. There is no proven technology that **allows for the complete containment of oil spilled in the marine environment**.
- **Shipping Traffic:**
 - Climate change has brought on longer open water seasons, which coupled with the growing pressures of [globalisation](#), means more of the Arctic's waterways are opening for travel and commercial transportation.
 - This issue entirely describes a greater risk of wrecks, spills, noise, pollution, etc. Still, much of the Arctic Ocean has not been adequately surveyed and there is a **lot of work to be done to establish new routing and regulations**.
- **Rising Sea Level Concern:** Melting Arctic ice adds to rising sea levels, which in turn increases [coastal erosion](#) and elevates storm surges as warming air and ocean temperatures create more frequent and intense coastal storms like cyclones.
 - It can significantly impact India which has 7,516.6 km of coastline and important port cities.
 - According to the [World Meteorological Organisation's](#) report, '[State of Global Climate in 2021](#)', sea level along the Indian coast is rising faster than the global average rate.

What are the Conflicts over Arctic?

- Russia, Canada, Norway and Denmark have put in **overlapping claims for extended continental shelves**, and the right to sea-bed resources.
- Russia is the dominant power, with the longest Arctic coastline, half the Arctic population, and a full-fledged strategic policy.
 - Claiming that [the Northern Sea Route \(NSR\)](#) falls within its territorial waters, Russia anticipates huge dividends from commercial traffic **including through the use of its ports, pilots and ice-breakers**.

- Russia has also activated its northern military bases, refurbished its nuclear-armed submarine fleet and demonstrated its capabilities, **including through an exercise with China in the eastern Arctic.**
- China, playing for economic advantage, has moved in fast, projecting the Polar Silk Road as an extension of the BRI, and has invested heavily in ports, energy, undersea infrastructure and mining projects.

What can be the Way Forward?

- **Towards Global Ocean Treaty:** It is important to place **global ocean governance** under scrutiny and make progress towards a **collaborative global ocean treaty** with **special attention to polar regions** and associated sea level rise challenges.
- **Safe and Sustainable Exploration:** There is a need to **promote safe and sustainable resource exploration** and development in the arctic region, with **efficient multilateral actions** taking into account cumulative environmental impacts.

Conclusion

- India's Arctic Policy is timely and is likely to provide a direction to India's policy-makers on contours of India's engagement with the region.
- It is the first step towards developing a whole-of-government approach on India's engagement with the region.
- The Policy is also likely to raise awareness about the Arctic within India and vice-versa through conduct of programmes, seminars and events in India and in the Arctic.

UPSC Civil Services Examination, Previous Year Question (PYQ)

Prelims

Q. Consider the following countries: **(2014)**

1. Denmark
2. Japan
3. Russian Federation
4. United Kingdom
5. United States of America

Which of the above are the members of the 'Arctic Council'?

- (a) 1, 2 and 3
- (b) 2, 3 and 4
- (c) 1, 4 and 5
- (d) 1, 3 and 5

Ans: (d)

Mains

Q. Why is India taking keen in resources of Arctic region? **(2018)**

Q. What are the economic significances of discovery of oil in Arctic Sea and its possible environmental consequences? **(2015)**

