# TÜRKİYE'S ARCTIC STRATEGY: FROM SCIENCE DIPLOMACY TO STRATEGIC POSITIONING

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MINTEL WORLD

The rapid retreat of Arctic sea ice because of climate change has transformed the region from a space defined primarily by environmental change into an area of growing geopolitical significance. The prospect of new maritime routes, easier access to energy and mineral resources, and intensifying competition among major powers have made the Arctic an increasingly important arena in global politics.

Türkiye is among the countries closely monitoring these developments. Since the mid-2010s, its polar policy has evolved beyond a sole focus on Antarctica and has gradually expanded into a broader framework encompassing the Arctic. Conducted under the auspices of the Presidency, coordinated by the Ministry of Industry and Technology, and implemented through TÜBİTAK MAM Polar Research Institute, the National Arctic Scientific Research Expeditions have become Türkiye's most visible activity in the region.

These scientific efforts extend beyond research and data collection. Türkiye has strengthened its legal position in the Arctic by becoming a party to the Svalbard Treaty while simultaneously pursuing observer status in the Arctic Council. At the same time, the country is preparing for the economic opportunities that may emerge from the Northern Sea Route, energy resources, and critical minerals. Consequently, Türkiye's Arctic approach rests on three main pillars: scientific capacity, diplomatic visibility, and economic preparedness.

The Sixth National Arctic Scientific Research Expedition (TASE-VI), conducted in July 2026, demonstrated a stronger level of state commitment to this policy. The visit of Minister of Industry and Technology Mehmet Fatih Kacır to Longyearbyen in Svalbard and to the Turkish scientific team conducting research in the Arctic Ocean was particularly noteworthy, as he became the first cabinet minister to participate in a National Arctic Scientific Research Expedition. His on-site examination of oceanographic and atmospheric measurements underscored that polar research is no longer viewed merely as an academic activity but as an element of long-term state policy.

## Scientific Activities on the Ground

Türkiye's visibility in the Arctic is largely shaped by the National Arctic Scientific Research Expeditions. These missions encompass interdisciplinary research in oceanography, marine biology, atmospheric dynamics, meteorology, geodesy, satellite systems, microplastic pollution, and marine ecosystems. The expanding scope of the expeditions each year demonstrates Türkiye's growing ability to maintain a sustained scientific presence at high latitudes.

The fourth expedition (TASE-IV), conducted in 2024, departed from Tromsø and advanced through the Barents Sea to the sea-ice boundary at 71° North latitude. During the expedition, sampling was carried out at 24 stations, and 16 scientific projects were completed. The mission provided valuable experience in integrating multiple scientific disciplines within a single field program.

The fifth expedition (TASE-V) in 2025 significantly expanded the operational area. Along a route exceeding 3,000 nautical miles, researchers conducted 19 projects at 70 stations. Comprehensive measurements were undertaken on seawater temperature and salinity, atmospheric processes, GNSS data, sediment structures, and microplastic pollution. The participation of researchers from Argentina, Bulgaria, and Ecuador, alongside high school students, strengthened both the international cooperation and science education dimensions of the program.

TASE-VI represented a continuation of previous efforts while reaching higher latitudes and expanding sampling activities. Coordinated by Prof. Dr. Burcu Özsoy and led by Captain Doğaç Baybars Işıler, the expedition implemented 12 interdisciplinary projects. Research activities extended across Svalbard and the Barents Sea, reaching as far as 82° North latitude, with measurements, sampling, and experiments conducted at more than 90 stations.

The collected CTD data provide insights into the temperature, conductivity, pressure, and stratification characteristics of Arctic water masses. Water and sediment samples offer information on chemical composition, heavy metal concentrations, and past climatic conditions, while studies on phytoplankton, zooplankton, and microbial communities help reveal ecosystem changes. Microplastic analyses generate critical data on the extent to which human-induced pollution has reached high-latitude environments.

Atmospheric and geodetic studies constitute another important component of the expeditions. GNSS systems are used to monitor ionospheric activity and positional deviations, while meteorological variables such as pressure, humidity, wind, and surface temperature are continuously recorded. Comparisons between sea-ice observations and satellite data help validate field measurements.

Collaborative analyses conducted with Italy's Dirigibile Arctic Station in Ny-Ålesund demonstrate Türkiye's growing emphasis on bilateral scientific cooperation. Such partnerships enhance the quality of scientific outputs while increasing Türkiye's visibility within international research networks.

| Expedition | Date | Route / Latitude Limit | Stations / Projects |
|---|---|---|---|
| **TASE-IV** | 26 June – 25 July 2024 | Tromsø – Longyear-byen (71°N Sea-Ice Boundary) | 24 Stations / 16 Projects |
| **TASE-V** | 8 – 31 July 2025 | Arctic Ocean (3,000+ Nautical Miles) | 70 Stations / 19 Projects |
| **TASE-VI** | 5 – 24 July 2026 | Tromsø – Longyear-byen (82°N Latitude Target) | Multiple Sampling Operations / 12 Projects |
| **TASE-VII (Planned)** | June – Sep-tember 2027 | Barents Sea Region (20–40 Day Voyage) | Projects Selected Through the Official Call for Proposals |

## Building Permanent Research Capacity

Transforming a seasonal scientific presence into a permanent one represents the next stage of Türkiye's Arctic strategy. Longyearbyen and Ny-Ålesund are among the world's leading polar research hubs, hosting facilities operated by numerous countries. Türkiye aims to establish its own research station in one of these locations by leveraging the opportunities provided by the Svalbard Treaty.

A permanent Turkish research station would eliminate dependence on short-term summer expeditions alone. Continuous year-round data collection would significantly improve climate, atmospheric, sea-ice, and ecosystem research by enabling more systematic and comparable datasets. Such a facility would also facilitate sustained participation by Turkish researchers in international scientific projects.

Another critical objective is the acquisition or development of a national ice-class or icebreaking research vessel. Current expeditions rely on chartered foreign-flagged vessels, increasing costs and creating operational dependence. A fully equipped Turkish polar research vessel would enable more independent, sustainable, and long-term Arctic and Antarctic missions.

## Legal and Diplomatic Foundations

As important as scientific visibility is, Türkiye's Arctic presence must also rest on solid legal and diplomatic foundations. The country's accession to the Svalbard Treaty represents the most significant step in this regard.

Signed in 1920, the treaty recognizes Norwegian sovereignty over the archipelago while granting citizens and companies of signatory states equal treatment in specific areas of activity. Türkiye's accession process began with discussions in the Foreign Affairs Commission of the Grand National Assembly in 2022, progressed through Law No. 7468 published on 17 October 2023, and was finalized by a Presidential Decree on 7 March 2025.

Membership in the treaty provides Turkish citizens, researchers, and companies with a legal framework for scientific research, education, residence, maritime activities, fisheries, trade, and certain economic activities. However, these rights remain subject to Norwegian legislation, environmental regulations, local permits, and international legal obligations. As a result, translating these opportunities into concrete projects requires extensive legal, technical, and economic preparation.

Another major diplomatic objective is obtaining observer status in the Arctic Council. Bringing together the eight Arctic states and representatives of Indigenous peoples, the Council serves as the principal platform for regional coop





eration. Although Türkiye's observer application submitted in 2015 remains pending, regular scientific expeditions, international publications, and accession to the Svalbard Treaty have strengthened the country's credentials.

While observer status would not grant decision-making authority, it would provide Türkiye with greater access to working groups, scientific initiatives, and regional governance discussions. For this reason, supporting scientific activities with diplomatic engagement and collaborative research projects remains crucial.

## Economic and Geostrategic Dimensions

Türkiye's interest in the Arctic extends beyond science and diplomacy. The retreat of sea ice has increased the accessibility of the Northern Sea Route, which has the potential to serve as an alternative maritime corridor between Asia and Europe.

Stretching along Russia's northern coastline between the Bering Strait and the Barents Sea, the route can reduce sailing distances and transit times during certain periods of the year. Security crises along the Red Sea and Bab el-Mandeb corridor have further heightened interest in alternative routes such as the Northern Sea Route.

For Türkiye, this development presents both opportunities and challenges. Increased use of Arctic shipping routes could divert some trade flows northward. At the same time, Türkiye's ports, rail and road networks, and projects such as the Middle Corridor and the Development Road Initiative may play a complementary role by connecting different trade routes.

Strengthening the Turkish merchant fleet with ice-class vessels and training seafarers in accordance with Polar Code standards will be important for future participation in Arctic shipping. Nevertheless, the route requires careful assessment due to harsh climatic conditions, high insurance and operating costs, seasonal limitations, and geopolitical uncertainties.

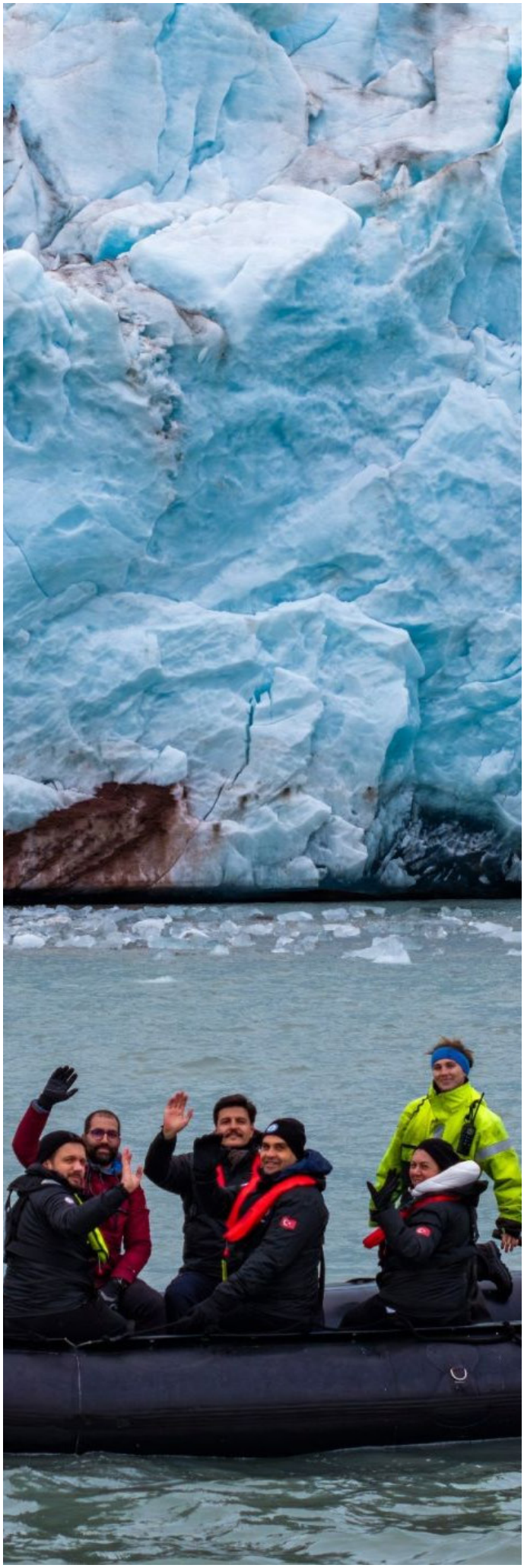
The Arctic's potential reserves of hydrocarbons, rare earth elements, and critical minerals also attract Türkiye's attention. Yet access to these resources depends on more than legal rights alone. High investment costs, environmental regulations, severe climatic conditions, infrastructure deficiencies, and licensing procedures remain major obstacles.

Consequently, a more realistic approach for Türkiye's private sector in the short to medium term may be to focus on maritime technologies, polar logistics, satellite systems, scientific equipment, environmental monitoring, and fisheries research rather than direct resource extraction.

## Strategic Outlook

Four priorities are likely to shape Türkiye's Arctic policy in the coming years. The first is the establishment of a permanent Turkish research station in Longyearbyen or Ny-Ålesund. The second is the development or acquisition of a national polar research vessel capable of supporting independent expeditions.

The third priority is strengthening Türkiye's Arctic Council observer application through scientific achievements and diplomatic engagement. The fourth involves preparing sectors such as maritime transport, logistics, energy, mining,



environmental technologies, and fisheries for future developments in the region.

According to planning by the TÜBİTAK MAM Polar Research Institute, the Seventh National Arctic Scientific Research Expedition (TASE-VII) is scheduled to take place in the Barents Sea between June and September 2027. The mission will be important for ensuring the continuity of existing datasets and implementing longer-term research projects.

Achieving these objectives will depend not only on the efforts of scientists but also on strong coordination among government institutions, universities, private-sector stakeholders, and diplomatic bodies. Developing a comprehensive and long-term national Arctic strategy would enable different institutions to work toward common goals within a coherent framework.

## Conclusion

Türkiye's Arctic policy began as a science-driven initiative but has gradually evolved into a broader strategy encompassing legal, diplomatic, economic, and technological dimensions. While the National Arctic Scientific Research Expeditions provide scientific legitimacy and operational visibility, accession to the Svalbard Treaty offers a legal foundation for establishing a lasting presence in the region.

The ministerial-level visit during TASE-VI clearly demonstrated that polar research has become part of state policy. However, becoming a permanent and influential actor in the Arctic will require moving beyond symbolic initiatives. A permanent research station, a national research vessel, sustainable funding mechanisms, a qualified workforce, and effective inter-institutional coordination remain essential requirements.

Rather than engaging directly in great-power competition, Türkiye is advancing through science diplomacy, international law, technological expertise, and economic preparedness. If pursued consistently, this approach could position Türkiye as an influential non-Arctic stakeholder—one that contributes to climate research, participates in international scientific cooperation, and plays a meaningful role in the future governance of trade routes and resource policies in the Arctic.

