THE ITALIAN PERSPECTIVE

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While not being an Arctic Country and having historically its main geopolitical, geo-strategic and geo-economic space in the wide Mediterranean basin, Italy has shown a significant set of interests in the Arctic area, together with a relevant presence on different domains.

Italian involvement in the Arctic dates to the end of the XIX Century and has been developing at different moments and levels throughout the XX Century, up to the new Millennium. The relationship between the Arctic and Italy is strongly grass-rooted in the past but has been developed also with a forward-looking attitude into the future.

The Italian membership in the Arctic Council finds its roots in both these factors and testifies the will of the Italian institutions, at political-institutional and scientific level, to play an important role in the international management of the nowadays and future challenges the North Pole and the Arctic region have and will have to cope with.

To categorize the main extent to which Italy relates to the Arctic, we could identify:

- the historical-cultural bond with the region thanks to the Italian explorers who took part in the discovery and scientific missions in the Arctic Circle and beyond;
- the political involvement of the country in the main regional organization, the Arctic Council, formalized in 2013;
- a scientific involvement in the environmental and natural dimensions of the climate change dynamics of the area;
- the increasing importance of the Arctic Ocean and of the surrounding territories for what concerns the extraction of energy resources, rare earth elements and critical raw materials;
- the monitoring on the feasibility of the "real" opening of Arctic communication sealines and trade routes;
- and, last but not least, the economic opportunities linked with the economic development of the Arctic region, where directly or indirectly, Italian economic operators are already being active and the Italian institutions responsible for directing and supporting the commercial relations and foreign investments of Italian companies are evaluating the value of this area in a more strategic way.

The "Italian Arctic Strategy" formulated in 2015, then updated in

2016[1], defined the different and Italian Arctic interests, highlighted in five main dimensions: political, environmental, human, scientific, and economic[2]. The latter one, together with the Energy and Security dimensions will be analyzed throughout this chapter.

The Arctic economic dimension

The Arctic region has been experiencing increasing attention from several countries and economic actors around the world that have expressed economic interests on its vast natural resources and potential opportunities. Due to climate change and the melting of ice masses, this area has become more accessible in recent years, opening new possibilities for different economic activities.

The Arctic region is characterized by the presence of numerous economic resources, which range from energy resources of fossil origin, such as oil and gas[3], to traditional activities based on agriculture (fishing and livestock), up to mineral resources linked to the most recent developments in the technological and industrial development experienced by a vast majority of countries around the world, such as Rare Earths and critical raw materials[4]. The latter have become of paramount relevance for the supply-chains of both the EU and the U.S. – still broadly dependent from Chinese exports – and are closely related to scientific research applied to the industrial sector and the development of green economies and renewable energy, key drivers of future economic development at world level and, specifically, in most of the Arctic territories[5].

The increased focus on the polar environmental and cultural elements and the rise in the average temperature have also stimulated

[1] "Verso una strategia italiana per l'Artico. Linee-guida nazionali", MAECI, 2015 (aggiornamento 2016). https://www.esteri.it/wp-content/uploads/2021/11/Verso-una-strategia-italiana-Artico-%E2%80%93-linee-guida-nazionali.pdf.

[2] For a summary of the main Italian politico-institutional involvements in the Arctic: C. Robustelli, "The Italian Presence in the Arctic", in "Arctic Connections: A Trust Building Arctic Cooperation on Energy, Security and Blue Economy", La Comunità Internazionale, Quaderno 18, Editoriale Scientifica Napoli, 2020.

[3] This sector is particularly relevant for Italian companies, like ENI, and will be in-depth analysed further on in this chapter.

[4] B. Watson, S. Masterman and E. Whitney, "Critical Minerals in the Arctic: Forging the Path Forward", Wilson Center, July 10, 2023. https://www.wilsoncenter.org/sites/default/files/media/uploads/documents/Critical%20Minerals%20in%20the%20Arctic%20-%20Forging%20the%20Path%20Forward.pdf.

[5] M. Q. Frederiksen, "If we want an energy transition, we must have more mining", Arctic Economic Council. Accessed 9 February 2024. https://arcticeconomiccouncil.com/news/if-we-want-an-energy-transition-we-must-have-more-mining/.

the growth of local and regional tourism[6], an element that should not be underestimated for local and international operators in this sector[7].

Estimating the economic dimensions in the Arctic involves aggregating the GDPs of all the Arctic regions, which can be complex due to differing methodologies in data gathering and elaboration, data availability, and economic structures among the various regions, also considering that some administrative regions in the Arctic countries are not totally geographically placed within the Arctic circle.

One of the most accurate studies on the regional economic dimension of the Arctic is "The Economy of the North – ECONOR"[8]. In its latest version, published in 2021 and referring to the year 2018, the authors indicated that the Arctic regions generated 0.7% of global GDP: 615 billion USD, under Purchasing Power Parity (PPP) conversion. With half of the Arctic landmass under its sovereignty, the Russian Federation holds nearly ¾ of the entire wealth produced in the Arctic area (73% in 2018). The second richest Arctic region is Alaska, which produces nearly 10% of the regional GDP, thus bringing the other 6 Arctic countries' territories to participate only for 18% of the total regional economy. For example, in 2020 Alaska produced 5 times the economic wealth of the Canadian Arctic regions (45 billion USD PPP at 2015 constant prices, compared to 8.7 billion USD of Yukon, Nunavut and Northwest Territories combined)[9]. One peculiar characteristic is that the relevance of the Arctic regions to the respective countries' GDP is not similar: while the Russian Arctic produces a significant proportion of the entire Russian GDP (more than 10%), for Norway its Arctic regions generate a smaller part of the

[6] An example of the significant role tourism has in the Arctic and sub-Arctic region is Iceland, where between 2016 and 2019 tourism generated more than 8% of GDP. "The share of tourism in GDP estimated at 6.1% in 2022", Statistics Iceland, 28 February, 2023. Accessed 12 February 2024. https://www.statice.is/publications/news-archive/national-accounts/the-share-of-tourism-in-gdp-2022-provisional-estimates/.

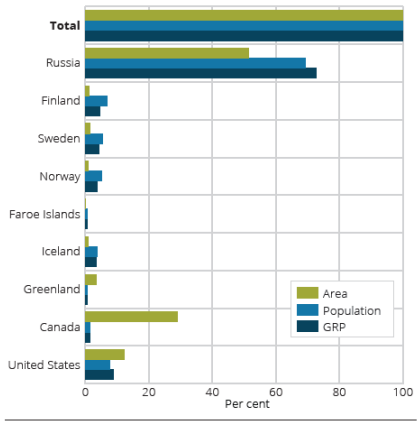
[7] The share of tourism in other national economies in the Arctic is smaller, but nevertheless it is of high importance for many local communities and regions where it represents a driver of economic growth in response to the decline in other traditional primary industries. G. T. Jóhannesson, J. Welling, D. K. Müller, L. Lundmark, R. O. Nilsson, S. de la Barre, B. Granås, T. Kvidal-Røvik, O. Rantala, K. Tervo-Kankare and P. Maher, "Uncertain Futures – From Overtourism to Re-starting Tourism", Nordic Council of Ministers, 2022. Accessed 12 February 2024. https://pub.norden.org/temanord2022-516/.

[8] S. Glomsrød, G. Duhaime and I. Aslaksen (eds.), "The Economy of the North, ECONOR 2020", Statistisk sentralbyrå, Statistics Norway, 2021, p. 44-45.

[9] OECD Stats, Regional Economy. https://stats.oecd.org/index.aspx?queryid=67054. Accessed February 10, 2024.

national wealth[10], also because the Oil&Gas revenues coming from the Arctic area production are not included in the economic statistics of the Arctic Norwegian regions. Furthermore, if we consider Canada and the United States, the non-Arctic economies are dominating, and this occurs also in relation to population dimensions.

Figure 3.2. Arctic surface area, population and GRP of Arctic states as share of the Arctic total. 2018. Per cent



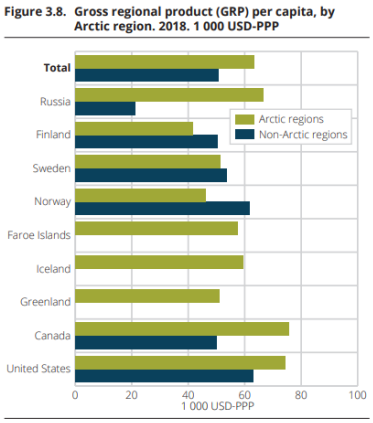
Source: ECONOR 2020[11]

The economic differences between the Arctic regions are strongly highlighted when measuring the per capita wealth: in Alaska, the GDP per capita (under PPP terms) in 2018 was 75,000 USD, while in Northern Finland was 42,000. Resource rich areas, like the Canadian Arctic territories, Alaska and Northern Russia have high regional GDP per capita levels: in Russia, per capita income in the Arctic regions is four times higher than in the non-Arctic territories. The Arctic region has traditionally played a key role in the Russian economy: 80% of Russian natural gas, 17% of oil, 90% of nickel and cobalt, 60% of copper and almost 100% of diamonds and rare earth metals are produced in the Arctic regions of Russia, with the

[10] This is true also in per capita terms. From this point of view, it is possible to compare the Norwegian situation with the Italian one, where the area is much more connected with the Mediterranean economy – basically, the southern regions – produces a smaller part of the Italian GDP, compared to the Northern regions.

[11] S. Glomsrød, G. Duhaime and I. Aslaksen (eds.), "The Economy of the North, ECONOR 2020", cit. p. 41. GRP stands for "Gross Regional Product".

percentage of Russian Arctic's exports on the entire Russian exports estimated to be around 20%[12].



Source: ECONOR 2020[13]

There is no doubt that mining and Oil&Gas activities are those that contribute the most to the wealth generation of the Arctic area. As mentioned, regions that are still heavily dominated by more traditional subsistence activities, such as hunting and fishing, in Greenland, in Northern Canada or in Northern Norway, have much lower gross products. Reindeer herding in Russia and Scandinavia is of substantial importance to the livelihoods and lifestyles of indigenous populations like the Saami and the Nenets, but does not contribute significantly to the GDP of these regions. These aspects must be adequately addressed to balance the need for economic growth with the sustainability aspects of socio-economic developments[14].

Italian economic interests in the Arctic

Looking from the Italian perspective, there are a series of economic sectors and activities that fall within the interests of Italian

[12] A. B. Likhacheva, I.A Stepanov, "Russian Arctic Policy: Opportunities for the Development of the Siberian and Far Eastern Regions." Regional Research of Russia. 11 (Suppl 1), 2021, p. 13-22.

[13] S. Glomsrød, G. Duhaime and I. Aslaksen (eds.), "The Economy of the North, ECONOR 2020", cit. p. 44.

[14] A. Novoselov, I. Potravny, I. Novoselova, V. Gassiy, "Sustainable Development of the Arctic Indigenous Communities: The Approach to Projects Optimization of Mining Company", Sustainability, 12(19):7963, 2020 . For further information, see the Arctic Council's "Sustainable Development Working Group" web portal: https://sdwg.org/.

companies, not only large corporations, but also Small and Medium Enterprises (SMEs), operating independently or through subcontracting activities. The economic relevance of the Arctic region for the Italian Country system could not be measured considering the economic dimensions of this region, which will never compete with the Mediterranean centrality in Rome's geopolitical and geo-economic projections. Excluding Italy, the Mediterranean basin involves 20 Countries, with quite all of them consistently dependent on the Mediterranean "Blue economy" for their growth and development. The combined GDP of these countries is nearly 10% of the world GDP[15]; something like more than 20 times the Arctic one. Not to mention the demographic dimensions. It would be without sense to compare the Arctic area with the Mediterranean region in terms of trade and investment relevance for Italy. This is particularly true if we look at the maritime dimension of the Italian economy, where the Mediterranean plays a pivotal role for different economic sectors[16].

Nevertheless, it is precisely the maritime dimension of the Italian economy that leads us to reflect on the importance of a greater and more strategic presence of the Italian country system in the Arctic region, certainly not to look for an alternative but to increase Italy's relevance in the international "Blue economy". From this point of view, one of the most interesting aspects of the Arctic region current and future developments is strongly related with the evolution of maritime routes and the related impact on different economic activities and sectors. The melting of ice has opened new shipping routes that could provide a shorter and more economically viable path for shipping goods at global level and mainly between Europe and Asia. The physical opening of sea lines and their economic affordability is a key matter for the Italian system and for the port and maritime infrastructures of Italy, considering the centrality of mercantile maritime power in its history and present. Arctic maritime routes are still limited in both accessibility throughout the year and in terms of economic costs for transit, docking in port and repair and

[15] P. Manoli, "Economic Linkages across the Mediterranean: Trends on trade, investments and energy", Hellenic Foundation for European & Foreign Policy (ELIAMEP), Policy paper 52, January 27, 2021.

[16] "XI Rapporto Economia del Mare 2023", a cura di Informare – OsserMare, Camera di Commercio di Frosinone Latina, 2023. https://www.informare.camcom.it/wp-content/uploads/2023/05/XI-rapporto-economia-del-mare.

maintenance services[17]. Considering one of the two trans-Arctic routes that melting ice could potentially open up in the future, the Northern Sea Route (NSR)[18], it appears evident that the maritime traffic is characterized by low volumes, compared to other maritime regions in the world, especially the Mediterranean one. The latest figures available for the NSR, indicate that the total traffic volume on the in 2022 was 34 million tons., with nearly 3,000 voyages made by 314 vessels[19]. Comparatively, every year 2 billion tons of goods cross the Mediterranean[20], with nearly 60 million containers moved during 2021[21], coming from and heading to different areas of the world. In 2022, 89% of the vessels that crossed the NSR waved a Russian registration flag, while 72% of non-Russian-flagged ships were LNG tankers, showing that most of the maritime trade is related with hydrocarbons, basically coming from Russian territory.

Most of the studies and hypotheses provided by shipowners, shipping companies, institutions, think tanks and academics have substantially ruled out the possibility of even partially replacing the classic international merchant routes - both in terms of container ships, bulk carriers and tankers - with the Arctic ones. In fact, most cargo ship activity currently taking place in the Arctic is regional, not trans-Arctic or international. However, there is a growing development of regional routes and countries such as Russia are investing significantly in shipping and maritime and land infrastructure, to take advantage of the increasing accessibility of some areas within territorial waters. Is remarkable that 2022 was the first year since 2011 were maritime traffic in that NSR area decreased, after more than 10 years of progressive growth: between 2011 and 2021 the total cargo volume registered in the NSR increased nearly

[17] "Arctic: risks and opportunities for Italian ports from climate change", Nova News, April 6, 2022. https://www.agenzianova.com/en/news/Arctic-climate-change-risks-and-opportunities-for-Italian-ports/.

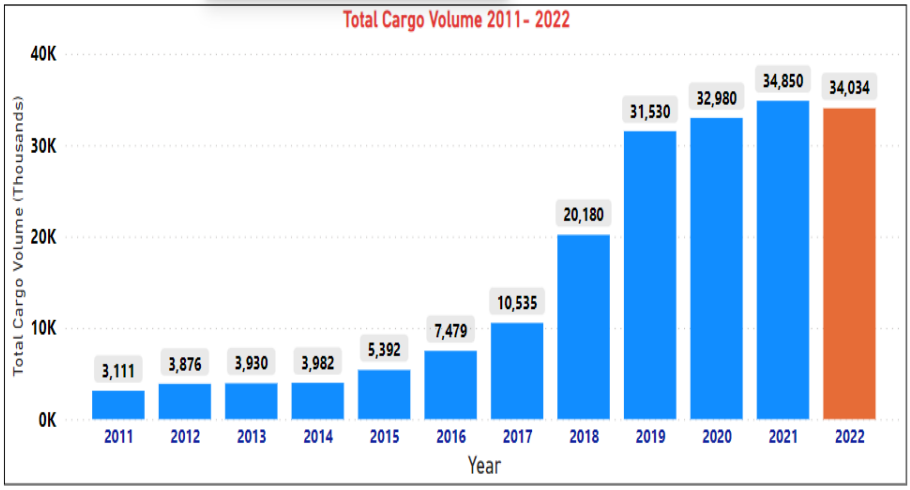
[18] The NSR shipping route is about 5,600 kilometers long and runs from the entrances to the Novaya Zemlya straits in the west, along the Russian Arctic coast above Siberia, through the Kara Sea, Laptev Sea, East Siberian Sea, and Chukchi Sea, to Cape Dezhnyov on the Bering Strait. The route lies within Russia's exclusive economic zone (EEZ) and is included in what has been called the Northeast Passage.

[19] "Shipping traffic at the NSR in 2022", Center for High North Logistics Information Office, 9 June 2023. https://arctic-lio.com/nsr-2022-short-report/.

[20] The length of the sea route from Gibraltar on the West to Suez, on the East, is nearly 4,320 km.

[21] D. Ferrara Panaro, "Porti, shipping e logistica negli scenari marittimi: il Mediterraneo tra pandemia e guerra", Aspenia Online, Feb 20, 2023. https://aspeniaonline.it/porti-shipping-e-logistica-negli-scenari-marittimi-il-mediterraneo-tra-pandemia-e-guerra/#_ftnref1.

900%[22], demonstrating that until the outburst of the Ukraine crisis, that route was becoming more and more relevant.



Source: Center for High North Logistics Information Office[23]

In addition, we should not underestimate the current critical situations that the world's main trade routes, such as the one passing through the Suez Canal, and the one centered in the Panama Canal, are experiencing. The elements who increase worries about the future of these maritime and commercial routes are:

- political-military events, such as the recent crises between Israel and Hamas and the conflict in Yemen, with the military attacks by Houthi militias against Western ships crossing the Gulf of Aden to and from the Red Sea[24];
- issues of a structural nature, linked to the growing traffic that the Suez Canal has to sustain that they bring and that could likely lead in the future to systematic slowdowns in transit times, with related increases in economic costs[25];
- climate change related impacts, like the prolonged drought that Panama is experiencing that brought to the cut of nearly 40% of the daily permits of passage issued by the Canal Authority[26].

Those aspects could provide a potential boost towards an

[22] *Ibidem.*
[23] *Ibidem.*
[24] For an updated monitoring on the Suez Canal transits, see the IMF's "PortWatch" platform: https://portwatch.imf.org/.
[25] "Suez Canal traffic uninterrupted after ship suffers fault - canal authority", Reuters, 7 December, 2023. Accessed 12 February 2024. https://www.reuters.com/world/africa/suez-canal-traffic-uninterrupted-after-ship-suffers-fault-canal-authority-2023-12-06/.
[26] M. Rojanasakul, "Panama Canal Drought Slows Cargo Traffic", The New York Times, Jan. 26, 2024. https://www.nytimes.com/interactive/2024/01/26/climate/panama-canal-drought-shipping.html.

increased focus and more investments on the Arctic region and its maritime routes. With the ongoing war in Ukraine and with Russia under western countries' sanctions and diplomatic isolation, this scenario seems impossible to achieve, but strategic approaches should always look beyond the present situation. From this point of view the United States are closely monitoring the evolution in the area to be prepared on the future potential developments influencing maritime trade[27]. The Italian interests in the Arctic maritime routes' evolutions should not only be focused on their potential for a partial future substitution of the Mediterranean ones, but also on considering the economic opportunities within the entire spectrum of economic activities, from ship building to infrastructures construction and maintenance, to technological services, where Italian companies and economic operators could play an important role, has already showed in recent years[28].

Economic and trade relations between Italy and the Arctic region.

According to data from the Italian Trade Agency (ITA)[29], between 2021 and 2022, Italy's main trading partners were: Germany (€311.6 billion in trade), France (€204 billion), the United States (€155 billion), China (€129 billion), Spain (€115 billion), the Netherlands (€99 billion), Switzerland (€88 billion), Belgium (€88 billion), the United Kingdom (€67 billion) and Poland (€63 billion). During the first 10 months of 2023, this group of countries remained unchanged, albeit with significant changes in position[30]. Apart from the United States, none of the Arctic countries are in the top 10 and only Sweden and Canada are in the top 20 (approximately around 20th place in the period January 2021-October 2023).

The same can be said for the main countries that make foreign direct investments (FDIs) in Italy (Source: Italian Trade Agency[31]).

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[27] "Changes in the Arctic: Background and Issues for Congress", Congressional Research Service, R41153, January 18, 2024.

[28] For an overview on the Italian economic presence in the Arctic and the potential opportunities for the Italian companies in the future: "Energia e industria. L'Italia oltre il Circolo Polare", Italia chiama Artico 2023, Osservatorio Artico, November 30, 2023. https://italiachiamaartico.osservatorioartico.it/.

[29] Italian Trade Agency Statistics. https://www.ice.it/it/statistiche/. Accessed February 10, 2024.

[30] China saw its contribution to Italian imports decreasing by about 20%.

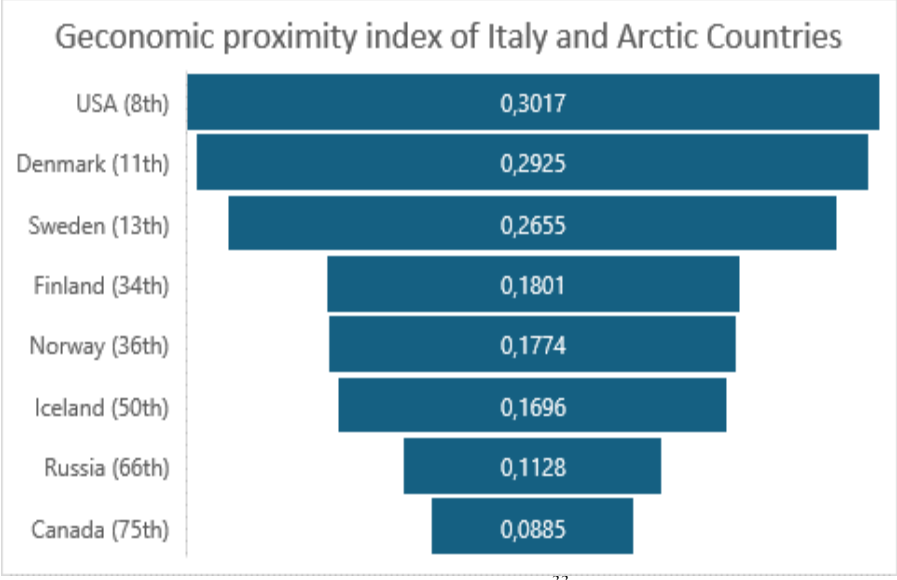
[31] Info Mercati Esteri, Osservatorio Economico, MAECI. https://www.infomercatiesteri.it/paesi.php.

	Italian FDIs stocks in 2022 in the Country (€ million)		**Country FDIs stocks in 2022 to Italy (€ million)**
USA	56,060 €	USA	16,942 €
RUS	11,673 €	SWE	4,488 €
DEN	8,383 €	DEN	2,629 €
CAN	4,913 €	RUS	1,222 €
SWE	3,137 €	FIN	969 €
FIN	2,551 €	NOR	913 €
NOR	718 €	CAN	851 €
ISL	-4 €	ISL	147 €

In this case, although there are significant differences between the various years as regards flows, in terms of stocks the Arctic countries are scarcely present in economic and financial operations directed towards Italy and the Mediterranean in general.

Therefore, it could be affirmed that, in terms of economic nearness, the Arctic region is not the closest for Italy, with the exception of the USA[32].

[32] Data from the Geoeconomic Proximity Index (GPI)®, created by Carobene and Pigoli. Based on official data on trade, foreign direct investments and economic and trade agreements of 200 countries, the GPI® objectively measures how close the world economies are to each other: 1 is maximum proximity; 0 is absolute distance. To have a detailed explanation of how the GPI® works and a practical application of its results see: A. Carobene, A. Pigoli, "Come le nuove tecnologie influenzano lo studio della geopolitica", in A. Plebani (Ed), "Dinamiche geopolitiche contemporanee", Ce.St.In.Geo. geopolitical outlook 2023, EduCatt, Milano, 2023, p. 212-215.



Source: BAIA[33]

Nevertheless, if we take into consideration one a key area where the Italian politico-institutional system is currently focusing with a strategic approach, the African continent, data seem not to differ: the major Italian's trade and investments partners in the African continent, are currently far from being geo economically closed, some of them even laying behind most of the Arctic States.

Country position in the GPI ranking	**GPI value**
Egypt (61th)	0,1371
Algeria (65th)	0,1257
Morocco (71th)	0,0972
South Africa (73th)	0,0892
Tunisia (78th)	0,0832

Source: BAIA[34]

This element adds food for thought when it comes to setting future geo-economic strategies for the Italian decision-makers, considering that investments and economic strategies could be directed in the future also to areas where, now, the distance seems relevant.

[33] http://baiaintelligence.it
[34] *Ibidem.*

The case of Italy-Norway economic and trade relations

Economic and trade relations between Italy and Norway were characterized by a substantially regular trend during the years prior to the outbreak of the Ukrainian crisis in February 2022. Until that date, the annual trade of goods was around 3 billion euros, with Italy covering a market share of about 10% of Norway's trade with the rest of the world, while Norwegian shares in the Italian market have always been between 40th and 50th position[35].

	Export from Italy to Norway (bln €)	**Import from Norway to Italy (bln €)**
2018	1.715	1.424
2019	1.880	1.111
2020	1.606	1.198
2021	1.795	1.505
2022	2.015	6.020
2023	2.156	4.506
Total	**11.167**	**15.764**

Source: Italian Trade Agency[36]

As shown by figures in the table, from 2022 onwards, Norwegian exports to Italy have been skyrocketing, basically due to the energy supply that the Italian system was in need of because of the war in Ukraine and the embargo on Russian hydrocarbons. Between 2021 and 2022 natural gas exports from Norway to Italy increased by nearly 670%, with a value of €5.5 billion. While significantly decreasing during 2023, the value of exports has remained nearly 4 times higher than in 2020, where natural gas imports from Norway to Italy reached a value of €750 million[37]. This is clearly highlighted by Norway's jump in the ranking of Italy's trade suppliers: from the 50th rank in 2021 to the 24th in 2022[38].

[35] "Scheda di Sintesi Norvegia", Info Mercati Esteri, Osservatorio Economico, MAECI. https://www.infomercatiesteri.it/public/osservatorio/schede-sintesi/norvegia_80.pdf.

[36] "Interscambio commerciale dell'Italia per paesi: Norvegia", Italian Trade Agency Statistics. https://www.ice.it/it/statistiche/. Accessed April 15, 2024.

[37] Although with smaller numbers, oil supply too has grown significantly, passing from 252 million € in 2020 to 625 million € in the first 10 months of 2023.

[38] For a more detailed analysis on the strategic relevance of Norwegian natural gas supply to Italy see the following section of this chapter.

Italian national interests in the Energy sector of the Arctic region

Italy is a present and invested actor in the energy dynamics of the Arctic. As ice thaws and access to ichthyic stocks, hydrocarbons, and minerals widens, the country is keen to play an active role in the region by leveraging its technical expertise in hydrocarbon extraction and robust manufacturing capability[39]. Energy is one of the main economic drivers of the "Italian Arctic Strategy", in recognition not only of a long-standing and increasingly profitable economic involvement in the Arctic through the presence of national companies but also of the country's technological capability to mitigate environmental risks at the core of the extractive activities of hydrocarbons[40]. In the *Strategy*, the Italian Ministry of Foreign Affairs and International Cooperation (MAECI) identifies a "long tradition in research and extraction of hydrocarbons at sea", highlighting an alleged "environmental compatibility of extractive operations" with a focus on Italian competencies aimed at ensuring a safe performance "among the best in the world" and a further interest in renewable energy sources, particularly geothermal, in the region[41].

From a macroeconomic perspective, Italy's energy mix is significantly intertwined with Arctic energetic dynamics, particularly due to the role that Norwegian and Russian natural gas has historically played in the domestic primary energy supply and the country's charted energy transition. Despite sharp reductions in natural gas consumption in 2023[42], natural gas still represents the primary power source in the national net consumption, and its contribution to the energy mix has steadily grown, with a 44-percent rise in the period 1990-2020[43]. Before the Russian invasion of Ukraine in 2022, Italy

[39] M. M. Minuti, "L'Italia Ha Un Interesse nell'Artico, Ecco Come Difenderlo", *Limes*, 6 February 2019, www.limesonline.com/cartaceo/litalia-ha-un-interesse-nellartico-ecco-come-difenderlo.

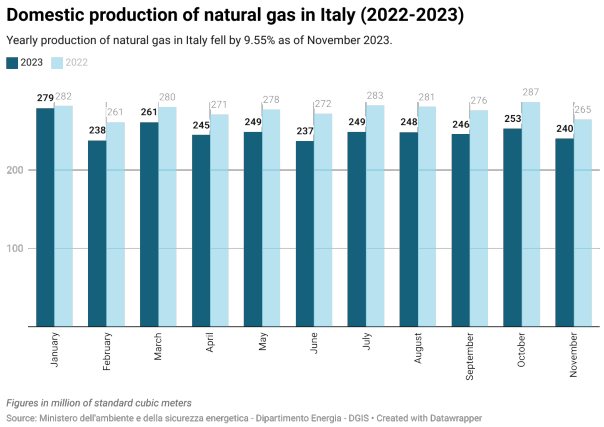
[40] F. Pace, "Arctic region, climate change and multidimensional security: opportunities and challenges for Italy", *LUISS Department of Political Sciences*, 2021, p. 53.

[41] Ministero degli Affari Esteri e della Cooperazione Internazionale (MAECI), "Verso una Strategia Italiana per l'Artico: Linee-Guida Nazionali", 2015, p. 7-15.

[42] Reuters, "Italy's 2023 gas consumption drops to 8-year low, GME says", 17 January 2024, www.reuters.com/business/energy/italys-2023-gas-consumption-drops-8-year-low-gme-says-2024-01-17.

[43] International Energy Agency (IEA), "Greenhouse Gas Emissions from Energy Data Explorer", 2023, www.iea.org/data-and-statistics/data-tools/greenhouse-gas-emissions-from-energy-data-explorer.

significantly relied on both Norway and Russia for its natural gas, which was produced abroad and imported via international pipelines or transported by sea as LNG[44]. In 2021, 46% of natural gas imports were from Russia and approximately 8% from Norway, the latter being worth approximately $870 million yearly[45]. In 2021 and 2022, following the European Union's *REPowerEU* targets, Italy almost halved its natural gas imports from Russia, replacing it with natural gas traded by countries such as Azerbaijan and northern European partners – including Norway – through existing infrastructures and pipelines[46]. In 2023, fuels from Russia via pipeline were below 5% of total imports, and Russian gas represented approximately 3% of total natural gas imports by late 2022[47,48]. Considering the anticipated role of natural gas in the country's energy transition plans as per Italy's *Integrated National Plan for Energy and Climate 2030* (PNIEC), Arctic-sourced natural gas falls wholly within national interests and trade relations with Norway in this regard could meaningfully shape the country's energy policy towards 2030.



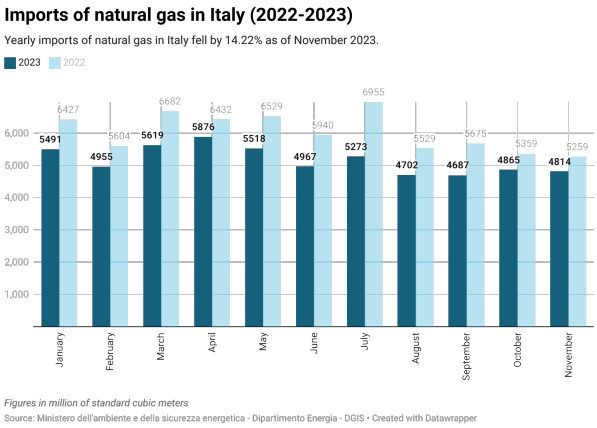
[44] F. Pace, *Arctic region*…, op. cit., p. 83.

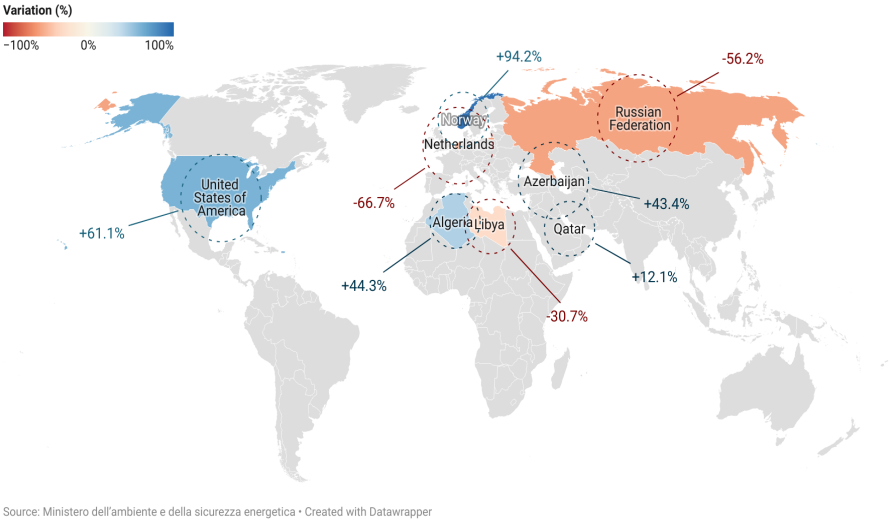
[45] G. Gaulier, S. Zignago, "BACI: International Trade Database at the Product-Level. The 1994-2007 Version", *CEPII Working Paper*, 23, 2010.

[46] D. Panzeri, F. Andreolli, F. Bellisai, M. Bienati, G. Giordano, M. Governatori, "Il Panorama Energetico Italiano dopo l'Invasione Russa dell'Ucraina", *ECCO*, 2023, p. 3.

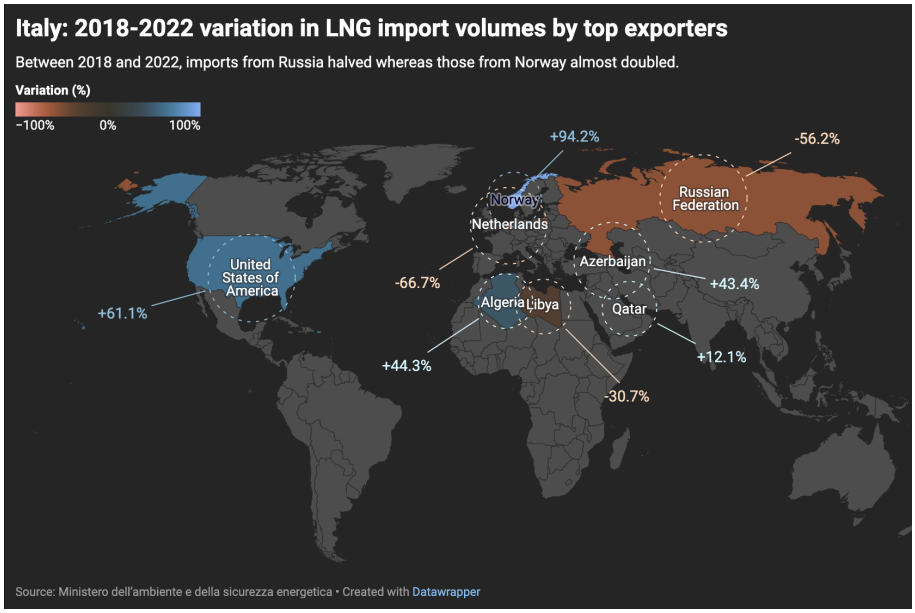
[47] Reuters, *Italy's 2023 gas*…, op. cit.

[48] IEA, "Executive Summary", n.d., www.iea.org/reports/italy-2023/executive-summary.





Source: Ministero dell'ambiente e della sicurezza energetica



Source: Ministero dell'ambiente e della sicurezza energetica

Furthermore, Italian companies actively contribute to both extraction and production (E&P) activities in the Arctic. Among leading Italian companies active in the Arctic are Saipem in Norwegian waters on behalf of Total and Shell Norway, which further joined a joint venture for the realization of 'Arctic LNG2' in 2019[49], Nuovo Pignone in the Russian Arctic, and Vard (*Fincantieri* Group), which is involved in naval constructions for offshore infrastructure[50]. However, the *Ente Nazionale Idrocarburi* (ENI), the largest Italian multinational company for energy and gas, arguably represents the largest feat of Italian involvement in Arctic extractive and exploration activities as the company sustained its presence and cooperation with Russian and Norwegian companies in the past two decades while other major energy companies instead withdrew from the region following the mid-2010 fall in oil prices[51,52]. With regards to extractive activities, ENI plans to maintain a long-term involvement in the Arctic region, articulating its extractive activities as located in the "operable Arctic" (chiefly in ice-free territories), the "challenging

[49] L. Parigi, "La strategia dell'Italia per l'Artico", *Osservatorio Parigi*, 14 September 2020, www.osservatorioartico.it/strategia-italia-artico.
[50] M.M. Minuti, *L'Italia ha un Interesse*…, op. cit.
[51] M. M. Minuti, *L'Italia ha un Interesse*…, op. cit.
[52] M.L. Lagutina, "Strategy of the Italian Republic in the Arctic", *Arctic and North*, *24*, 2016, p. 135-144.

Arctic", and the "extreme Arctic" based on the anticipated technical and logistical challenges in extracting hydrocarbons and the related anticipated period of return on investment[53]. The company – chief operator of *Goliat* – the biggest and northernmost floating offshore platform in the Barents Sea for oil production and oil and gas storage, has been operating since 1965 in Norwegian territories, where the Goliat deposits (located in the Barents Sea and worth approximately 250 million barrels of oil) were first discovered. Through Goliat, the company has generated €43 billion in the first three years of operation[54]. The Italian Arctic Strategy further recognizes ENI's extraction of hydrocarbons as valuable for the country's energy portfolio diversification[55]. Throughout its history of operations in the region, ENI has diversified its mining portfolio through mergers (see, for instance, Vår Energi AS, which has become one of the main E&P societies in Norwegian waters), acquisitions (e.g., purchasing the assets of ExxonMobil's Upstream in over 20 fields), and novel licenses (namely in the Northern Sea, Barents Sea, and Norwegian Sea)[56]. In 2020, ENI further created the company Vågrønn, through which Renewable Energy Sources (RES) projects in the region, particularly offshore wind farms, could be developed in Norway and other markets in the High North through tenders for offshore licenses[57]. In the 2012-2021 period, the company further established partnerships with Russian Rosneft and Gazprom for crude oil import to Italy and in 2017, memoranda of understanding between Rosneft and ENI were concluded for a long-term collaboration in hydrocarbon trade and extraction, albeit the freeze of commercial relationships with the Russian oil company post-2014 meaningfully reduced Italo-Russian cooperation via ENI[58]. In addition to extraction, ENI is also involved in exploration activities in the Barents Sea, active stock research in Greenland, and is the first company to obtain a license from Washington to extract from the deposits in Nikaitchuq and Oguruk in the Alaskan Beaufort Sea. 120 further licenses were bought in 2021 for exploration in the Eastern North Slope[59].

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[53] Commissione III (Affari Esteri e Comunitari) della Camera dei Deputati, "Resoconto Stenografico: Indagine Conoscitiva no.17", 2016, p. 35.

[54] F. Pace, *Arctic region*…, op. cit., p. 82.

[55] MAECI, *Verso una Strategia*…, op. cit., p. 11.

[56] F. Pace, *Arctic region*…, op. cit., p. 82.

[57] F. Pace, *Arctic region*…, op. cit., p. 83.

[58] M.L. Lagutina, *Strategy of the Italian*…, op. cit., p. 143.

[59] F. Pace, *Arctic region*…, op. cit., p. 82.

In conclusion, Italy – via national energy companies and through energy trade with major gas exporters – has meaningful stakes in the energy dynamics of the Arctic. Nonetheless, an evident clash between continued investments in the extraction of hydrocarbons, incompatible with the IPCC-recommended greenhouse gas mitigation pathways, and *raison d'être* of the Italian presence in the Arctic ("it is important that it [climate change] is universally recognized as a priority at the global level", as per the *Arctic Strategy*) emerges[60]. Given the central role of energy trade in Arctic geopolitical governance, Italy's challenge for the next decades will likely be navigating its domestic energy transition while maintaining the important bilateral and multilateral trade relations with the Arctic Five and particularly with Norway.

Key drivers of Italian national interests towards the Arctic in the Security sector

As a member of NATO and the European Union, Italy expresses daily concern over Russia's subversive stance, stemming from both the invasion of Ukraine on February 22, 2022, and Moscow's aggressive posturing in other international scenarios[61]. The Arctic is one such theater revealing Russia's intent to undermine Western certainties, possibly starting from the region it knows best: the High North[62].

The primary driver prompting Italy's interest in the Arctic is now related to Russia itself. In other words, Russia represents a current threat to Western countries, including Italy[63]. (Borozna 2024)

Russia was a robust economic partner for Italy and Europe for several years, especially in the supply of hydrocarbons. This partnership persisted even after Russia's unilateral declaration of Crimea's annexation in 2014. However, the invasion of Ukraine and the subsequent unilateral annexations of Donetsk and Luhansk regions had a different impact, radically altering the perception of Russia within European chancelleries. If the perception of Russia has

[60] MAECI, *Verso una Strategia*…, op. cit., p. 7.

[61] Center for Strategic and International Studies. (n.d.). *Arctic military activity tracker*. https://arcticmilitarytracker.csis.org/.

[62] E. Buchanan, *Red Arctic: Russian strategy under Putin*, Washington D.C, Brookings Institution Press, 2023, p. 16-20.

[63] A. Borozna, "Russia's Security Perceptions and Arctic Governance", *Politics and Governance*Vol. 12, 2024 p. 2-5.

changed, so has the perception of the "Russian Sea" – the Arctic[64].

Especially because Moscow pursues several military objectives in the Arctic. Firstly, Russia's seven out of 11 ballistic missile submarines stationed on the Kola Peninsula ensure the country's second-strike capability. Secondly, Russia aims to protect access for its Northern Fleet to the North Atlantic and the European Arctic, which would be crucial in a potential conflict scenario with NATO. Thirdly, Russia's extensive northern borders necessitate military bases in the Arctic to enable the rapid deployment of military capabilities[65].

Once viewed as a region for scientific and economic cooperation, as outlined in the latest Italian government plan on the Arctic[66], it has now transformed into a territory where one must "prepare for the unexpected", as stated by Admiral Bauer during theArctic Circle event in Reykjavik, in October 2023[67].

An unstable Arctic or escalation in the Arctic would directly involve Italy on two fronts. Firstly, with Finland and Sweden's admissions, the Arctic becomes a region composed of 7/8 NATO member states[68]. An attack by Russia on any other state would be considered a violation of Article 5 of the North Atlantic Treaty, potentially triggering a collective defense response from all Alliance members, as outlined in the article[69].

On the other hand, an escalation in the Arctic would seriously jeopardize all activities and interests that Italy pursues in that region.

Italy is internationally recognized for excellence in polar scientific studies, with recent discoveries affirming Italian greatness and expertise in these latitudes. The Italian National Research Council's Polar Institute, and the Hydrographic Institute of the Italian Navy, are among the most authoritative actors operating in the Arctic,

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[64] *Ibidem*, p. 150-171.

[65] E. Rumer, R.Sokolsky, & P. Stronski). Russia in the Arctic—Critical examination. Carnegie Endowment for International Peace, 2021, p. 6 https://carnegieendowment.org/2021/03/29/russia-in-arctic-critical-examination-pub-84181.

[66] MAECI, *Verso una Strategia*…, op. cit., p. 3.

[67] A. Edvarsen "NATO's Military Leader: "We Must Be Prepared for Military Conflicts Arising in the Arctic" High North News, 30 October 2023

https://www.highnorthnews.com/en/natos-military-leader-we-must-be-prepared-military-conflicts-arising-arctic.

[68] Mason Evers. Z "A Changing Security Landscape: NATO and Russia in the Arctic" The International Affairs Review. 1 January 2024, https://www.iar-gwu.org/print-archive/fl2hwo38rikirjykl1w8lguqhmt2ub.

[69] North Atlantic Organization Treaty "The North Atlantic Organization Treaty" 4 April 1949

https://www.nato.int/cps/en/natolive/official_texts_17120.htm

relying on international cooperation among scientists from different states. A possible "white war," as coined by Mian, would seriously endanger this international scientific cooperation. The Russian invasion of Ukraine has already caused serious damage, affecting the survival of the most important international scientific forum in the Arctic, the Arctic Council, fragmenting it internally and blocking data exchange between the Russian scientific community and others in the region, including the Italian community[70].

The Arctic, rich in key raw materials for energy transition, is of great interest to a country like Italy, which lacks these resources in its subsoil[71].

Italy's goal, in conjunction with the European Union, is to reduce dependence, especially on China, for the supply of raw materials[72].

Security issues in the Arctic would make it difficult for European countries, including Italy, to exploit these resources, as they rely on dialogue and diplomacy and would not be ready for a direct confrontation with major powers to secure resources[73]. On the other hand, countries like China and Russia would find fertile ground in seizing Arctic underground resources, further increasing Europe's dependence on other international actors.

With the evolution of the concept of war from traditional to strategic, critical infrastructures play a key role in current conflicts. ENI is the Italian company most extensively involved in the Arctic, participating in many of these "critical activities", such as oil exploration and extraction, particularly off the Norwegian coast[74].

A fear of conflict emerges, posing a serious risk to the company's activities in the region. On one hand, due to the escalating tension in a strategic point like the Norwegian coast and the stretch of water

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[70] M. Mian, *La Guerra Bianca*, Vicenza, Neri Pozza Editore, 2022, p. 21.

[71] M. Bressan "Le sfide multidimensionali alla sicurezza marittima nell'area del Mediterraneo allargato: la tutela degli interessi marittimi nazionali e la catena di valore marittima" in *Le sfide multidimensionali ed emergenti del Mediterraneo allargato: quale ruolo dell'Italia"* Rivista Trimestrale della Società Italiana per l'Organizzazione Internazionale, Q. 26, 2023 p. 10.

[72] European Council & Council of European Union "Infographic - An EU critical raw materials act for the future of EU supply chains" Website, 21 November 2023, https://www.consilium.europa.eu/en/infographics/critical-raw-materials/.

[73] Foreign Policy "Arctic Competition; PART ONE: RESOURCE COMPETITION IN THE ARCTIC" 13 October 2020,
https://foreignpolicy.com/2020/10/13/arctic-competition-resources-governance-critical-minerals-shipping-climate-change-power-map/.

[74] ENI "Our activities in Norway" 8 September 2023, https://www.eni.com/en-IT/actions/global-activities/norway.html.

separating Norway from Svalbard, one of the focal points of Russia's Arctic Strategy[75].

On the other hand, the likelihood and risks of targeted attacks on Western oil platforms would increase. It should be emphasized that, following the Russian invasion of Ukraine, the Norwegian Arctic has become a major basin for supplying gas and oil to the European Union. Thus, attacking one of these platforms could mean attacking the heart of European energy supplies.

The Italian Army, the Italian Navy, and important Italian companies have been engaged for several years in ensuring stability in the Arctic region and preventing the potential conflict that, as we have seen in the previous chapters, would also harm significant Italian interests.

From a military perspective, the Italian army has been preparing for Arctic missions for several years. In January 2024, the "Volpe Bianca'' exercise took place, where a Tactical Group from the 2nd Alpini Regiment faced challenging trials, simulating the critical conditions that could arise in the far North[76]. This mission also serves as preparation for the NATO international exercise "Nordic Response", where over 20,000 soldiers from 13 nations, including Italy, will practice defending NATO's northern flank[77].

In 2017, the Italian Navy launched the High North project to actively contribute to the National Arctic Strategy. During the High North 2023 mission, the navy conducted monitoring activities and mapped the marine surface and seabed in the Svalbard region, an area key for science but also a spot of growing geostrategic importance[78].

From a security perspective, Italian expertise and the know-how of Italian companies are contributing to ensuring stability in the region and navigation safety. Fincantieri and Leonardo are two key Italian

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[75] J. Kluge, M. Paul, "Russia's Arctic strategy through 2035: Grand plans and pragmatic constraints", SWP Comment, No. 57/2020, Stiftung Wissenschaft und Politik (SWP), Berlin, 2020, p. 2-4, https://d-nb.info/1261089294/34.

[76] Comando Truppe Alpine "Al via l'esercitazione "Volpe Bianca" Esercito.difesa.it, 25 January 2024 https://www.esercito.difesa.it/comunicazione/Pagine/volpe_bianca.aspx.

[77] A. Edvarsen, "Nordic Response" High North News, 2 February 2024 https://www.highnorthnews.com/en/nordic-response-over-20-000-soldiers-13-nations-will-practice-defending-natos-northern-flank. L. Parigi "La Guerra di domani" Osservatorio Artico, 24 January 2024, https://www.osservatorioartico.it/volpe-bianca-2024/.

[78] Marina Militare "Al via La Campagna High North 2023" M.M Redazione Web, 19 July 2023, https://www.marina.difesa.it/media-cultura/Notiziario-online/Pagine/20230719_Marina_Militare_Al_Via_La_Campagna_High_North_2023.aspx.

players in the Arctic. On one hand, Fincantieri, the largest shipbuilding company in Europe, has recently committed to providing new ships for the Norwegian state. Fincantieri has also contributed its renowned "Alliance" ship to the Italian Navy for environmental observations and is working to expand the Italian polar fleet with a new Polar Research Vessel[79].

On the other hand, Leonardo, a multinational Italian company specializing in aerospace, defense, and security, is participating in the European project ARCSAR - Arctic Security and Emergency Preparedness Network[80]. Leonardo aims to deploy high-tech innovation systems for search and rescue, as well as radar for navigation aid in the Arctic. This project is being carried out in collaboration with e-Geos, a company focused on earth observation and geo-spatial information. e-Geos is also responsible for the Cosmo-SkyMed, Italy's satellite system designed to monitor the retreat of the Arctic ice[81].

In conclusion, although the Arctic is not a primary national interest for Italy, it is a region where Italy boasts various collaborations, areas of excellence, and confirms its status as a middle power. The international geopolitical situation is changing day by day, presenting growing threats and new actors on the global stage. In an international scenario where the concepts of national defense and space are radically evolving, Italy, as a NATO member and a founding member of the European Union, must be prepared even in regions not contiguous to its primary national interests, like the Arctic, to defend a status quo that sees it as a middle power and significant national interests that would be disintegrated by a possible conflict in the region.

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[79] Fincantieri "Polar Research Vessel", 2022 https://www.fincantieri.com/en/products-and-services/naval-vessels/polar-research-vessel/. Redazione Ansa "Fincantieri: taglio lamiera nave idro-oceanografica della Marina", 19 December 2023.
https://www.ansa.it/sito/notizie/economia/2023/12/19/fincantieri-taglio-lamiera-nave-idro-oceanografica-della-marina_ad295e00-6c43-40dd-9735-10750e0a3ad1.html.

[80] Leonardo, Comunicato Stampa "Leonardo partecipa al progetto europeo ARCSAR per lo sviluppo sostenibile e la sicurezza dell'Artico" Leonardo.com, 25 February 2019 https://www.leonardo.com/it/press-release-detail/-/detail/leonardo-to-participate-in-arcsar-25-02-19.

[81] A. Muro Pes "Far but not so far: Italy's Role and Interests in the Arctic" Arctic Institute, 10 November 2020 https://www.thearcticinstitute.org/italy-role-interests-arctic/.