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UNA Italy

OSSERVATORIO

sulle attività delle organizzazioni
internazionali e sovranazionali,
universali e regionali, sui temi di
interesse della politica estera italiana

OSSERVATORIO SULLE ATTIVITÀ DELLE ORGANIZZAZIONI INTERNAZIONALI E SOVRANAZIONALI, UNIVERSALI E REGIONALI, SUI TEMI DI INTERESSE DELLA POLITICA ESTERA ITALIANA

WORKING PAPER 1-2022



Ministero degli Affari Esteri
e della Cooperazione Internazionale

Il presente progetto di ricerca è stato realizzato con il contributo dell'Unità di Analisi e Programmazione della Segreteria Generale del Ministero degli Affari Esteri e della Cooperazione internazionale (MAECI)

Direzione: Prof. **Pietro Gargiulo**, *Ordinario di Diritto internazionale, Università degli Studi di Teramo e Direttore responsabile della Rivista della SIOI “La Comunità Internazionale”*; Prof. **Ivan Ingravalle**, *Associato di Diritto internazionale, Università degli Studi di Bari Aldo Moro e Redattore capo della Rivista della SIOI “La Comunità Internazionale”*.

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Segreteria di Redazione: **Alessandra Scala**, *Segretaria di Redazione della Rivista della SIOI “La Comunità Internazionale”*.

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SOCIETÀ ITALIANA PER LA ORGANIZZAZIONE INTERNAZIONALE

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INTERNATIONAL SYMPOSIUM

ARCTIC CONNECTIONS

SUSTAINABLE DEVELOPMENT IN THE ARCTIC:
HOW DO WE SUCCEED?

ROME, 26-27 OCTOBER 2021

The Italian Society for International Organization

MINISTERO DEGLI AFFARI ESTERI E DELLA COOPERAZIONE INTERNAZIONALE

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ARCTIC CONNECTIONS

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Presentazione del Working Paper

Il presente *working paper* raccoglie alcuni dei contributi prodotti nel corso dell'International Symposium "Arctic Connections – Sustainable Development in the Arctic: How Do We Succeed?". L'evento è stato organizzato dalla Società Italiana per l'Organizzazione Internazionale (SIOI) a Roma il 26 e 27 ottobre 2021, in collaborazione con la Reale Ambasciata Norvegese in Italia e con il Ministero degli Affari Esteri e della Cooperazione Internazionale, nonché con l'High Center for Business and Governance della Nord University (Bodø).

Nel corso dell'International Symposium si è svolto un approfondito dibattito tra diplomatici, studiosi ed esperti internazionali dei problemi connessi con l'Artico. Tra i temi affrontati nel corso dell'iniziativa relativi allo sviluppo sostenibile della Regione artica si segnalano: la transizione energetica, il contributo dei giovani al futuro sostenibile, il cambiamento climatico, i problemi ambientali e le nuove opportunità imprenditoriali.

INTRODUCTORY REMARKS

FRANCO FRATTINI

The question in the title of this symposium invites us to reflect on the complex of the relations in the Arctic Council and all what is related to the Arctic interest of Italy. I remember, many years ago, when we proposed the candidacy of Italy to become a permanent observer – and I have to say that the Ministry of Foreign Affairs immediately reacted in a very positive way – the Ministers, my successors as Ministers of Foreign Affairs, and all diplomats have been working on that, and the idea has become a reality, because now Italy is proudly one of the Permanent Observers to the Arctic Council.

In this third edition of our symposium, you know the title is very important point which will be the main topic of the discussion of today: *Sustainable Development in the Arctic. How do we succeed?* It is an open question and we organize this initiative with the ambition to understand, thanks to the contribution of the speakers, the components that form part of the answer to this very complex question. Our ambition is to get some contribution to Arctic as one of the best examples where to test energetic transition.

You know perfectly that Italy and the government led by President Draghi has put at the very center of its policy and the recovery plan, among others, energy transition, also while establishing a Ministry of ecological and energetic transition with professor Cingolani as a Minister. But this question is made by many elements.

First of all, we will be talking about green energy.

Green energy means of course increasing our cooperation in order to make it possible to reconcile two needs: needs for private sector, private company, not to stop about promoting new energetic sources. And ENI, the Italian company, has a longstanding cooperation with the Kingdom of Norway, not only with Norway but also with Norway. Reconcile this understandable need to make a progress with the idea of gradually change towards green energy. This is the new frontier. And this is testified by the fact that not only Arctic region but in many regions of the world, think about the Gulf, there are strategies looking

at 2030, 2040, that have as ultimate goal green energy. We can be not surprised that the countries that now are the biggest producers of traditional energy are looking already now at green and clean energy sources. Of course, in the Arctic I think this is even more important, even more urgent.

The second topic is the international cooperation. The first time I attended the Arctic Council I saw around the table the Ministers – not the officials – representing some of the most important and powerful States of the world: the Secretary of the United States of America, the Minister of Foreign Affairs of Russia, the Minister of Foreign Affairs of Canada, all those countries were represented. I am talking about years ago, and Under Secretary Dalla Vedova can confirm that this happens even more recently, that all these countries were represented at the highest political level, and in any way at *political* level. That explains why Arctic is one of the best examples where cooperation succeeds.

I had the experience that countries having frictions, already at that time, having serious problems, already at that time, used to sit together, around the table of the Arctic Council, not to the side, because you know, Arctic Council is a body where we don't take binding decisions, but it is a body open for a lasting and positive dialogue. And, frankly speaking, looking at the world of today, this is not often happening in other *fora*. In other *fora* you always see raising burning issues; around the table of Arctic Council the points raised are really points in the common interest of the participants States. This is an element of the Arctic Council which reassures on the good will to address the Arctic related issues in a cooperative way, which should be the ultimate aim of any diplomatic action.

Between Italy and Norway, I have not much to say: there is an excellent cooperation, a hundred percent cooperation. Italy has always been fully satisfied about its cooperation with the Kingdom of Norway, and more than ever now it is important to focus on technologies, on business development and cooperation which is bilateral, of course, Italy and Norway, but also multilateral cooperation. This is an extremely important point. Around the Arctic multilateral cooperation is the key to succeed. Because when you put around the tables countries like Russia, China, United States, Canada plus other countries that traditionally are committed, like Norway, Finland, Sweden, Denmark, you see as a result a strategy, a vision, common ideas that are spreading across States that on so many other

issues have serious frictions, serious problems, not to say about degradation of bilateral relations. I think about China vs United States or United States and the West vs Russia. Nevertheless, on the Arctic there is a common awareness on the importance of working together.

This is the added value of working together. And dealing with the Arctic related issues, for Italy in particular as European State, we have in mind the full application of the European Green Deal. Great achievement for European Union, with great *consensus*. I know since my time as Vice-president in the European Commission, that it was not so frequent to find a similar level of consensus among the Member States of Europe on one goal. On European Green Deal there is a good consensus on the full implementation in cooperation with countries like Norway, that has been from the very beginning one of the protagonists on that.

I have the temptation to fall towards the substance instead of limiting myself to just welcome you. My final consideration is that it is right to talk about energy, sustainable energy and transition towards green energy, but let's not forget about the human dimension of the Arctic. Human dimension means millions of people that live in the Arctic. We have to take into consideration that whatever we do it has repercussions on millions and millions of people and when we talk about protecting environment, preserving from dramatic scenarios like melting ice phenomena, we are talking about the fate, the destiny of millions and millions of people. I wouldn't even imagine the multiplication of climate migrations in the Arctic. What we have testified in African countries with the desertification. It has a direct implication with the human life. We are not just talking about energy, how to make business, how to open new routes. We are talking about preserving a patrimony of humanity that can be disrupted in one second.

So, we are not just talking about business and energy, we are talking about the future of humanity and the future of the world.

I used to say "What happens in the Arctic, does not stay in the Arctic", because you can imagine easily the consequences, the impact of what can happen in the Arctic region if we are not vigilant, we are not well prepared, we have not fully implemented all the common initiatives aiming at preserving what is today the environment in the Arctic, including how to use energy, including how to go towards green energy. These are preconditions.

Our goal is the human life, is the human being's future. This is for me even more important to sign an agreement more or another contract with this or that energy company. And the companies, which will take the floor after this panel and will express their opinion, are increasingly moving in that direction and we are very happy that company like ENI, well internationalized as you know, has understood perfectly that it is in the interest of the companies to preserve the environment and the human life in the Arctic. This is the goal that has to do with the ethical principle that I have in mind and we have to keep in mind every day.

With that I give the floor to the Ambassador to Norway, the co-organizer of this symposium.

THE ENERGY TRANSITION IN THE ARCTIC:
TOWARDS A GREENER FUTURE

A GREEN, PEACEFUL AND PROSPEROUS ARCTIC FOR THE WORLD

MONICA PAULSEN

Earlier this week I did participate at the International Symposium “Arctic Connections” in Rome, to talk about the energy transition in the Arctic – and how we can move forward towards a greener future.

The environmental footprint of EU and the world has a significant impact on the Arctic. The symptoms of the global climate challenges are most evident in the Arctic. For example, the Arctic region is warming three times faster than the rest of the planet. The EU contributes to Arctic warming through an 8% share in global greenhouse gas emissions. In addition, the EU is responsible for around 36% of Arctic deposition of black carbon, which speeds up the warming of the Arctic, the melting of snow and ice surfaces, and is a harmful air pollutant. The melting of ice and thawing of permafrost in the Arctic further accelerate climate change and have huge knock-on effects.

So, how can we succeed with sustainable development in the Arctic? And how may EU act, to make the Arctic safe, stable, sustainable and prosperous?

President Franco Frattini held the opening speech at the Arctic Connection Symposium, reflecting on the global challenges, and the role of European countries for sustainable development of the Arctic. Mr. Johan Vibe, Ambassador of Norway to Italy, Benedetto Della Vedova, Undersecretary of State – Italian Ministry of Foreign Affairs and International Cooperation, Morten Høglund, Norwegian Senior Arctic Official and Arne O. Holm, the editor in chief at High North News, Nord University all held opening statements.

In his inspirational talk, Arne O. Holm quoted the Greenland politician Aaja Chemnitz Larsen, in order to explain a crucial premise for the EU’s Arctic engagement: «Nothing about us without us».

Meaning, the people in the Arctic has contextual knowledge that must be taken into account, before making EU policies that affects the Arctic region.

For two days, the Symposium set the scene for international dialogue, hosted by Società Italiana per l’Organizzazione Internazionale – SIOI, which is the UN Association of Italy, in collaboration with The High North Center at Nord University.

At the Symposium, the phrase «What happens in the Arctic doesn’t stay in the Arctic” was constantly repeated by different panelists from outside the Arctic. For some, it seems that the easiest way of protecting the Arctic would be to prohibit industrial activity in the region.

In that regard, it was important for me to share insights on how we do contribute to the global sustainability goals. We are lowering the emissions, because we are basing our industrial activity on renewables. We are exploiting the resources in a responsible manner, by developing more circular economy solutions.

We do contribute to the global sustainability goals, by lowering the emissions, and by creating more circular economy solutions.

Knowing that many associates the Arctic with desolated areas covered in snow and ice, it was also important to show that while we do have winter seasons and snow, life in the Arctic is so much more. Thanks to the warming Gulf stream, and the Nordic people who find it in their hearts to live here, in the High North, we can contribute to global sustainability in so many ways. By developing attractive communities we maintain geopolitical stability in the Arctic region. Our development of renewables, clean energy technologies and green products is in the best interest of the Arctic, the EU and the world.

Our presence and our green industrial development is in the best interest for the Arctic, the EU and the world.

The hydroelectric power plants in our region are producing endless amounts of green energy. The industry in Norway are based on hydroelectric power. The power intensive industry in Norway is also based on hydroelectric power.

The process industry in Northern Norway were built in close proximity to these hydroelectric power plants, and the industrial value chains have grown as their industrial activity increased. So has the cities and the communities up North. One example is the Alcoa Aluminum production site in Mosjøen, producing green aluminum for the global market. The energy transition also offers new industrial opportunities. Nearby the Alcoa site, Gen 2 Energy is going to produce green Hydrogen, and Bergen Carbon Solutions will Capture Carbon Dioxide for producing Carbon Nano Fibers.

In our region Helgeland, we have a long industrial history, way back to Thomas A. Edison. He was the inventor of the light bulb, and also magnetic separation of iron ore. Based on this process, the Dunderland Iron Ore Company (D.I.O.C) was founded in 1902. Dunderland is located only 35 km north of Mo industrial park, and today, the same ore is still being mined by a local company called Rana Gruber, and their products are sold to global markets. For many decades, we have built industrial competence, we hold an industrial DNA, that accelerates innovation and industrial growth.

Minerals and metals are important building blocks for the green shift, so we take pride in making and exporting products made from green energy.

In Mo industrial park, you'll find three international metal producers, and a wide range of suppliers. Minerals and metals are important building blocks for the green shift, so we take pride in making and exporting products made from green energy. Within Mo industrial park, the companies exchange material streams and energy sources. It is a successful showcase of an ongoing circular economy at an industrial scale. A pilot for carbon capture at an industrial scale will be implemented by Elkem Rana next year, in collaboration with other companies and R&D institutes like SINTEF. This is an important contribution for accelerating circular economy and sustainability.

One of the metal producers is Celsa, a Spanish family owned company. Together with Statkraft and Mo Industrial park, they are establishing a green hydrogen value chain for industrial use. The aim is to replace fossil input factors with green hydrogen, to produce one of Europe most climate friendly reinforcing steel and rolling wire. This includes building a plant for electrolysis-based hydrogen production in Mo Industrial park.

For Celsa, this is an important initiative to achieve their long-term sustainability goals. They focus on sustainable production technology such as hydrogen, to meet society's need for quality steel without compromising future generations.

Right next to Celsa, Freyr Battery is an emerging producer of clean battery solutions. They are building five giga factories, the first one to be finished is a customer qualification plant – and it will be ready for manufacturing by next year. Developing 43 GWh of battery cell production capacity by 2025 will position FREYR as one of Europe's largest battery cell suppliers. They are now listed on the

New York Stock Exchange, and an important part of a global value chain for energy storage.

These examples show some of the industrial development by partners of the Arctic Cluster Team. The Cluster has 98 members, covering the industrial value chain from raw materials to products, supported by suppliers, R&D sector, universities and schools.

Within the cluster there are so many more examples of sustainable development, and I would have loved to talk about all of them at the Symposium, but sadly, I had time for only one more. So, I chose to talk about Finnfjord, one of the world's most energy efficient ferrosilicon producer. In addition to this, together with the Arctic University of Norway, they have developed, and are now scaling up and commercializing the production of Arctic algae. The algae feeds on carbon dioxide from the process plant, and are later used as fish farming food. This way, Norway can increase the production of Arctic seafood in a sustainable manner.

Arctic Cluster Team aim to be a driving force for sustainable transition of Norway.

Our technology, processes, green raw materials and products for energy storage and new energy carriers are important contributions to the new standards for sustainable development.

In the Arctic, we have been blessed with unique advantages, that enable sustainable development based on renewable energy. Through our focus on responsible production and sustainable use of resources, we do protect the Arctic, and obtain geopolitical stability, while accelerating the global energy transition.

HOW TO PROMOTE A NEW NORWEGIAN ARCTIC STRATEGY

MATTEO CHIESA

The Arctic is often referred to as the Gateway to the High North, or the key strategic centre of the world. But the Arctic is more than just oil and gas and fisheries and environment. It is the people living there, and all ways of life that have been passed through generations. Including indigenous people such as the Sami.

Nordland, my home region, is doing great. Unemployment rates are low, and we export more than ever. Still, our future is not just bright and free from challenges. Like in other parts of Europe, young people gravitate towards larger cities. If we want to utilize the rich resources in this region, we must have people my age living here.

In order to make that happen, we have to offer something else than Oslo. The answer to that, I think, is culture. By culture, I mean sports, music, food, theatre, language, movies and arts, everything that connects people, and everything that connects people.

Yes, we must have job opportunities, good schools and ways of transportation in the core. Good means of transportation is especially important in a landscape like Norway where the distances are vast. But we also must have recreational offers. And I believe therefore in initiatives like Bodø becoming ECoC or Narvik applying to host the world championship in skiing.

To some, culture is extreme sports in the extraordinary Arctic nature. For others it is instead the midnight sun, the history of the region and the people inhabiting it.

If we do not work with the features that make us special, we will lose in competition with the more urban areas. And I believe that it is through the people, and people practicing arts and culture – sports, music, duodji – that we promote this uniqueness.

Yes, the Arctic is a highly strategic area. We must utilize this position, especially when it comes to the energy transition. And business and stakeholders must invite the youth to take part of this journey.

I will give you two examples of how we have done this back home.

In Bodø, there is this organization called Bodø2040, which is a network for those between the age of 20 and 40. Like in the rest of Europe, this is the group that is likely to gravitate towards more urban areas or cities. Many of their members want to contribute to the development of the city, but because they are young, and do not have a big network, they don't know how. Bodø2040 has therefore developed a webpage where young people (20-40) can present themselves and their competences, almost like on LinkedIn. By signing up, they signal that they want to contribute in boardrooms and decision-making processes. And businesses and stakeholders can invite them to do so.

And the Government Youth Panel is another example of how youth are being involved in decision-making policies. In 2020 the government established a panel of 50 young people from all over northern Norway to provide input to the new Norwegian Arctic strategy. The process is the major learning point.

Yesterday dr. Holm said «Nothing about us without us». Today I say: To make youth stay, they should have something to say.

ENERGY-RELATED INTERESTS AS THE KEY DRIVER IN SHAPING ARCTIC RELATIONS

MARCO VOLPE

Introduction.- The Arctic is warming twice as fast as the rest of the earth. According to scientists at the National Snow and Ice Data Center at the University of Colorado Boulder on March 5 2020, Arctic sea ice has likely reached its maximum extent for the year at 15.05 million square kilometers (5.81 million square miles)¹. The 2020 maximum is the eleventh lowest in the 42-year satellite record. It is estimated that by 2030 the Arctic could experience ice-free summers with tremendous effects on both local and global population. Besides the strictly scientific-related consequences, the progressive melting process is shaping a new reality in the Arctic with an increase in maritime trade, ships traffic, tourism activities, research and exploration missions and military ships protecting countries' sovereignty rights. Moreover, the Arctic region accounts for about 25% of the world's undiscovered hydrocarbon resources and for 9% of coal and other economically critical minerals such as palladium, uranium, diamonds, platinum, cobalt, nickel, tungsten, zinc and rare earth elements (Wright, 2011). Opportunities linked to new trade routes, via both the Arctic Ocean and the North-East and North-West passages, paired with natural resources opportunities and the strategic positioning to conduct scientific research, are shaping countries' Arctic strategies. To what extent the growing interests will impact the current governance framework in the Arctic is difficult to foresee but, what clearly emerges, is a renovated geopolitical relevance.

Is Greenland the new El Dorado?- Despite the attempts of the international community of establishing a well-defined legal framework, a counternarrative of "terra nullius" "resource frontier" and "Arctic race" is emerging (Kuersten, 2015). Arctic military competition narrative is also fueled by the growing militarization

¹ National Snow & Ice Data Centre: <https://nsidc.org/news/newsroom/arctic-sea-ice-maximum-extent-2020>

pushed by the US, Canada and Russia (Gorka, 2018). However, Gorbachev's desire to make the Arctic region a space for political stability and research and economic cooperation expressed in the famous Murmansk speech in 1987, seems to have shown the way. Even though military presence seems to increase, no relevant military episodes or clashes have compromised the political stability of the region. On the contrary, what has undoubtedly shaped Arctic relations among Arctic and non-Arctic States, is the region's energy potential that has conducted to many energy agreements.

The energy potential has also contributed to let isolated and remote places to acquire a renovated relevance within the global stage. In terms of visibility and general public interest, the sea-ice minimum registered in 2007 represented a real game-changer (Christensen et al., 2013). Many new actors pertaining to military security, maritime transport and resource exploitation have been attracted by the consequences of such an event. Greenland's case is absolutely revealing in how the ice cap melting process, despite deeply influencing indigenous people lives, is also deeply shaping the political discourse and business interests. With almost 95% of its entire population made up by Inuit, it is not hard to understand why the melting process and emerging attention of world powers to Greenland's energy potential has been entangled with independence and post-colonial matters. The relation between emerging business and energy-related opportunities with independence and the possibility to create a self-sufficient economic mechanism, has shaped Greenland's political recent discourse. During Kleist's cabinet (2009-2013) social betterment and well-being scenario mainly consisted in the creation of jobs through a well-developed system of resource extractive industry mainly financed by foreign investments and on a fiscal system based on corporation taxes. In Kleist's perspective, this system on one side may have solved the long-standing high unemployment rate and, on the other, may have eased Greenland's dependence on Copenhagen's yearly subsidy. His successor, Aleqa Hammond, agreed on the generation of resource-related economic system to be financed also by foreign investors, but she disagreed on the financial nature: she strongly believed that only the use of royalties was the prerogative to generate a direct and legitimate relation between the amount of resources extracted and degree of national self-determination (Sejersen, 2019). Independence and business opportunities in the fisheries, mineral extraction and tourism

sectors were the core points of Kim Kielsen's mandate (2014-2021). In the Arctic Circle Assembly held in Reykjavik in 2019, he stated: "We will utilize these [fisheries, tourism, mineral extraction] as best as possible to minimize impact on environment and for the health of the people and social impact"². Kielsen's approach points out that Greenland resources potential needs to be developed in line with the general principle of sustainable development expressed in the Rio Declaration (1992) of rational acquisition of natural resources. By acting in the full respect of an international agreement helps Kielsen's rhetoric in the first place to position Greenland in the global community as a responsible partner that acts in line with international recognized principles, and it simultaneously gives the opportunity to justify the openness for business opportunities to foreign investors. In April 2021 Greenland's election signed a historic shift in Greenlandic government. The Inuit Ataqatigiit (IA) party obtained the majority and Mute Bourup Egede became the Greenlandic Prime Minister. Most of the election campaign has been based on the ban on uranium exploitation with the specific intention to stop the rare earth elements project in Kvanefjeld. Despite never denying business opportunities for foreign investors in the mineral sector, Egede's attention is much more focused on how Greenland energy and development strategy should be shaped on the respect of international climate standards. This approach, instead of boosting mining and hydrocarbon sectors, privileges exploitation of hydropower resources of which Greenland is extremely rich.

What emerges from Greenlandic political discourse analysis is the continuity of promoting Greenland as a land of opportunities that could be synthesized in Aleqa Hammond's words: "climate change for Greenland is a major driver that brings pressure and opportunities"³. Kleist and Hammond shared the idea about looking at China as a valuable partner (Guerrieri, 2019). China is the world's biggest importer of energy and raw materials which are pivotal to ensure internal social and political stability, which also legitimates Communist Party's leadership (Pursiainen et al., 2021). The Arctic offers a politically stable region that may help China in diversifying its energetic demands by accessing to alternative resources, including

² Kielsen's full speech at the Arctic Assembly 2019. Source: <https://www.youtube.com/watch?v=B6GlxFvaUVQ>

³ Hammond's speech at Halifax International Security Forum, 2013. Source: <https://www.youtube.com/watch?v=vSrW8ySjCkA>

natural gas and greener alternatives. The exploitation of the rare earth elements in Kvanefjeld has been the cornerstone in China-Greenland energy-related relationship. With the acquisition of the 12.5% of the shares of the Greenland minerals, the Shenghe Resources became a valuable partner in the exploitation's projects. Most of the election campaign of the IA party has been based on the opposition to this project. However, the halt of the project does not seem to have compromised China and Greenland relations, since it is a recent news that a new representation office of Greenland's government has been opened in Beijing, in order to strengthen and enhance the ongoing cooperation.

Sino-Russian axis. - As a non-Arctic actor, China has consistently increased its capacities in the Arctic region. Energy-related interests have been not limited to the emerging opportunities that influenced Greenland emerging position in great powers agendas. Recent geopolitical events have actually facilitated China's access to Arctic investments. Eu sanctions on Russia after Crimea's crisis and the ongoing turbulent situations along the Belarus border and with the clashes in Kazakhstan, have seriously impacted Eu and western power relations with Russia that has found in the country guided by Xi Jinping a valuable ally in the development of Arctic infrastructures for liquified natural gas (LNG) deposits. China's involvement in Yamal's LNG project and the development of the Power of Siberia represent two key points of China and Russia energy-related collaboration.

In 2013, China National Petroleum Corporation (CNPC), the state-owned oil and gas company, bought 20 percent of shares in Yamal LNG from Novatek for \$960 million and at the same time, committed to purchasing at least three million tons of LNG annually and to securing Chinese financing for the project. In July 2018 the first LNG shipment arrived in China from Russia's Yamal peninsula via the Northern Sea Route. Two LNG tankers carried 170.000 cubic meters of LNG from Sabetta port to the Jiangsu Rudong port, a province North of Shanghai. The passage along the Northern Sea Route allowed Novatek, the Russian natural gas producer which operates the Yamal LNG plant, to save almost twenty days of shipping as well as the fees incurred along the Suez Canal. Even though the traffic along the Northern Sea Route is not even comparable to Suez Canal's, the obstruction occurred in March 2021 revealed the strategic relevance of the Northern Sea Route as an alternative shipping route especially

relevant for Russian shipments directed to Asian markets. Yamal LNG's production and shipping numbers are in line with the expectations: in 2020 it produced 18.8 million metric tons of LNG, 255 LNG cargos (18.6 million metric tons of LNG) and 24 stable gas condensate cargos (1 million metric tons) were shipped to international markets⁴. These numbers show an already relevant trade shipped along the Northern Sea Route with Eastern market having a leading role. China's participation in the project has contributed not only in diversifying its energy supplies in line with energy transition principles' of reducing dependance on coal, it also helped China in increasing its status in world energy markets and in promoting Belt and Road Initiative (BRI) on an international level. Simultaneously, Chinese companies involvement enhance Chinese presence in the Arctic energy sector. All these aspects underline how Sino-Russia energy relation in the Arctic has a multilevel justification that aims at reduce its dependance on coal, in line with Paris and COP 26 agreements, at boost China's companies relevance in realizing infrastructural projects extremely needed in the Arctic region and, at internationally promote the Polar Silk Road under the BRI framework. Sino-Russia energy relation is not only based on Yamal LNG project, it has gone further with Chinese companies involvement in the realization of LNG 2 that sees the participation of Novatek (60%), Total Energies (10%), CNPC (10%), CNOOC (10%), and Japan Arctic LNG, a consortium of Mitsui & Co, Ltd. and JOGMEC (10%). The project foresees the construction of three LNG trains, with a capacity of 6.6 million tons per annum (mtpa) of LNG each. The total LNG capacity of the three trains will be 19.8 mtpa and about 1.6 mtpa of stable gas condensate⁵.

Another relevant section of Sino-Russia relation is the Power of Siberia⁶, the largest gas pipeline in Eastern Russia that supplies gas from Chayandinskoye field to China and other Eastern consumers.

⁴Full article at: <https://totalenergies.com/energy-expertise/projects/oil-gas/lng/yamal-lng-cold-environment-gas>

⁵Full article at: <https://www.novatek.ru/en/business/arctic-lng/>

⁶Image: https://www.gazprom.com/f/posts/37/581052/map_sila_sib_e2021-12-15.png

Conclusion.- Global warming and climate change effects are gradually acquiring more relevance in State agendas. The expectations behind COP 26 hosted in November 2021 gave a clue on how environmental international agreements will not only influence national environmental policies, but will also shape international relations with the possibility to open new ground for energy-related synergies. In the Arctic, all these aspects are deeply intersected and business opportunities overlap with energy transition objectives giving the chance to non-Arctic actors to emerge and find their place in the Arctic framework, even though the well-established sovereignty and governance framework do not allow them to have a lot of space of maneuver. Simultaneously, Arctic actors that have been confined to the edges of the geographical and political world are now obtaining new attention due to their energy and natural resources potential. Military increasing presence employed by many Arctic States seems to have more a deterrence nature rather than a real and concrete possibility to be translated into military confrontation. What, instead,

will contribute in shaping the future Arctic geopolitical scenario, are energy-related interests of Arctic and non-Arctic actors.

BIBLIOGRAPHY

Christensen, M. 2013. Arctic climate change and the media: The news story that was. In M. Christensen, A.E. Nilsson, and N. Wormbs. eds. *Media and the Politics of Arctic Climate Change: When the Ice Breaks*, New York: Palgrave Macmillan, pp. 26-51.

Gorka, A. 2018. Militarization of Arctic: Issue of Incredible Importance Not Given Due Attention To. *Strategic Culture Foundation*. [Accessed on November 23rd, 2021].

Link: <https://www.strategic-culture.org/news/2018/10/24/militarization-arctic-issue-incredible-importance-not-given-due-attention-to/>.

Guerrieri, V. 2019. The Spatiality of Hope: Mapping Canada's Northwest Energy Frontier. *Globalizations*, 16 (5) pp. 678–94.

Kuersten, A. 2015. Imaging the Arctic: International Law, Governance, and Relations in the High North. *Michigan State International Law Review*.

Pursiainen, C. Alden, C., Bertelsen, R. 2021. The Arctic and Africa in China's Foreign Policy: How Different Are They and What Does This Tell Us? *Arctic Review* 12 pp. 31–55.

Sejersen, F. 2019. Brokers of hope: Extractive industries and the dynamics of future-making in post-colonial Greenland. *Polar Record* 56 (e22) pp. 1-11.

Wright, D. C. 2011. *The Dragon Eyes the Top of the World: Arctic Policy Debate and Discussion in China*. Newport, R.I.: U.S. Naval War College, China Maritime Studies Institute.

YOUTH: THE FUTURE OF THE ARCTIC

THE ROLE OF YOUNG PEOPLE IN ARCTIC REGIONS

MICHAEL MANN

Many thanks indeed for asking me to speak this morning at this excellent and very timely event.

I am especially pleased that this conference is organised in a non-Arctic EU state.

For me that is proof of a growing recognition that Arctic matters are not just an issue for Arctic states. What happens in the Arctic regions matters to us all.

As you are certainly aware, two weeks ago, the High Representative and the European Commission approved the EU's updated Arctic policy.

The paper is entitled: A Stronger EU Engagement for a Peaceful, Sustainable and Prosperous Arctic.

The updated policy is the result of a year and a half of consultation, discussion and outreach to interested parties in the EU and beyond.

We see it as an ambitious blueprint for our work in and on the Arctic for the coming years.

The EU is committed to upholding a safe, stable, sustainable and prosperous Arctic, which must remain a region of low tension and peaceful multilateral cooperation.

The EU is *in* the Arctic. We have strategic and day-to-day interests, both in the European Arctic and the broader Arctic region.

It's a cliché but it's true: what happens in the Arctic does not stay in the Arctic.

Likewise, the climate crisis the Arctic is facing is not caused by the activities of the around 4 million Arctic inhabitants, but by the actions of the 7.8 billion people who live south of the Arctic Circle.

The Arctic has changed dramatically in recent decades, and especially quickly in the 5 years since our last policy paper was released.

The Arctic is warming three times faster than the global average.

Geopolitical interest in Arctic matters has grown hugely over recent years.

As a major geopolitical and economic player, the EU must react to these challenges, and bring its Arctic policy into line with its political priorities, not least the EU Green Deal.

In short: EU engagement in the Arctic is a necessity.

The eight Arctic states have the primary responsibility for what happens on their sovereign territory, yet many of the challenges the Arctic faces can best be tackled through regional or international cooperation.

This is especially true of climate change.

And so the European Green Deal is at the heart of the EU's Arctic engagement, together with the Fit for 55 package, our biodiversity policy and the EU's approach for a sustainable blue economy, supported by science, innovation and regional investment.

But we are also aware of our geopolitical role, and the need to reflect that in our approach to Arctic matters.

Two of our proposals garnered the most attention in the media.

The first was our push for oil, gas and coal to 'stay in the ground' and our pledge to work with partners towards a moratorium on hydrocarbon reserve development in the Arctic.

The second was our plan to establish a European Commission Office in Nuuk, Greenland.

But there is of course, more to the policy than these two headlines.

Our updated policy is based on climate action, environmental protection, enhanced international cooperation, and finding ways to stimulate sustainable economic development in Arctic regions through research and innovation and regional development support.

These are living regions, with populations who have legitimate aspirations for a decent future for themselves and their children.

We will seek in particular to take full account of the wishes of indigenous people and the unique knowledge they possess.

We want to place greater emphasis on gender equality and the role of young people in Arctic regions.

During the drafting work on the updated policy, we were very impressed with how Norway had given young people a key role in preparing the new Norwegian strategy, in particular through the establishment of the Youth Panel.

We were not able to set up a formal structure of this sort, but we did establish close contacts with young people across borders both

during the public consultation on our Arctic policy, and through ad hoc outreach.

We would now like to make this more regular and concrete, beyond the already considerable role which will be played by young people in the European Commission-run Arctic Stakeholders Forum and Indigenous Peoples' Dialogue on the 10 and 11 of November.

We are aware that some organisations representing the young are run largely by volunteers who have full-time jobs or studies.

Just last week, I was discussing how the Arctic Youth Forum could potentially benefit from EU assistance.

Youth organisations in the Arctic are already participating in actions funded by the Erasmus+ programme to develop projects and offer information about work and training opportunities, learning mobility or other opportunities to become active citizens.

The programme runs not only in Finland, Sweden and Denmark, but Iceland and Norway are also fully associated to the programme.

The EU will invest in the future of people living in the Arctic, stimulating better education, sustainable growth and jobs through Horizon Europe, regional funding and by improving digital connectivity, in particular via satellite technology.

We want to stimulate a green transition so that Arctic regions can showcase future-compatible job creation in sectors including green energy and sustainable approaches to connectivity, tourism, and innovation.

Our Arctic policy must put people first.

Thank you.

CLIMATE CHANGE, ENVIRONMENTAL ISSUES AND NEW
BUSINESS OPPORTUNITIES IN THE ARCTIC

INTRODUCTORY REMARKS

CARMINE ROBUSTELLI

Welcome to the third and final panel of this third edition of Arctic Connections.

As you can read in the programme, the topics addressed in this panel will be climate change, environmental issues and new business opportunities in the Arctic. Specifically, it will be discussed the economic and political factors that could influence the future scenario in the Arctic and the global and regional challenges and possibilities for a green growth; the contribution of new technologies and the private sector to the development of the region and its significance for social and demographic development, as well as the role of space, satellite technology and digitalisation as enabler for strong sustainable growth.

We have panellists from diverse institutions and companies, as well as the scientific world.

Raphaël Goulet, Head of Unit for Ocean Governance, Law of the Sea and Arctic Policy in DG MARE of the European Commission, will illustrate, in his intervention, the main guidelines of the new Joint Communication of the European Commission and EU External Action Service about the Arctic; Bruno Versini, e-Geos General Director, will highlight that Italy provides image data through COSMO-SkyMed and COSMO Second Generation radar missions, and through its financial and technological contributions to Copernicus system; Grammenos Mastrojeni, Senior Deputy Secretary General of the Union for the Mediterranean, in charge of Energy and Climate Action, will speak about the interconnections between cryosphere degradation and security, with reference also to the consequences on European integration; Carlo Barbante, Director of the Institute of Polar Sciences of the National Research Council, will explain, in his intervention, "Why Poles Matter", underlining the reasons why phenomena in Polar regions are relevant for the climate at all latitudes; Ola Gråbak, EO Application Engineer in the Directorate of Earth Observation Programmes at the European Space Agency (ESA), will present some examples of how Earth Observation satellite data is being used in

supporting local communities, climate monitoring and Arctic shipping.

I am Carmine Robustelli, Special Envoy for the Arctic of the Ministry of Foreign Affairs, and as a diplomat I have been dealing with the Arctic region for four years now.

In front of me, there are many students, young people, and I believe we hold a very important task. Our real aim, here, is that at the end of this symposium this young people can be even more interested in climate change and the Arctic. Moreover, this symposium is part of the Italian Strategy for the Arctic, concerning the important field of raising awareness also in our country and strengthen the links that we have with the Arctic States and the Arctic peoples.

THE SUSTAINABLE DEVELOPMENT OF ARCTIC

RAPHAËL GOULET

Ladies and gentlemen, thank you for inviting me to speak in this panel on the sustainable development of the Arctic.

I would like to thank Carmine Robustelli for his introduction and for the contribution of the Italian Government to the development of the new EU Arctic Policy. Our updated EU-Arctic policy “A stronger EU engagement for a peaceful, sustainable and prosperous Arctic” was adopted by the European Commission and the High Representative on 13 October 2021, following a public consultation.

The Arctic is warming up to three times faster than the rest of the planet. Collapsing infrastructure led last summer to a huge oil slick. We have to fight against the climate and biodiversity crises.

This must be fixed and the reason is simple: the melting of ice and thawing of permafrost in the Arctic further accelerate climate change and have huge knock-on effects, felt by Europeans but also throughout the world.

In this context, and in line with the European Green Deal, our EU-Arctic policy highlights the EU’s commitments to contribute to slowing the effects of climate change. It also supports the sustainable development of the region to the benefit of its population.

Firstly, to achieve a sustainable Arctic, progress must be made on our understanding of the effects of climate change on the Arctic and its inhabitants. We can do this through the EU Copernicus space programme, which operates a dedicated Arctic monitoring and forecasting centre. International cooperation in research is also essential. For example, we can use the Northern Dimension programme to work with Russia on permafrost thaw and on black carbon emissions.

Secondly, we will also continue our efforts for more research. The EU supports Arctic science and is a major funder of Arctic research, via the EU Research and innovation framework programmes. The EU funded around EUR 250 million of Arctic research under the Horizon 2020 Programme, notably on climate change, biodiversity and sustainable development.

Thirdly, we must address climate change. We already know enough to act now. In the European climate law, the EU and its Member States have committed to reach climate neutrality by 2050. This goal will benefit the Arctic.

The EU will act against major sources of pollution affecting the Arctic regions in the air, on land and at sea, such as plastics/marine litter, black carbon, chemicals, and transport emissions.

In the global debate on a transition towards carbon neutral production and consumption systems, we are also calling for oil, gas and coal to stay in the ground, including in the Arctic.

Fourthly, we want to support a green transition. For instance, the Arctic has a huge potential for renewables (e.g. geothermal, wind, green hydrogen and hydro-energy). This energy transition can benefit some of the local population by creating future proof jobs and stimulating the economy. There is funding available from several programmes, for instance Horizon Europe, INTERREG, connectivity and observation space programmes. We will use cohesion and regional cooperation funds to support this green transition as well as sustainable approaches to connectivity, tourism, and innovation. We will also invest in people, stimulating better education.

The EU consumes 20% of the world's mineral products while producing only 3% of them. The eight Arctic States are potentially suppliers of materials needed for the green transition, and there are already mineral extraction activities in the European Arctic. We must ensure that this sustainable and secure supply of critical materials is done in full respect to environment management, biodiversity protection and involvement of local and indigenous communities of the Arctic region.

Lastly, a sustainable way forward in the Arctic requires inclusive dialogue, diversity and meaningful participation in decision-making. The EU cannot engage in the Arctic without involving and consulting the inhabitants and stakeholders of the region including Indigenous Peoples, women and young people.

To enhance our engagement with local and indigenous peoples, we have established an annual Arctic Stakeholders' Forum and Indigenous Peoples' Dialogue. The next edition will be on 10 and 11 November in Brussels. By bringing together local stakeholders and European policy makers, this event feeds into the development and implementation of the EU Arctic Policy.

To conclude, the EU is in the Arctic. We have strategic and day-to-day interests, both in the European Arctic and in the broader Arctic region. With our Arctic policy, the European Union aims to promote sound environmental management, biodiversity protection and efficient energy use, support climate change mitigation and adaptation, and contribute to the resilience of the people facing the effects of climate change.

GHIACCI: COME SI SCIOLGIE LA SICUREZZA

GRAMMENOS MASTROJENI

La pianificazione militare da sempre integra la meteorologia e il clima; e l'aver sottovalutato queste dimensioni ha condotto a storici clamorosi fallimenti in varie occasioni. Tuttavia, mai prima nella storia la pianificazione di sicurezza ha valutato non il clima bensì il suo cambiamento. Non che sia un problema nuovo: fluttuazioni climatiche spontanee hanno giocato ad esempio nella rivoluzione francese, intervenuta in un contesto di carestia a sua volta determinato da eruzioni vulcaniche in Islanda che, riempiendo l'atmosfera di particolato, hanno causato una serie di inverni rigidissimi. Qualcosa di simile, e l'eruzione era intervenuta nella lontana Alaska, pare aver contribuito al passaggio della Roma antica da un regime repubblicano al più autoritario Impero. I nostri avi, tuttavia, non avevano gli strumenti per analizzare interconnessioni di così vasta scala e trarne previsioni.

Noi sì e, come noto, ci avviamo a un'era di rapidi e corposi mutamenti del clima che devono essere integrati nelle strategie di sicurezza nazionali e multilaterali. Diversi ordini di impatti del riscaldamento climatico hanno un potenziale destabilizzante: viene spontaneo pensare alla siccità e alla desertificazione, ad esempio; ma non ci viene spontaneo – specie nell'area mediterranea – fare i conti con la peggior minaccia sistemica di tutte, la fusione dei ghiacci.

Un primo problema viene dal mare, il cui livello sale. Anche se con l'aumento di temperatura non si fondessero dei ghiacci, l'acqua degli oceani, per il solo proprio riscaldamento, subirebbe una dilatazione termica e dunque il volume di mari e oceani aumenterebbe. Così è stato effettivamente negli ultimi decenni, tanto che si calcola che circa la metà dei 25 cm di aumento del livello del mare riscontrato a partire dal 1880 sia dovuto proprio a questa dilatazione termica dell'acqua. L'altra metà è attribuita alla fusione dei ghiacci ubicati sui continenti.

La fusione dei ghiacci del circolo polare artico ha ben poca influenza diretta sull'innalzamento del livello del mare, in quanto essi sono “a galla” sull'Oceano artico: contribuisce invece la fusione dei ghiacci che si “tuffano” in mare da sopra i continenti. E sono molti,

dalla Groenlandia alla Siberia, dall’Antartide all’Alaska, fino ai ghiacciai montani di tutto il mondo. Si calcola che se tutti i ghiacci continentali fondessero – ma questo per fortuna non è previsto – il livello degli oceani aumenterebbe di quasi 70 metri.

Dato che circa il 40% della popolazione mondiale vive entro 100 chilometri dalle coste, talvolta coste alte solo poche decine di centimetri sul livello del mare, è chiaro che la fusione dei ghiacci continentali va monitorata con la maggiore precisione possibile. Gli scenari per fine secolo danno poco meno di un metro di aumento del livello del mare, ma nuovi studi di dinamica dei ghiacci mostrano fenomeni di formazione di “fiumi” interni ai ghiacciai di Groenlandia e Antartide che conducono a movimenti e distacchi più rapidi di ghiaccio – si parla di “lubrificazione” dei ghiacciai – portando a rivedere queste stime verso l’alto, tanto che un aumento di 2 metri appare oggi ragionevole.

Per rendere una zona inabitabile, non è necessario che essa venga completamente sommersa dalle acque. Basta che le inondazioni sempre più frequenti comincino a salinizzare le falde, che il cosiddetto cuneo salino si insinui nell’interno, per far sì che dove prima fioriva vegetazione ed esisteva acqua potabile ora non cresca più nulla. Lo sapevano bene gli antichi Romani, quando spargevano il sale sui campi dei nemici per renderli sterili. Oggi siamo in una situazione in cui, se il grosso dell’Antartide appare ancora piuttosto solido, la sua penisola occidentale e tutta la Groenlandia sembrano molto più fragili. E non si tratta di piccole quantità di ghiaccio: non si tratta di 70 metri, ma si stima che, se dovesse fondersi tutto il ghiaccio della Groenlandia, il livello del mare si innalzerebbe di 7 metri; e circa metà della popolazione mondiale dovrebbe cambiare casa.

In questo quadro, la fusione dei ghiacci alle latitudini polari ha due ordini di conseguenze sul piano umano: uno localizzato in quelle stesse latitudini, soprattutto nella regione artica semplicemente perché l’area antartica è per lo più disabitata. L’altro ordine di impatti, in un sistema interconnesso come il pianeta Terra, va a colpire regioni molto lontane tramite la cinghia di trasmissione fornita dall’innalzamento del livello dei mari. La fusione in atto nell’Artico fornisce la prima dimostrazione del meccanismo che lega i cambiamenti climatici ai conflitti sebbene, per fortuna, si tratta di controversie ancora pacifiche: alcune risorse essenziali vengono dislocate verso territori diversi da quelli in cui si trovano oggi; molti ci perderanno; qualcuno, persino, ci guadagnerà ma in ogni caso si apre una “competizione” per recuperare le risorse perdute e accaparrarsi quelle nuove che si presen-

tano. Poiché il Polo Nord si sta fondendo, gli Stati che hanno ambizioni artiche iniziano a mostrare, ancora pacatamente, i muscoli, guardando alle nuove rotte di navigazione che si apriranno, ai giacimenti di gas e di petrolio e a tanto altro. La Russia ha inviato dei sottomarini a piantare la propria bandiera sul fondale oceanico dell'Artico, mentre gli Stati Uniti e il Canada hanno avviato una disputa per decidere di chi è la sovranità sul passaggio a nord-ovest, la mitica via di navigazione a settentrione del continente americano che già si sta liberando dai ghiacci perenni che la rendevano impraticabile. Tutto piuttosto pacifico perché gestito da soggetti che gestiscono interessi economici in maniera generalmente razionale.

Senonché, l'ipotesi che la competizione si faccia violenta non viene trascurata; il 13 novembre 2007 la NATO è stata interessata dal Ministro degli Esteri norvegese alle implicazioni del disgelo artico. Il numero di marzo-aprile 2008 di *Foreign Affairs* pubblicava un articolo dal titolo *La fusione dell'Artico* di Scott Borgerson; ecco come l'editore ne sintetizza il contenuto: «a causa del riscaldamento globale, le distese di ghiaccio artico si stanno rapidamente fondendo, dando accesso a ingenti risorse naturali e a scorciatoie nelle rotte marittime che potrebbero far risparmiare miliardi di dollari ogni anno¹. Ma attualmente mancano regole chiare a governare questa regione di importanza vitale sul piano economico e strategico. A meno che Washington non apra la strada a soluzioni multilaterali diplomatiche, l'Artico potrebbe precipitare in un conflitto armato». Un'ipotesi lontana da noi italiani nello spazio e nel tempo, e lontana in assoluto nelle probabilità, per fortuna. Tuttavia, nel nostro piccolo pianeta interconnesso ha già delle conseguenze sui trasporti marittimi commerciali in cui l'Italia è presente. Inoltre, malgrado sia del tutto improbabile un vero

¹ Secondo stime dello U.S. Geological Survey – pubblicate nel maggio 2009 – circa il 30% delle riserve mondiali di gas naturale non ancora censite (47,3 miliardi di metri cubi) e circa il 13% delle riserve di greggio (90 miliardi di barili) si troverebbero nell'Artico. A ciò si aggiunge il valore economico – stimato in diversi miliardi di dollari di costi risparmiati ogni anno – e l'importanza geo-politica delle rotte marittime che potrebbero aprirsi con lo scioglimento dei ghiacci: il Passaggio a Nord Ovest, fra l'Atlantico e il Pacifico, a settentrione del Canada e dell'Alaska e il Passaggio a Nord Est, lungo la costa siberiana. L'estrema rigidità del clima artico rendeva queste risorse di difficile accesso e anti-economiche. Tuttavia, l'Artico è la regione ove più rapidamente si fanno sentire gli effetti del cambiamento climatico: se la tendenza prosegue, entro circa vent'anni i due Passaggi potrebbero essere liberi dai ghiacci e facilmente navigabili durante i mesi estivi, mentre si creeranno condizioni più favorevoli allo sfruttamento dei giacimenti di ogni genere, compresi quelli in mare aperto che dovrebbero rappresentare – sempre secondo lo U.S. Geological Survey – circa l'84% delle nuove risorse individuate nella regione artica.

conflitto, ricordiamoci che della NATO facciamo parte anche noi: così lontano, così vicino. Senza contare che, se i passaggi a Nord Est e Nord Ovest diventano ordinariamente navigabili, il Canale di Suez e la rotta commerciale mediterranea – ove transita circa il 20% delle merci – perde senso economico.

Anche comunità diverse da quelle autoctone stanno subendo pressioni per l'alterazione complessiva dell'ambiente artico. Quasi il 40% della popolazione degli Stati Uniti risiede nelle zone costiere. «Una rapida crescita del livello dei mari» – notano in uno studio dell'Università di Princeton² – «rischia di aggravare l'esposizione a lungo termine ai rischi di inondazione: circa 1,3 milioni, 3,4 milioni e 11,7 milioni di persone negli Stati Uniti continentali potrebbero essere a rischio di spostamento con scenari di innalzamento rispettivamente di 0.3m, 0.9m, e 1.8m del livello del mare entro il 2100. L'entità delle popolazioni dislocate dall'innalzamento del livello del mare potrebbe costare fino a 11.7 trilioni di dollari. Città come Boston, New York, New Orleans e Miami sono a rischio e le prime avvisaglie ci sono già, con l'erosione di diverse isole». Anche altri Stati ricchi sono a rischio: i Paesi Bassi, con gran parte del loro territorio sotto il livello del mare e protetto da un sistema di dighe che gli olandesi stanno già pianificando di rinforzare. Oppure Singapore.

Da queste nazioni, verrebbe da pensare, non deriva tuttavia un rischio geopolitico o per la sicurezza dell'Italia: sono solide e ricche a sufficienza per assorbire i costi economici e sociali senza che questi portino a conseguenze sulla sicurezza internazionale. Solo che il pianeta Terra è interconnesso: se questi paesi sono assorbiti dalla sfida di gestire la loro riorganizzazione del territorio e i loro movimenti di popolazioni, necessariamente chiuderanno le porte ai flussi di migranti che gli stessi fenomeni stanno creando nei paesi meno fortunati. E allora questi dove andranno? Forse siamo indirettamente coinvolti anche noi.

Questo tranquillizzante “forse” invece non c'è per quanto riguarda gli impatti di mari più alti su paesi più fragili. Il potenziale di movimenti forzati di popolazioni a livello mondiale entro la fine del secolo, se si verifica lo scenario di un innalzamento degli oceani di circa due metri, è di 700 milioni di persone circa fra dislocazioni interne e internazionali: si tratta di migrazioni semplicemente ingestibili. E re-

² <http://paa2015.princeton.edu/uploads/153817>. Significativo anche:

<https://www.google.it/amp/s/amp.businessinsider.com/5-terrifying-impacts-of-rising-sea-levels-2015-2?client=safari>

gioni in cui le conseguenze già ci riguardano non mancano. Si salinizza il delta del Niger in un'area in cui investiamo e da cui provengono pericolosi traffici illeciti che ci raggiungono, oltre a consistenti movimenti forzati di popolazioni. Non è ancora la causa determinante, ma quest'ennesima pressione sul sistema agricolo non è estranea alla tensione sociale in cui traffici e fanatismi che finiscono per riguardarci trovano terreno fertile. Ciò vale ancora di più per un altro paese fragile e lontano, il Bangladesh, ove i nostri interessi economici sono rilevanti, ove il fanatismo islamico ha già colpito, e che non è estraneo ai flussi migratori che raggiungono l'Europa: uno dei paesi più poveri del mondo, fra i più vulnerabili all'innalzamento del livello del mare. La popolazione è già gravemente colpita da mareggiate che paiono di severità crescente, ed altri eventi catastrofici in passato hanno causato danni fino a 100 km nell'entroterra. Non è difficile immaginare fino a che punto gli impatti peggiorerebbero con l'aumento accelerato del livello del mare.

Ma concentriamoci su un nostro vicino, l'Egitto. Non solo la portata del Nilo potrebbe ridursi del 75% per la fine del secolo – per varie ragioni, compreso il clima – ma un innalzamento rilevante del livello del mare potrebbe allagare fino al 20% del delta del fiume aumentando il tenore di sale. Ma il delta del Nilo è cruciale per l'economia e la sopravvivenza stessa della popolazione. Poiché il 95% del Paese è deserto, se il Nilo si ritira o non fornisce più acque adatte all'irrigazione, l'Egitto entrerà in crisi: si stimano gravi perdite in termini di Pil (6-16 %), ampia popolazione colpita (10-20 %), di aree urbane (6-12 %) e agricole (15-35 %) interessate, perché nel Delta del Nilo risiede un'elevata percentuale degli abitanti e in quest'area si concentrano le principali attività economiche del paese, soprattutto l'agricoltura. Ciò riguarderebbe una nazione in continua crescita demografica, con una grande proporzione di giovani in cerca di un futuro, in un contesto regionale di instabilità e ove i paesi del Medio Oriente e del Nord Africa ospitano il 5% della popolazione mondiale ma possiedono meno dell'1% delle risorse idriche utilizzabili. Di riflesso e a forza di ripercussioni, cosa succederebbe alla nostra intera area?

Se l'effetto più vasto della fusione di tutti questi ghiacci è l'innalzamento del livello del mare, i cui impatti si sentiranno soprattutto nella seconda metà del secolo, un altro aspetto è ancor più minaccioso: la diminuzione delle riserve di acqua intrappolate nei ghiac-

ciai che si trovano sulle più alte montagne dei vari continenti, soprattutto alle medie latitudini, Himalaya, Alpi, Ande e non solo.

Il cambiamento climatico colpisce più gravemente le aree montuose, sia perché spesso ospitano ecosistemi fragili e altamente sensibili, sia perché vi risiedono popolazioni generalmente più povere, legate a economie isolate e di sussistenza. Il clima che cambia sta già aggravando la fuga dalle montagne – e quindi dinamiche migratorie verso le pianure e le città – che erano già consistenti per ragioni sociali e produttive: le montagne coprono il 22% delle terre emerse – predominando in numerosi paesi, compreso il nostro – e raccolgono circa il 70% delle fonti d'acqua dolce, il 23% della copertura forestale mondiale, il 25% della biodiversità, il 60% delle riserve della biosfera dell'UNESCO, e catalizzano fra il 15 e il 20% del turismo mondiale. La popolazione delle montagne non è di scarsa entità, si tratta del 13% della popolazione mondiale, con circa 915 milioni di residenti. Ma è frammentata, e ciò rende la voce delle montagne poco potente, dandoci l'impressione che rappresentino un problema minore.

Ma anche a voler essere cinici – solo il 13% della popolazione? – dobbiamo fare i conti con la gravità: quel che succede a monte, in alto, si abbatte a valle, sulle pianure popolate e fertili. In molte zone, le risorse idriche a disposizione dipendono in modo cruciale dal disgelo primaverile dei ghiacciai montani: ne dipende il rifornimento idrico di circa la metà della popolazione umana. Questo disgelo provoca una regolata discesa a valle di enormi quantità di acqua che possono essere utilizzate da attività agricolo-pastorali, ma anche per bere, oppure per riempire invasi idrici che possano consentire di non soffrire più di tanto la siccità estiva. Il fatto che la massa dei ghiacciai diminuisca fa sì che anche la quantità di acqua che scende a valle – nella stagione calda in cui ce n'è più bisogno – sia minore, o vada addirittura a zero nel caso di scomparsa dei ghiacciai stessi. In zone critiche tutto ciò potrà portare ad instabilità e migrazioni, ma anche in zone meno vulnerabili si potranno avere grossi problemi. Si pensi alle nostre Alpi. Come riempiremo i bacini che forniscono energia idroelettrica? Gli interrogativi riguardano anche noi, ma la fusione dei ghiacciai montani prelude a uno scenario molto più preoccupante, ad esempio, in Asia.

La regione dell'Hindu Kush himalayano è conosciuta come il 'Terzo Polo' per le sue gigantesche masse di ghiaccio e neve, e le catene montuose che vi si connettono percorrono tutto il Sud e Sud-Est asiatico e comprendono rilievi in Afghanistan, Bangladesh, Bhutan,

Cina, India, Myanmar, Nepal e Pakistan. L'Hindu Kush Himalayano da solo è la fonte di dieci grandi sistemi fluviali, e a valle 1,4 miliardi di persone – un quinto della popolazione del mondo – dipende dal deflusso dei ghiacciai per beni e servizi essenziali: con l'acqua, il cibo e l'energia.

A nord del complesso himalayano quasi il 90 per cento della popolazione dell'Asia centrale conta sull'acqua che defluisce dai ghiacciai: una risorsa su cui le tensioni tra i paesi dell'altopiano e quelli di pianura si stanno moltiplicando. A sud, il subcontinente indiano – irrigato dall'Indo e dal Gange che scendono dall'Himalaya – e il sud-est asiatico reso fertile dal Mekong, non hanno prospettive migliori. Saldando i due versanti, la crisi che si profila è di dimensioni continentali e si innesta su un quadro di fragilità idrica già esacerbato per altre ragioni.

In questo scenario già teso, incombe lo spettro di un vero e proprio collasso dei ghiacciai dell'Himalaya. Si teme che esso intervenga “all'improvviso”, superata una certa soglia di tenuta dei ghiacciai – come “impatto non lineare” – in tempi relativamente brevi e non gradualmente, non in misura proporzionale all'aumento delle temperature, per “lubrificazione” dei ghiacciai. In pratica, con l'aumento delle temperature una parte più consistente del solito del ghiaccio che si fonde in superficie, prima di defluire a valle, si insinuerebbe nei crepacci e nelle varie spaccature, nutrendo una rete di scorrimento all'interno e sotto i ghiacciai che andrebbe a lubrificare i loro ancoraggi sui pendii. Essi inizierebbero a sganciarsi e disgregarsi e quindi potrebbero essere esposti a un collasso.

E se ciò avvenisse? Teniamo a mente quello che è successo con la crisi finanziaria del 1929, quella che ha condotto la classe media tedesca a scelte irrazionali a causa di pressioni economiche e della svalutazione: fenomeni di ampia portata, ma soprattutto sviluppatisi in tempi troppo brevi per consentire alla popolazione di trovare soluzioni di vita compatibili con il nuovo panorama economico. Consideriamo quindi che lo scenario della fusione dei ghiacciai potrebbe manifestarsi come rottura improvvisa dell'equilibrio – con i ghiacciai che si sgretolano a causa della lubrificazione – ed emergere in tutta la sua ampiezza in tempi relativamente brevi, che non lasciano tempo alle società per riorganizzarsi e adattarsi. Aggiungiamo che i fiumi provenienti dall'Himalaya irrigano proprio l'India, le piane dell'Asia centrale e il sud-est asiatico, ovvero che – direttamente o indirettamente – sostentano 1,4 miliardi di persone.

Se la crisi finanziaria del 1929 bastò a dividere le nazioni e portarle alla Seconda guerra mondiale, cosa ci porterebbe una rapida fusione dei ghiacciai dell'Himalaya? Uno scenario in cui le estese terre costantemente irrigate dai fiumi che scendono dalla catena montuosa asiatica rapidamente si trasformano in lande flagellate da un'alternanza di siccità e inondazioni – i ghiacciai regolano un costante afflusso di acqua – implica che centinaia di milioni di persone si troveranno prive di sostentamento e riferimenti produttivi secolari: se scattassero allora le stesse dinamiche socio-economiche che hanno condotto al secondo conflitto planetario, in una regione in cui quattro Stati – Cina, India, Pakistan e Russia – hanno armamenti atomici, abbiamo gli ingredienti della Terza guerra mondiale.

Dando per scontato che, con una chiara consapevolezza di una simile minaccia, essa non avrà un esito bellico, il potenziale destabilizzante, di conflittualità locale, e quindi migratorio, rimane preoccupante. L'Asia è lontana dall'Italia e abbiamo impatti critici del clima ben più vicini geograficamente, e anche più avanzati come fenomeno, di cui preoccuparci. Ma siamo nell'era della globalizzazione e dei trasporti rapidi: rimarremmo immuni? E se anche le popolazioni colpite si dirigessero altrove, verso l'Australia, la Russia, il Giappone, il Canada? Non ci riguarda? Si formerebbe un cerchio di pressione migratoria che saturerebbe altre regioni di ricezione dei flussi, lasciando al polo europeo del mondo sviluppato il compito di fronteggiare tutto il resto, in un clima geo-politico che non favorisce la collaborazione.

L'Himalaya è lontano. Ma forse la storia ci insegna qualcosa, specie quella di epoche in cui spostarsi non era né facile né immediato. Secondo uno studio pubblicato nel 2011 dalla rivista *Science*³, un periodo prolungato di clima instabile in Asia, durato dal 250 al 600 d. C., contribuì con il collasso delle produzioni agricolo-alimentari al declino dell'Impero Romano, a cui l'impatto delle cosiddette “invasioni barbariche” – l'esodo in massa di popolazioni spinte dalla necessità di trovare altrove aree di sussistenza – avrebbe dato il colpo decisivo che ne determinò il crollo. E ora che il cambiamento climatico prodotto dall'uomo si prospetta ben più esacerbato? Ora che ci si muove rapidamente? Ora che invece di cavalieri, lance ed archi, c'è il terrorismo e la guerra asimmetrica? L'Europa unita – quella che ha quasi abbandonato la libera circolazione delle persone in seguito a un

³ Büntgen et al. (2011), *2500 Years of European Climate Variability and Human Susceptibility*, in *Science*, 331, 578-582.

modesto afflusso di migranti dal Sud – a Est confina con le terre che furono di Attila. Magari, questa volta, invece di attendere lo scontro potremmo organizzarci per risolvere assieme il problema.

CONCLUSIONS

CARMINE ROBUSTELLI

Once closed this final panel, I will take just few more minutes of your time, since my name in the programme has been linked not only to the moderation of this panel, but also to draw the general conclusions of the symposium. Therefore, if I can, my intention is to remark few points that stemmed during this edition of Arctic Connections.

First, as already recalled, the need and hope to meet again soon for a fourth edition of Arctic Connections. I believe it is widely agreed that this format is successful and it is a useful example of the Italian-Norwegian friendship and collaboration. Therefore, my thanks go to Nord University, the Embassy of Norway, and SIOI, whose agreement and intent have allowed this fruitful debate. In my capacity of Special Envoy for the Arctic for the Italian Ministry of Foreign Affairs and International Cooperation, I underline the need to continue along this path.

Concerning the topics highlighted during these days, I should remark that the Arctic can and has to be a hotspot for contrasting climate change, boosting energy transition and increasing sustainable development. This understanding of the Arctic has been confirmed in every speech and work exposed.

Furthermore, the importance of youth involvement has been underlined in all contributions, and when I refer to youth involvement, I mean their involvement in the decision process. So, not only listening to, not only discussing with youth, but also their concrete involvement, because involvement in the decision process means also taking responsibilities, balancing interests, compromising, acting in real life and not just in theory, which I believe is fundamental for the youth.

Another topic I would like to underline is the importance of cooperation, i.e. the actual involvement of all actors at any level, as governments, international organizations, local communities, scientists, civil society and private companies. The participation of all

such actors to Arctic Connections contributes to an effective dialogue on climate change and sustainable development.

Finally, I would like to recall some iconic sentences heard during the symposium. I already knew “what happens in the Arctic does not stay in the Arctic” and “the Arctic is global and local”, now I added to my book “The Arctic is not a museum” and “Nothing about us without us”. They are closely linked together as they perfectly summarise the spirit of our work and dialogue. Arctic peoples must be considered first and foremost. Not only is this a warning to non-Arctic peoples and States but also it means that the first responsibility is yours to take the action, make proposals, act first as Arctic States and Arctic peoples.

In conclusion, I would like to reiterate that Italy is ready to continue supporting you, as it has done to this day.

Thank you very much and see you next time.