

ENVIRONMENT IN TIMES OF WAR

CLIMATE AND ENERGY CHALLENGES IN THE POST-SOVIET REGION

edited by **Aldo Ferrari** and **Eleonora Tafuro Ambrosetti**
introduction by **Paolo Magri**



ISPI

ENVIRONMENT IN TIMES OF WAR

CLIMATE AND ENERGY CHALLENGES IN THE POST-SOVIET REGION

edited by Aldo Ferrari and Eleonora Tafuro Ambrosetti

ISPI

© 2022 Ledizioni LediPublishing
Via Antonio Boselli, 10 – 20136 Milan – Italy
www.ledizioni.it
info@ledizioni.it

ENVIRONMENT IN TIMES OF WAR: CLIMATE AND ENERGY CHALLENGES
IN THE POST-SOVIET REGION
Edited by Aldo Ferrari and Eleonora Tafuro Ambrosetti

First edition: June 2022

Print ISBN 9788855267335
ePub ISBN 9788855267342
Pdf ISBN 9788855267359
DOI 10.14672/55267355

ISPI. Via Clerici, 5
20121, Milan
www.ispionline.it

Catalogue and reprints information: www.ledizioni.it



**Ministry of Foreign Affairs
and International Cooperation**

This Report is realized with the support of the Policy Planning Unit of the Ministry of Foreign Affairs and International Cooperation pursuant to art. 23-bis of Presidential Decree 18/1967.

The opinions contained in this Report are solely those of the authors and do not necessarily reflect the opinions of the Ministry of Foreign Affairs and International Cooperation and ISPI.

Table of Contents

Acronyms.....	7
Introduction	
<i>Paolo Magri</i>	11
1. Russia's "Green Shift" and What It Means for Neighbouring Countries	
<i>Richard Sakwa</i>	17
2. War and Decarbonisation: EU-Russia Energy Relations in Crisis	
<i>Marco Siddi, Eleonora Tafuro Ambrosetti</i>	37
3. Food as a "Silent Weapon": Russia's Food Security Strategy	
<i>Elena Maslova</i>	55
4. How Is Climate Change Shaping Russia's Arctic Policy and Activities?	
<i>Pavel Devyatkin</i>	77

5. Environmental Challenges and Opportunities Posed by the BRI in Central Asia <i>Aliya Tskhay</i>	101
6. Desertification of the Aral and the Caspian Seas: Patterns and Political Implications <i>Stefanos Xenarios, Jessica Neafie</i>	115
Conclusions.....	137
About the Authors.....	141

2. War and Decarbonisation: EU-Russia Energy Relations in Crisis

Marco Siddi, Eleonora Tafuro Ambrosetti

The early 2020s are proving to be a watershed for EU-Russia energy relations. Following decades of trade and growing interconnections, Russian gas accounted for over 40% of EU gas imports in 2021. In addition, around one quarter of the EU's oil imports and 40% of coal imports came from Russia.¹ Moscow was also the main external supplier of coal to the Union. This state of affairs seems to be about to crumble due to two highly significant developments: the EU's decarbonisation agenda and the unprecedented tensions between the EU and Russia following Moscow's military attack against Ukraine in February 2022.

The decarbonisation agenda of the EU cast the first dark clouds on the future prospects of fossil fuel trade with Russia. While the EU has had emission reduction targets since the 1990s, it was only recently that these targets became more ambitious. Following the launch of the European Green Deal in December 2019, the European Commission set a carbon neutrality target for the Union by 2050; this target was codified in the European Climate Law in 2021.² For the mid-term, the EU aims to reduce its greenhouse gas emissions by at least 55%

¹ Eurostat, <https://ec.europa.eu/eurostat/cache/infographs/energy/bloc-2c.html> (accessed 18 March 2022).

² M. Siddi, *The European Green Deal: Assessing its current state and future implementation*, Finnish Institute of International Affairs (FIIA), Helsinki, May 2020.

by 2030. Inevitably, this entails a significant reduction in coal, oil and gas consumption, and hence in imports of these energy sources from abroad.

Russia's attack on Ukraine in February 2022 marked a second turning point. The EU is now fast-tracking its reduction in fossil fuel imports specifically from Russia as a measure to decrease its energy dependence, punish Russia for its actions and prevent Moscow from using export revenues to finance the war.³ While cutting energy ties with Russia will require time and drastic policy adjustments, and the picture remains fluid at the time of writing, it appears highly unlikely that the EU-Russia energy relationship will survive the ongoing crisis unscathed. The EU has already imposed an embargo on the import of Russian coal and sea-borne oil, and its RePowerEU Plan focuses on a drastic cut in oil and gas imports too.⁴ This raises questions about both the future of the relationship and how present developments fit into the broader picture of global efforts to tackle climate change.

This chapter engages with these issues as follows. It starts by reviewing the impact of the European Green Deal and the energy transition on EU-Russia energy trade. It then examines how the beginning of the war in Ukraine has led the EU to accelerate its plans to switch to renewable energy, boost energy efficiency and especially diversify away from Russian supplies. At the time of writing, it remains unclear how these plans will be implemented, but there is little doubt that costs will be significant. Next, the chapter reviews recent developments in Russia concerning the climate agenda and explores areas where “green” cooperation with the EU could be possible – and functional to the multilateral climate agenda – when the political climate allows.

³ M. Bianchi and P.P. Raimondi, *Russian Energy Exports and the Conflict in Ukraine: What Options for Italy and the EU?*, Istituto Affari Internazionali (IAI), March 2022.

⁴ REPowerEU Plan. COM/2022/230 final, 18 May 2022, <https://eur-lex.europa.eu/legal-content/EN/TEXT/PDF/?uri=CELEX:52022J0023&from=EN>.

Energy Transition in Europe: Impact on EU-Russia Energy Trade

The European Green Deal and the energy transition in Europe will have two types of consequences for Russia. Firstly, as implementation of the energy transition in Europe proceeds, Russia's energy exports to the European market will be affected. European demand for Russian fossil fuels will decrease, even if the current confrontation over the war in Ukraine is eventually resolved. As the most polluting fossil fuel, coal has no future on the European market. Even prior to the EU's announcement of a 55% GHG reduction target for 2030, Makarov estimated that Russian coal exports to Europe would see a drastic reduction already in the 2020s. The embargo imposed by the EU on Russian coal in April 2022 has already halted this trade. Even in a post-Ukraine-war "low tension" scenario, oil and gas exports will decrease substantially in the late 2020s and 2030s at the latest.⁵ Russian oil has a relatively low production cost and mid-range carbon intensity (the amount of carbon emitted per unit of energy produced). This suggests that, with shrinking global oil demand and more widespread carbon accounting mechanisms in the future, Russian oil will remain competitive, but it may also become less attractive to buyers than oil from producers with lower carbon intensity such as Norway, Saudi Arabia and the United Arab Emirates.

With regard to the gas trade, Russia faces the challenge of decreasing European demand, phasing out long-term contracts and addressing the issue of methane leakage, which has recently received much attention in multilateral efforts to tackle climate change (particularly through the launch of a Global Methane Pledge by the EU, US and a few other countries).⁶ Following

⁵ I. Makarov, *The External Dimension of the European Green Deal: Russia's Perspective*, Konrad Adenauer Foundation, 2021.

⁶ J. Stern, "Will the Global Methane Pledge achieve critical mass in 2022?", in *Key Themes for the Global Energy Economy in 2022*, Oxford Institute for Energy Studies (OIES), January 2022, pp. 23-24.

Russia's war against Ukraine in 2022, estimates for Russian gas exports to Europe will most likely have to be revised, as the EU plans to decrease its imports significantly, even in the short run, for political reasons (see below). These developments will have an impact on the Russian state budget, which relies substantially on fossil fuel exports: while Russian energy exports to Asia and China in particular have increased in recent years, Europe remains the main destination market.

The second set of consequences of the European Green Deal concerns energy-intensive Russian exports to Europe, such as metals, chemicals and fertilisers. Beginning in 2026, the EU plans to introduce a carbon border adjustment mechanism (CBAM), namely a tax on imports commensurate with the volumes of emissions related to their production. The EU's declared aim is both to prevent the transfer of carbon-intensive production to countries with weaker environmental standards and to induce other countries to adopt similar standards. The tax is likely to affect the price of Russia's metallurgical (i.e. iron, steel, aluminium) and chemical products and of electricity sales on the European market. In 2019, Russia provided around 13% of the EU's iron and steel imports, 29% of fertiliser imports, 13% of aluminium imports and 12% of electricity imports.⁷ This trade has been and will likely be further affected heavily by the ongoing political crisis even prior to the introduction of CBAM.

The EU's plan to introduce CBAM was met with criticism from Russia and other trade partners who tend to see it as "green protectionism", namely as a way of using environmental arguments for protectionist purposes. Some Russian policy actors mentioned that the issue could be taken to the World Trade Organization (WTO). Compatibility with WTO rules will depend on the final design of CBAM. The WTO itself has been weakened considerably by the posture of major actors in

⁷ A. Assous et al., "A Storm in a Teacup: Impact and Geopolitical Risks of the European Carbon Border Adjustment Mechanism", *E3G*, pp. 6-7, 9, 45.

recent years (notably the US during Trump's presidency), and its effectiveness in a relevant dispute is not certain. In this context, if carbon border taxes become a common practice in the international arena, Russia's interests may best be served by the introduction of its own domestic carbon pricing mechanism. As argued by the Russian presidential advisor on climate issues, Ruslan Edelgeriyev, this would ensure that carbon fees are collected in Russia rather than abroad.⁸

Another key question stemming from the Green Deal concerns the speed of the energy transition in Europe and the "room" allowed for gas in the process. These will be important factors in determining the upcoming role of external gas suppliers in the European market. While European discourses on gas have become more critical in recent years, in early February 2022 the European Commission proposed including gas power (together with nuclear) in the bloc's sustainable finance taxonomy, even if subject to some limits and phase-out periods.⁹ This suggests that the Commission, together with many European businesses and public stakeholders, continues to see an important role for gas during the energy transition. In this context, if the European market remains free and open to all external suppliers, Russian gas exports could continue to play an important role thanks to their competitiveness. At the moment, however, the European Commission is bent on limiting the role of Russian gas in the European market as a retaliatory measure for Russia's invasion of Ukraine.

⁸ R. Edelgeriyev, "Tsena na uglerod kak instrument ekonomicheskoy i ekologicheskoy politiki" ("The price of carbon as an economic and environmental policy"), *Kommersant*, 11 giugno 2020.

⁹ F. Simon, "EU puts green label for nuclear and gas officially on the table", *Enractiv*, 2 February 2022.

War in Ukraine: A Quick End to Energy Interdependence?

Russia's attack on Ukraine on 24 February 2022 came as a shock to most European policy makers and energy businesses. Prior to it, the political climate between Russia and the West had been deteriorating for months due to Moscow's official proposals for restructuring the European security architecture (by curbing and reversing NATO's military presence in Eastern Europe), Gazprom's reluctance to sell gas on spot markets in addition to the volumes guaranteed through long-term contracts, and the military build-up around Ukraine. On 21 February, Russia's decision to recognise the so-called Donetsk and Lugansk Peoples' Republics led *inter alia* to Germany freezing the certification process of the Nord Stream 2 pipeline.¹⁰ This step was significant because Nord Stream 2 was the largest (and most controversial) new cooperative project between Russia's Gazprom and its European partners, and Germany had been its staunch supporter until then.

When Russia attacked Ukraine, the belief that energy trade was financially supporting Moscow's military efforts quickly became dominant in EU decision-making circles. This led the European Commission to draft the REPowerEU Communication, which focused on a drastic cut of gas imports from Russia in the short term (by the end of 2022). Despite the simultaneous energy crisis, unprecedentedly high energy prices and the existence of long-term supply contracts with take-or-pay clauses between Gazprom and numerous European companies, the Commission proposed to reduce imports of Russian gas by approximately 100 billion cubic metres (bcm) by the end of 2022.¹¹ The EU had imported around 155 bcm of Russian gas in 2021; therefore, the Commission's proposal was to immediately cut two thirds of normal import volumes.

¹⁰ S. Marsh and M. Chambers, "Germany freezes Nord Stream 2 gas project as Ukraine crisis deepens", *Reuters*, 22 February 2022.

¹¹ European Commission, "REPowerEU: Joint European Action for more affordable, secure and sustainable energy", 8 March 2022.

According to the Commission, this goal is to be achieved primarily by substituting imports of liquefied natural gas (LNG) from other producers (Qatar, the US, Egypt and West Africa) for Russian gas. 50 bcm/year would be acquired in the form of LNG. In this respect, high prices and the actual market availability of LNG, most of which is sold to Asian buyers under long-term contracts, appears to be the main challenge. The Commission also hopes to import an additional 10 bcm/year via pipeline from Azerbaijan, Algeria and Norway, and to save the equivalent of 38 bcm by frontloading wind and solar energy deployment and implementing energy-saving measures. After 2022, further cuts in gas imports should be made possible by increased biomethane production (resulting in an additional 17 bcm) and the large-scale deployment of renewable hydrogen.¹²

It is unclear whether the EU will be able to (fully) implement these measures, some of which – such as saving energy by “turning down the thermostat of buildings’ heating by 1 degree Celsius, saving 10 bcm”¹³ – depend on citizens’ behaviour and can be neither enforced nor monitored by the Commission. Energy prices, their consequences for the European economy and citizens’ willingness to accept very significant costs will influence, and potentially constrain implementation of the Commission’s plans. At the time of writing, the Commission appears to be sending a strong political message to Russia and Gazprom, possibly with the intent of signalling to Moscow that lucrative energy trade with the EU will be over in the short term if Russia continues its military campaign. Furthermore, the EU seems to be using the current political climate, including the widespread criticism of energy trade with Russia, to foreground and accelerate its “Fit for 55” climate agenda, which foresees a reduction in EU greenhouse gas emissions by at least 55% by 2030.¹⁴

¹² Ibid., pp. 6-8.

¹³ Ibid., p. 6.

¹⁴ See European Council, “Fit for 55”.

A “Greener” Russia?

While at the time of writing, attention focuses on reducing the EU’s reliance on Russian energy, the future of the global climate and energy agenda also leads us to look at Russia’s reaction to shrinking fossil fuel markets and its possible contribution to multilateral climate commitments. According to the International Energy Agency (IEA), Russia is the world’s third-largest oil producer, the largest exporter of oil to global markets and the second-largest crude oil exporter behind Saudi Arabia. In 2021, Russian crude and condensate output reached 10.5 million barrels per day (bpd), making up 14% of the world’s total supply.¹⁵ Also, due to its intense production of energy from fossil fuels, Moscow is often accused of having a heavy carbon footprint. Indeed, the Federation remains a strong polluter today, albeit to a lesser extent than other G20 countries. With 1,711 million tons of CO₂ produced, Russia ranks fourth in the global polluters ranking, which is headed by China at around 30% of all global emissions, and the United States (14%).¹⁶ Hence, it does not seem plausible to achieve global climate and environmental goals without the involvement of Russia.

For its part, Russia has a rational interest in participating in the energy transition, first and foremost because climate change is having severe repercussions for the country itself. Russia is particularly exposed to climate change: the permafrost that covers 65% of the continental mass is melting, with dire environmental consequences. The country has recently been the scene of severe accidents both related to climate change and due to human hand: from the oil spill in Siberia in June 2020 – which, with over 21,000 tons of diesel poured into the Arctic Ocean, is one of the most significant incidents of this type in the history of Russia¹⁷ – to more frequent wildfires in Siberia. The

¹⁵ International Energy Agency (IEA), *Oil Market and Russian Supply – Russian supplies to global energy markets*, Analysis.

¹⁶ *Which countries are the world’s biggest carbon polluters?*, ClimateTrade.

¹⁷ “Russia races to clean up massive oil spill in Siberia”, *News DW*, 6 June 2020.

2021 wildfire season was Russia's worst ever, but, according to Greenpeace, the number of wildfires in April 2022 was already twice as high as those of the same time last year, while wildfires in May 2022 alone killed 16 people.¹⁸ Furthermore, given the global “green shift” that is occurring – at least rhetorically – in Russia too,¹⁹ Moscow needs to develop green technologies and avoid widening the technological gap with competitors if it wants to remain a key energy player in the next decade. This happens in a context made even harder by international sanctions and the Green Deal, which is doomed to reduce EU demand for Russian energy regardless of possible embargoes.

In light of these and other considerations, in 2021, Russia adopted a strategy to reduce carbon emissions to achieve carbon neutrality by 2060, first cutting net greenhouse gas emissions to 80% of 1990 levels and 60% of 2019 levels by 2050. However, Russia has its own way of defining carbon neutrality. While the EU has chosen the paradigm of decarbonisation, the Russian approach is to adapt to the consequences of climate change and search for tools to reduce emissions by absorbing them, for example through Carbon Capture and Storage (CCS), but also by increasing forestry: the so-called strategy of reducing losses and utilising benefits.²⁰ The Russian recipe for decarbonisation is based on two pillars: 1) increasing the capacity of ecosystems to absorb emissions; and 2) decarbonising economic sectors through energy and resource efficiency, including in carbon-intensive industries. Furthermore, specific policies in technical regulation and financial and fiscal policy appear to be the engines of technological renewal. The first pillar implies, to a greater extent, the realisation of Russia's national potential, while the second – the modernisation of industries in a green key – was seen to involve a strong potential for cooperation

¹⁸ “[Summer Wildfires Ravage Forest-Rich Siberia, in Photos](#)”, *The Moscow Times*, 15 May 2022.

¹⁹ See chapter 1 by Richard Sakwa in this volume.

²⁰ See E. Maslova, *What Does the Green Deal Mean For Russia?*, ISPI Commentary, ISPI, 14 April 2021.

between the West and Russia.²¹ At least, before Russia invaded Ukraine.

War-related rollbacks are indeed doomed to make Russia's green targets harder to achieve. This is because the strong reaction against the war has imposed heavy economic costs on Russia and curtailed cooperation with the West. In general, state officials maintain the new political and economic situation will not alter Russia's green commitments, but high-profile figures have voiced their concern. For instance, Russia's energy ministry has stated that Western sanctions over Ukraine could prevent the country from achieving its plans to cut carbon emissions by 2050 and has developed a plan to support Russia's vast energy sector in the face of sanctions, including tax cuts and the possibility of dropping dividends.²² In general, uncertain political and economic circumstances do not set a favourable climate for green investments and "the planning and implementation of systemic changes necessary for achieving meaningful progress toward decarbonisation".²³ Moreover, several politicians and lobbyists have already seized the moment to demand the cancellation of the Paris Agreement and domestic environmental programmes, asking to prioritise the interests of crisis-ridden businesses instead.²⁴ There are production challenges linked to Western sanctions; targeted sanctions on specific technologies, financial sanctions and "self-sanctioning" by private companies are already preventing Russia from obtaining or producing high-tech goods.

²¹ E. Maslova and E. Tafuro Ambrosetti, "La transizione verde russa e l'UE: rischi e opportunità" ("Russia's green transition and the EU: risks and opportunities"), *Focus Sicurezza Energetica*, edited by ISPI, Senato della Repubblica, Camera dei Deputati, Ministero degli Affari Esteri e della Cooperazione Internazionale, 2022.

²² N. Davlashyan, M. Shibalova, C. Harris, and AP, "How are sanctions impacting everyday life in Russia?", *Euronews*, 11 March 2022.

²³ Ibid.

²⁴ A. Davydova, K. Doose, and A. Vorbrugg, "Other casualties of Putin's war in Ukraine: Russia's climate goals and science", *The Conversation*, 23 May 2022.

Moreover, domestic production and the diversification of suppliers appear insufficient to make up for the loss of Western markets, at least in the short term: Russia is highly reliant on imports of high-tech goods, the largest share (45%) coming from the EU.²⁵ Another substantial risk comes from the general shrinking of space for civil society action, which is crucial to countering dangerous and unlawful attempts to impose particular economic interests over some natural regions. This is a longstanding trend in Russia, but the war is worryingly worsening it due to bans and restrictions on public protests, state targeting of high-profile figures, and difficulties for NGOs to carry out their work – both due to governmental regulations and the dropping of individual donations. This also applies to many environmental and climate activists and organisations that have been labelled as “foreign agents” since the invasion.²⁶

Furthermore, under the current conditions of growing sanctions and a looming economic crisis, there have been attempts at state level to roll back some environmental regulation. Such attempts include further easing rules for infrastructure construction in protected natural areas, lowering standards for wastewater discharges – including in the Baikal lake area – and pushing forward deadlines for introducing Best Available Technologies and industrial pollution monitoring systems. All this leads to a need for further advocacy and media campaigns when pressure on Civil Society Organisations (CSOs) in general is increasing, criticism of state actions (especially from CSOs) can be met with severe oppression, and public protest campaigns are growing increasingly difficult.

The government has already enacted several worrying measures that reverse the “green path” on which Russia had set out. For instance, in April 2022, a law permitting Russian carmakers to temporarily produce cars of all environmental

²⁵ M. Grzegorzcyk, J.S. Marcus, N. Poitiers, and P. Weil, *The decoupling of Russia: High-tech goods and components*, Bruegel, 28 March 2022.

²⁶ A. Davydova, *Wounded But Not Broken: Russia's Civil Society in Times of War*, ISPI Analysis, ISPI, 9 May 2022.

classes including Euro-0 was enacted. This need to roll back requirements to the level of the 1990s arose against the background of the suspension of supplies of electronic control units, according to the Russian daily *Kommersant*.²⁷ Another example is the March 2022 Ministry of Natural Resources' draft order providing for the actual elimination of forest spawning zones. Spawning zones are a particular category of protected forest around rivers and lakes in which valuable species of fish – such as salmon, sturgeon and whitefish – spawn. In addition, such areas preserve many aquatic and terrestrial ecosystems and maintain the cleanliness of water bodies. They make up about five per cent of all forests in Russia. As Greenpeace Russia reports,²⁸ officials propose to reduce spawning zones to the size of protected fishery areas. However, there are no such areas in Russia now, meaning that there will be no spawning zones either; as a result, forests will lose their protected status, allowing them to be cut down easily. Attempts to eliminate spawning zones have already been made in the past. Still, the active opposition of regular citizens as well as environmental and scientific organisations has so far prevented these attempts from succeeding. However, the current state of Russian civil society raises concerns over its ability to stand up against such decisions today.

Options for Implementing the Climate Agenda

Russia is widely seen as a “gas and oil superpower” thanks to its abundant resources of fossil fuels. The strong industrial sector and vested interests that were built around these natural endowments have consolidated this perception. However, the

²⁷ У машин обнуляется экология (“U mashin obnulyayetsya ekologiya”) (“The ecology of cars is reset to zero”), no. 68 (7269), *Kommersant*, 19 April 2022.

²⁸ В России ослабляют экологическое законодательство (“V Rossii oslablyayut ekologicheskoye zakonodatel'stvo”) (“Russia weakens environmental legislation”, [greenpeace.ru](https://www.greenpeace.ru), 22 April 2022.

country also has vast resources that are functional to the energy transition, such as wind, hydro, geothermal, biomass and solar energy.²⁹ In 2019, Russia was the ninth largest producer of electricity from renewable sources, mostly thanks to installed hydropower capacity.³⁰ The country's potential in wind and solar energy production remains almost completely untapped. Solar, wind, geothermal and biomass account for only 1.4% of Russia's energy supply.³¹ Despite the introduction of some decrees and modest funding to promote renewable energy production, ambition remains very limited. This was confirmed by Russia's Energy Strategy to 2035, which continued to assign a dominant role to fossil fuels in the country's energy future.³²

Against this broader, not very encouraging backdrop, some positive developments have nevertheless occurred, even involving Western companies. For instance, Italy's Enel became involved in the Russian wind power sector and built the Azov wind farm in the Rostov region, in Southern Russia, which has a capacity of 90MW and became operational in 2021. Enel has been building a second wind farm in the Murmansk region, in the far North, with a capacity of 201 MW, but it is unclear whether it will stay in the Russian market due to the war in Ukraine.³³

Besides its vast potential for wind and solar energy production, Russia could also become an important player in the hydrogen sector, where it already has a number of related R&D activities. Hydrogen is an energy carrier that can be produced from both fossil and green sources and is widely seen as essential to the decarbonisation of sectors such as heavy industry and

²⁹ J. Henderson and T. Mitrova, "Implications of the Global Energy Transition on Russia", in M. Hafner and S. Tagliapietra (Eds.), *The Geopolitics of the Global Energy Transition*, Springer, 2020, pp. 93-114.

³⁰ International Renewable Energy Agency (IRENA), [Renewable Capacity Statistics 2021](#); [Renewable Energy Statistics 2020](#).

³¹ [Climate Transparency](#), Russian Federation 2021, p. 6.

³² T. Mitrova and V. Yermakov, *Russia's Energy Strategy 2035: Struggling to Remain Relevant*, Institut français des relations internationales (Ifri), Paris, 2019.

³³ See Enel Green Power, [Russia](#).

long-haul transport.³⁴ Green hydrogen allows energy produced from intermittent sources such as solar and wind to be stored and distributed. Russia could produce hydrogen from both hydrocarbons (for instance, “blue” hydrogen from gas, with carbon capture and storage technology to offset emissions) and from renewable sources (“green” hydrogen). While the EU is betting on green hydrogen, despite the currently higher cost of producing it, Russia appears to be keener on hydrogen production based on hydrocarbons. The Russian government has also proposed using some existing gas pipelines for hydrogen exports to Europe.³⁵

Furthermore, Russia has substantial rare earth resources, which are essential in renewable energy and digital technologies. The Russian government has offered reduced mining taxes and cheaper loans to investors in eleven projects that are designed to increase the country’s share of global rare earths output to 10% by 2030 (from 1.3% now). This would make Russia the second-largest producer after China. According to these plans, Russia would become nearly self-sufficient in rare earths by 2025 and start exports in 2026.³⁶

Russia is rich in “energy transition metals”, key elements in the green transition economy. Their prices and availability, however, are linked to political volatility as they are often located in high-risk contexts, and to international demand, which is rising due to the intensification of low-carbon energy production.³⁷ The Ukraine conflict is proving a significant stressor. For instance, Russia accounts for 7% of the world’s

³⁴ M. Siddi, *The Geopolitics of the Energy Transition: Global Issues and European Policies Driving the Development of Renewable Energy*, Finnish Institute of International Affairs (FIIA), Helsinki, 2021, pp. 6-7.

³⁵ B. Wehrmann, “Russia ponders adding hydrogen to Nord Stream 2 gas deliveries to Germany”, *Clean Energy Wire*, 29 July 2020.

³⁶ A. Lyrchikova and G. Stolyarov, “Russia has \$1.5 billion plan to dent China’s rare earth dominance”, *Reuters*, 12 August 2020.

³⁷ É. Lèbre et al., “The social and environmental complexities of extracting energy transition metals”, *Nature Communication*, vol. 11, art. no. 4823, 24 September 2020.

mined nickel – used for electric vehicle batteries – and produces a third of the world’s palladium – used in the car industry to control vehicle emissions. The global prices of both metals skyrocketed in the aftermath of the invasion, although there have since been market adjustments.³⁸ Furthermore, these metals could be hit by sanctions in the future. So far, the EU and the US have imposed sanctions on Russian oil and gas, coal and other commodities, often causing market shocks: in April 2018, the price of aluminium increased by a third after US sanctions – later removed – targeting Rusal, the world’s largest aluminium producer after China.³⁹ However, even without direct sanctions, Russia’s production could be jeopardised by “self-sanctioning divestment by non-Russian firms and sanctions affecting access to international banking and insurance markets”.⁴⁰

Russia could also play a role as a supplier of cobalt and lithium, minerals that are critical to the production of lithium-ion batteries, digital technologies and hence to the energy transition. In global cobalt production, Russia currently comes a distant second to the Democratic Republic of Congo, with over 6,000 metric tons of yearly production (compared to 95,000 in the DRC). However, Russia possesses reserves that are estimated at around 250,000 metric tons, mostly concentrated in the Altai Republic. Russian mining company Norilsk Nickel is among the world’s top five producers of cobalt.⁴¹ Russia also has its own lithium deposits in eastern Siberia and Yakutia. The major Russian actor in the field of lithium – state corporation Rosatom, which has its main business in the nuclear sector – has prioritised ownership of lithium resources abroad, particularly in Latin America and

³⁸ *Russia and Ukraine are important to the renewables transition. Here’s what that means for the climate*, The University of Queensland.

³⁹ *Russia’s Potanin dodges politics and sanctions to flourish*, *Reuters*, 4 May 2022.

⁴⁰ R. Johnston, *Supply of Critical Minerals Amid the Russia-Ukraine War and Possible Sanctions*, Columbia, SIPA, Center on Global Energy Policy, 19 April 2022.

⁴¹ “Profiling the world’s eight largest cobalt-producing countries”, *NS Energy*, 22 February 2022.

Africa. Nonetheless, in 2020 Rosatom officials declared that Russia could achieve domestic lithium production equivalent to 3.5% of the world's output by 2025.⁴²

As global supply chains of rare earths and critical minerals are to a considerable extent under China's influence or control, Russia could theoretically be an alternative supplier to Europe. While the ongoing confrontation between the West and Russia concerning the war in Ukraine makes this scenario implausible at the moment, the political situation may change in future. The energy transition is a long-term endeavour, and countries will have to navigate different conflicts and geopolitical reconfigurations while they implement it in coming decades. What is certain is that multilateral cooperation to tackle the climate crisis, or at least cooperative compartmentalisation of the climate agenda, will be in everyone's rational interest if the world wants to avoid catastrophic climate change. In light of this, it makes sense to exempt existing and potential green and climate cooperation from sanctions and escalatory spirals.

At the time of writing, the EU has managed to overcome Hungary's staunch resistance and adopted a sixth package of sanctions that prohibits the purchase, import or transfer of seaborne Russian oil, even if there are significant temporary exceptions for landlocked member states.⁴³ Yet, chances to impose sanctions on gas look slimmer. Moreover, Russian-sourced uranium and state nuclear energy company Rosatom has also been exempted from EU sanctions thus far, not least because it is essential for the supply, maintenance and radioactive waste disposal of several plants in EU member states. Rosatom also plays a role in non-proliferation, nuclear security, and nuclear safety projects around the globe, and is one of the few large stakeholders that have shown an interest in the energy transition in Russia. As long as some EU members continue to

⁴² E. Bouckley, "Russia aims to supply 3.5% of world's lithium by mid-decade", *S&P Global*, 25 September 2020.

⁴³ <https://www.consilium.europa.eu/en/press/press-releases/2022/06/03/russia-s-aggression-against-ukraine-eu-adopts-sixth-package-of-sanctions/>

rely on nuclear power as part of their decarbonisation plans and depend on Russian-built technology, related cooperation will not be suspended.⁴⁴

Conclusion

Russia's war against Ukraine has dramatic humanitarian, political, and economic consequences that go well beyond Russia and Ukraine, to the extent that it has been described as a "game changer".⁴⁵ Two war-related phenomena are already taking shape when it comes to the EU-Russia energy and climate relationship. First, among objective difficulties, EU states are trying to break away from energy dependence on Russia. This could either have a positive effect on the EU's green ambitions by boosting implementation of the Green Deal and fostering intra-EU energy cooperation, or a negative one involving a return to the use and even domestic production of highly polluting energy sources such as coal. The EU has laid out an ambitious plan – RePowerEU – to reduce and ultimately eradicate dependency on Russian energy imports. However, for the time being, Brussels is practically prioritising conventional energy – such as new or improved gas and oil deals from different sources – as an urgent and short-term solution to cope with energy shockwaves. The situation is also impacting the climate objectives of the US, which is "touting its oil and gas prowess" as it seeks to provide more LNG and oil to the EU but is also facing growing political pressure from soaring domestic energy prices and opposition to Biden's key climate legislation and funding for climate action in the Global South.⁴⁶

⁴⁴ "The wisdom of nuclear carve-outs from the Russian sanctions regime", *War on the Rocks*, 17 March 2022.

⁴⁵ Ł. Kamiński, M. Smółka, and W. Michnik, "Russia's invasion of Ukraine: A dramatic game-changer", *New Eastern Europe*, 3 March 2022.

⁴⁶ K. Mathiesen, Z. Colman, and Z. Weise "Climate goes missing in action in Russia's war", *Politico*, 11 May 2022.

Second, the war is reducing the ability of global governance efforts to deliver solutions to transitional problems – the climate crisis first and foremost. The Western-Russian spat will inevitably affect the outputs of upcoming key global governance summits such as the G20 Bali summit in November 2022.⁴⁷ One of the first “victims” could be Germany’s G7 “international climate club” initiative – in Chancellor Scholz’s words, an “open, collaborative club” to set “joint minimum standards, drive climate action that is internationally coordinated and ensure that climate action makes a country more competitive at the international level”.⁴⁸ But questions about the initiative’s viability and effectiveness remain: will Russia be allowed to participate in the club? Will Russia derail – directly or indirectly – the initiative and, more broadly, cooperation at the G20 level? What seems to be certain is that the conflict is fatally reducing space for EU-Russia green cooperation – a prospect that raised hopes before the war but now seems more distant than ever.

⁴⁷ See E. Tafuro Ambrosetti, “Should Russia Be Excluded from the G20?”, ISPI Counterpoint, ISPI, 13 May 2022.

⁴⁸ A. Norton, “Responses to Putin’s war risk impeding international cooperation on climate”, *Climate Home News*, 25 March 2022.