

MELTING ICE, FROZEN HEART

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Russia's posture on climate change and decarbonisation

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In the span of two decades, in its relations with Russia the EU has moved from ambitious endeavours to build Common Spaces and foster the Partnership for Modernisation to a more minimalist and defensive approach, epitomised by the dictum 'to push back, to contain and to engage'⁽¹⁾. There is no shortage of ideas on how to operationalise the first two aspects of this strategy, but the third one is more problematic. As global warming and the need for comprehensive decarbonisation efforts have risen to the top of the EU's agenda, fighting climate change has re-emerged as one of the prospective areas for positive selective interaction with Russia. Global warming knows no borders and requires transnational solutions, thus for its own sake if nothing else Russia should be interested in expanding such cooperation too.

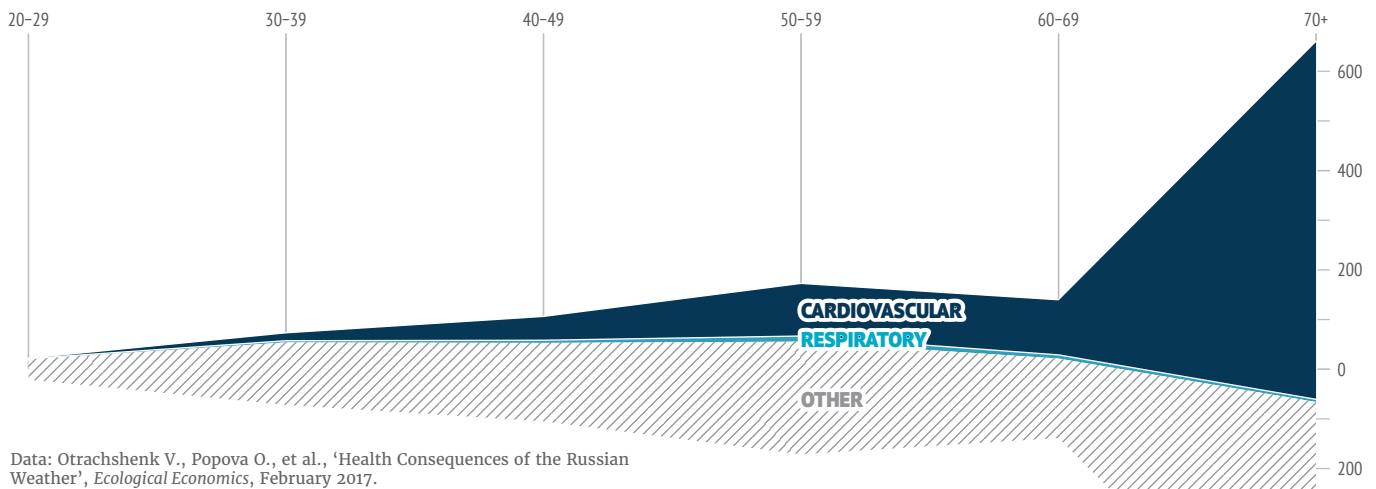
This Brief proposes to test this assumption by addressing the following questions: what is Russia's profile as a polluter? How strong is the impact of climate change in Russia? What shapes the Kremlin's perceptions and responses? Is there room for genuine cooperation today between Russia and the EU on climate issues? If not, what factors could change Russia's attitudes and actions in the near and distant future?

Summary

- › The EU has identified climate change as one of the areas where it could engage in mutually beneficial interaction with Russia.
- › Russia is the world's fourth biggest polluter, and incurs significant economic and social costs due to climate change. These are projected to augment in the near future.
- › Despite worsening environmental problems, Russia is poised to increase CO₂ emissions in the coming decade. Russia's resistance to decarbonisation derives from three intertwined factors: its resource-based economy, domestic political power configuration and combative foreign policy posture.
- › Key factors that could alter Russia's stance on climate change, either moderately or radically, are: the cumulative effects of devastating natural disasters, worsening environmental conditions, local protests, a change of leadership at the top of the Russian government, and faster than expected decarbonisation of the world's biggest economies.

The cost of one day above 2.5°C in Russia

Estimated economic cost in number of deaths and \$ million



Data: Otrachshenk V., Popova O., et al., 'Health Consequences of the Russian Weather', *Ecological Economics*, February 2017.

RUSSIA FEELS THE HEAT

The EU has strong incentives to consider engagement with Russia on climate change. One incentive derives from regional concerns. The ecosystems of territories in the Arctic region, Baltic and Black Sea where both the EU and Russia are stakeholders are intertwined and thus global warming will affect both sides regardless of national borders and political rivalries. Besides the interdependence of regional ecosystems, there is a global impetus for engagement too. If the EU is to succeed in leading efforts to slow down the rise in global temperatures, bringing on board the world's largest greenhouse gas (GHG) emitters is a crucial task. Russia belongs to this category, being the world's fourth biggest polluter with a 5.36 % share in global GHG emissions⁽²⁾.

The breakdown of GHG emissions by sector reveals that the lion's share comes from three (stationary and mobile) sources: electricity and heat generation (34 %), fugitive emissions (29 %) and transport (9.7 %)⁽³⁾. Among stationary sources, manufacturing accounts for the bulk of emissions (34 %)⁽⁴⁾. This figure reflects the energy-intensive nature of the Russian economy and indicates that greater energy efficiency and a shift to renewables would substantially reduce Russia's GHG emissions. These represent two of the areas of possible cooperation between the EU and Russia.

The main sources of methane emissions in Russia, after fugitive emissions (76 %), are waste (12 %) and the agricultural sector (5.7 %)⁽⁵⁾. The data on methane release reflects not only the energy-intensive nature of existing manufacturing and industrial processes, but also reveals emerging sources of GHG emissions that are likely to grow in the future. According to the Russian government, only approximately 7 % of waste is recycled, with the rest being dumped in landfills⁽⁶⁾. At the same time, under current conditions the area

occupied by landfills is projected to grow by 10 % annually, reaching 8 million hectares in 2026⁽⁷⁾, and thus the amount of methane released into the atmosphere will increase too. Waste management is another potential area of engagement where the EU could share experience and know-how in order to prevent an increase in Russia's methane emissions. But for cooperation to bear fruit and become impactful, it takes two to tango.

Data on the current impact of global warming on Russia as well as estimated costs in the future should incentivise the Russian authorities to seize the opportunity to engage. According to the Russian state environmental watchdog *Rosgidromet*, the average temperature in the country is growing 2.5 times faster than at the global level; it is noteworthy that the increase is even sharper in Russia's Far North⁽⁸⁾. This phenomenon has been vividly illustrated in the last two years. In 2019-2020 Russia experienced its warmest winter since meteorological records began 130 years ago⁽⁹⁾. This was followed by the hottest spring and summer temperatures on record in Siberia⁽¹⁰⁾. Thus, the year 2020 set a new heat record, with average air temperatures hitting 3°C above the norm.⁽¹¹⁾ Russia is clearly at the forefront of global warming.

The most visible manifestation of this is the rapidly melting Arctic shelf, a process which has been recorded since the 1970s. As the surface of the Russian Arctic shelf shrinks, the ocean absorbs more heat from the sun than it reflects back into the atmosphere. The melting of permafrost not only releases more carbon and methane into the atmosphere, but also erodes soil and contributes to an increase of extreme weather phenomena, such as floods, droughts and forest fires. In 2020 alone, around 1 000 extreme weather events occurred in Russia, 97 more than in 2019⁽¹²⁾. To put this in a more long-term perspective,

environmental monitoring shows that over the last 40 years the number of natural disasters in the country increased fourfold⁽⁴³⁾. Extreme weather events have thus become a 'new normal' in Russia.

All this incurs immediate costs. The agricultural sector feels the pain first. Although it represents only 3 % of GDP it is essential for national food security but also for Russia's ambitions to remain a global grain producer. Severe droughts in 2010 and 2012 reduced the grain harvest in Russia by one third and one quarter respectively, inflicting a total of €3.3 billion in damage⁽⁴⁴⁾. Regions in the North Caucasus which were previously rich in grasslands slowly turned into sand dunes, forcing locals to seek new pastures⁽⁴⁵⁾. This, in turn, may fuel more conflicts in the politically fragile and economically poor North Caucasus. Global warming is systematically depleting Russian natural resources. Annually 300 000 hectares of forests disappear, 70 % of them due to fires⁽⁴⁶⁾. While experts often struggle to differentiate between man-made and natural forest fires, there is little doubt that hotter temperatures increase the likelihood, frequency and severity of wildfires.

Global warming causes significant damage to infrastructure too, forcing the government to invest extra funds to repair it. For example, massive floods in the Russian Far East in 2013 destroyed buildings and roads, causing a loss equal to 0.14 % of GDP⁽⁴⁷⁾. Infrastructural damage caused by melting permafrost – 15 % and 80 % of all Russian oil and gas projects respectively are concentrated in permafrost areas – is even greater. In 2017 alone, in the town of Norilsk, located in the permafrost zone, the number of houses damaged by soil erosion was higher than in the last 50 years. Industrial accidents resulting from deformation of soil in permafrost areas cause 5 000 oil spills every year, inflicting heavy damage on the environment⁽⁴⁸⁾. As a result, significant budget resources are diverted to deal with the effects of climate change. In 2019, €116 was taken from the tax contribution of each working Russian citizen to deal with the consequences of natural calamities⁽⁴⁹⁾.

Besides fiscal costs, global warming imperils Russian lives. The extreme hot weather in 2010 that led to wildfires and covered Moscow with acrid smoke drove the mortality rate up by nearly a fifth in July and August⁽²⁰⁾. Public surveys confirm that citizens experience deleterious effects of weather anomalies, listing headaches, dizziness, heart disease, and listlessness as the main symptoms⁽²¹⁾. Still, although 57 % of Russians believe that climate change has had an impact on their lives, the overwhelming majority are not ready to accept higher prices for goods and services, even if the extra revenue generated would help to finance CO2 reduction measures⁽²²⁾.

Extreme weather events have become a 'new normal' in Russia.

If left unaddressed, global warming is projected to have a devastating impact on Russia in the coming decades. According to the Accounts Chamber of the Russian Federation, climate change is expected to cause damage equal to 3 % of GDP every year by 2030⁽²³⁾. This will affect the agricultural sector, among others. The southern regions of Russia, the country's bread-basket, are expected to experience smaller harvests, while northern areas will not be able to take advantage

of new agricultural opportunities due to lack of infrastructure, manpower and lower soil fertility. As a result, climate change is projected to reduce Russia's harvest by 10 % by the end of this decade⁽²⁴⁾.

The most severe impact from climate change will be felt in the Russian Arctic, home to 1.8 % of the country's population and 41 indigenous groups. Disruption of economic activities related to permafrost melting is estimated to rise to €99 billion by 2050⁽²⁵⁾. Traditional activities (hunting, fishing, reindeer herding) and migration routes of indigenous people living in the region will be disrupted too⁽²⁶⁾. Melting permafrost could trigger more health threats for the Russian public as this phenomenon might lead to outbreaks of infectious diseases unleashed by microorganisms currently frozen in the polar circle⁽²⁷⁾. The economic and health consequences of climate change intersect when considering the costs incurred due to the impact of heatwaves on mortality and decreased labour productivity. Estimates for Russia show that a single day with an average temperature of above 25°C may lead to a loss of more than \$10 million, about 0.28 % of daily GDP in Russia⁽²⁸⁾. All these projections show that Russia will be severely affected by global warming.

RUSSIA UNDERPERFORMS

The Russian leadership has plenty of reasons to take climate change seriously. However, so far the authorities have failed to demonstrate that they are ready to commit to ambitious climate protection efforts. In the early 1990s, Russia reduced its GHG emissions by almost half⁽²⁹⁾. However, this outcome resulted from the collapse of industrial output in the wake of the disintegration of the Soviet Union, rather than from a coordinated plan to cut CO2 emissions. The Climate Action Tracker reveals that Russia's emissions have been slowly climbing back since the 2000s⁽³⁰⁾, as the national economy started to recover.

To mask their underperformance on climate issues, the Russian authorities traditionally stress the positive effects of Russia's natural resources. Russian forests are often described as the lungs of the planet,

which absorbed around 38 % of national carbon emissions in 2018, thus offsetting Russia's overall GHG release⁽³⁴⁾. The Russian authorities, in reality, have failed to boost the absorption capacity of these green lungs, which has actually contracted: the area covered by forest in the country has shrunk by 8.4 % in 20 years⁽³²⁾. In addition to fires, Russian deforestation has significantly accelerated due to illegal logging, not least because of corruption⁽³³⁾. If the current trend persists, Russia will ultimately be able to absorb less, not more, CO₂. Furthermore, more frequent and widespread wildfires will increase Russia's carbon emissions; for example, in June–August 2021 forest fires in Yakutia released as much carbon dioxide as Germany does in one year⁽³⁴⁾.

Deforestation is not the only domain where the government has failed to make a difference. Waste management is another telling example. After a series of local protests, the Russian government had to develop and launch the so-called 'waste reform' in 2019. It aimed at ensuring better waste management, closing illegal landfills and increasing recycling. A preliminary assessment of the outcome of the reform reveals that, while leading to overconcentration of the waste collection and management business among a few tycoons well-connected to power circles, it increased the cost of waste management fees paid by citizens⁽³⁵⁾. Even if in the future Russia manages to deposit less household waste in landfill sites, it will be as a result of incineration, an activity which falls under the category of recycling (if the energy released during incineration is converted into electricity or heat) and is favoured by waste management companies. And smoke from the incineration of household waste will add to Russia's GHG emissions. Just like the protection of forests, waste management has fallen victim to narrow private interests and corruption, increasing the probability of higher methane emissions from Russia in years to come.

Turning from the past to the future, the Kremlin does not look like an emerging champion of decarbonisation. Recently, the Russian president has recognised the severity of the impact of climate change and vowed to do more to combat global warming⁽³⁶⁾. Russia ratified the Paris climate agreement in 2019, adopted a new National Security Strategy which grants more prominence to ecological security in July 2021, and tabled a climate strategy until 2050. The president has accordingly set the GHG emissions reduction target to 70 % of 1990 levels by 2030⁽³⁷⁾. However, Russia's climate discourse, documents and targets look more like international posturing rather than a commitment to take action. At closer inspection climate-related policies reveal a strategy aptly described by some Russian experts as 'doing nothing'⁽³⁸⁾. Because Russia's emissions today have fallen by nearly 50 % compared to 1990 levels, the current reduction pledge does not force Russia to take drastic measures to cut emissions. On the contrary,

Moscow actually has leeway to increase them; this is exactly what the basic scenario of the national climate strategy envisions (an increase by 9 % to 2020 levels)⁽³⁹⁾. This conclusion is backed by Russia's plans to boost gas and coal production by 2035, as well as by announced cuts in funding to the green energy sector by 22 % for the period 2025–2035⁽⁴⁰⁾. All these projections beg the question of why, despite the adverse effects of climate change, Russia avoids committing to decarbonisation and continues to bet on mineral fuels.

WHY IS RUSSIA DRAGGING ITS HEELS?

Several powerful countervailing forces in Russia explain this conservative stance.

First among these is the structure of the economy. Hydrocarbons represent the backbone of the country's economy and of the state's budget. In 2019, oil and gas profits accounted for almost 40 % of total budget revenue (compared to 10 %–20 % in the early 2000s), and mineral fuels brought 52 % of total returns from commodity exports⁽⁴¹⁾. Hence, the role of fossil fuels in the Russian economy has grown considerably in the last 20 years, despite the rhetoric about the need to diversify away from the over-dependence on energy industries. Decarbonisation of the Russian economy implies radical transformations of the current economic model, changes which may not necessarily favour the country's leadership.

Due to the nature of Russia's economic model, any significant reform would come at a substantial financial and political price in the short to medium term. Losing control over the economic system is a risk the Kremlin is unlikely to take. The economic model built on the exploitation of hydrocarbon resources stands at the foundation of the political regime, which from the outset moved to assert state control over strategic energy assets and place them in the hands of a narrow circle of loyal elites⁽⁴²⁾. As a result, the state dominates about half of the total oil production via its majority ownership (in Rosneft and a subsidiary of the state-owned gas giant Gazprom, Gazpromneft), while Gazprom prevails in the gas sector with its ownership of the gas transportation network and monopoly of pipeline gas exports⁽⁴³⁾. Control over production and transportation means control over revenues.

Decarbonisation increases the risks linked to economic diversification and would imply a shift of revenues away from the strategic sector controlled by the regime, with greater focus on the cultivation of human capital. The only effective way to minimise

these risks seems to be slowing down the green transition. The International Renewable Energy Agency (IRENA) includes Russia in the basket of countries moderately exposed to the effects of the energy transition but conditions its future resilience on successful economic diversification⁽⁴⁴⁾. However, the regime's imperatives to ensure economic control supersede the country's objective needs, thus delaying 'double D' – diversification and decarbonisation – ultimately making Russia more vulnerable to climate change impacts and the indirect effects of energy transition. Russian economists estimate that the country's oil and gas export revenues could drop by 25 % in the 2020s compared to the previous decade.⁽⁴⁵⁾

The carbon economy and control over resources is intimately interlinked with the preservation of political power. The proceeds from energy sales are essential to ensure macro-economic stability, build up currency reserves for rainy days and finance major social spending programmes. Keeping citizens dependent on the state is a key element in the Kremlin's strategy to maintain social stability and prevent unwelcome political mobilisation among the population. Putin's presidential address to the Federal Assembly in 2021 in which extra social benefits were announced ahead of parliamentary elections, is telling⁽⁴⁶⁾. The carbon economy helps not only to sustain social peace at large, but also to keep elites happy by generating rents. It is particularly important

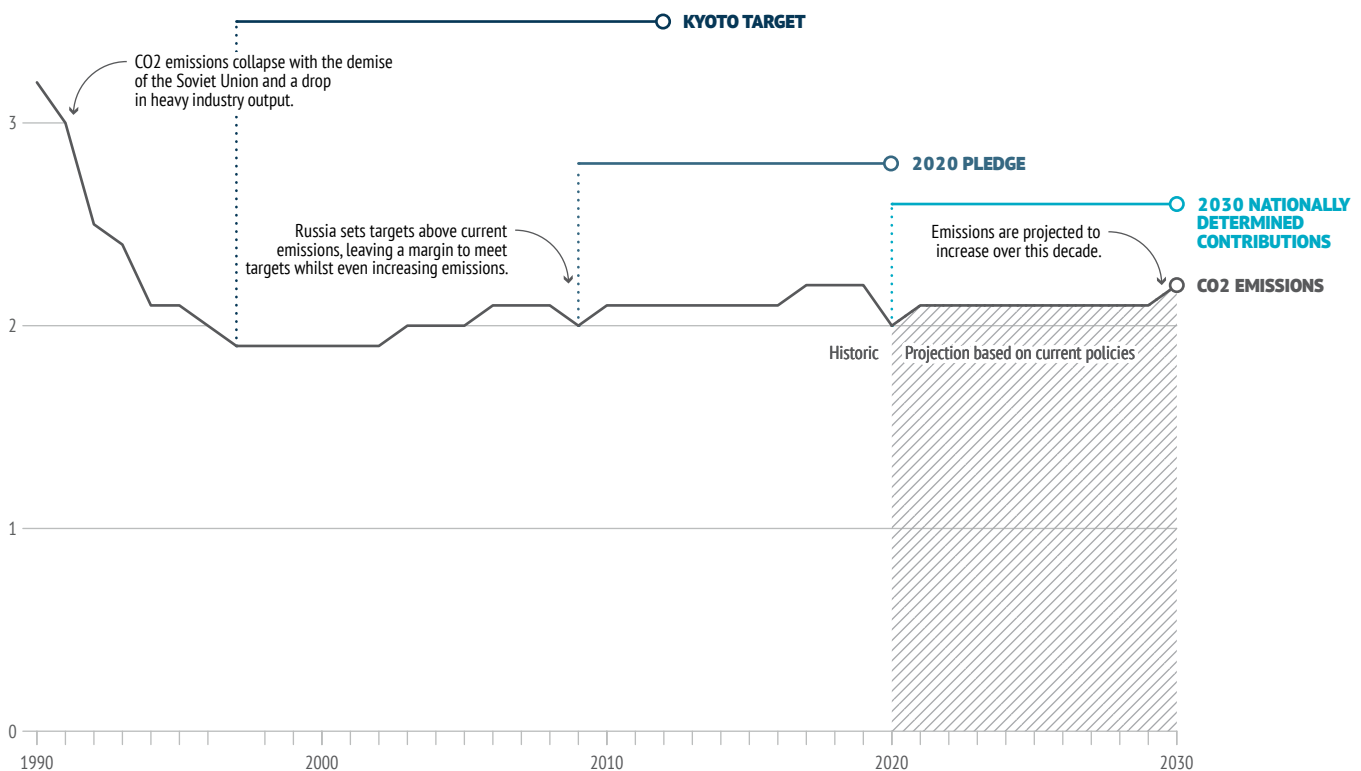
against the backdrop of the president's declining popularity ratings⁽⁴⁷⁾. Thus, at times when the regime seeks to preserve social and political stability in order to perpetuate itself in 2024 and afterwards, decarbonisation is perceived as a dangerous political gamble, which risks rocking the boat.

Last but not least, hydrocarbons have outstanding value for Russia's military power and economic statecraft. On the one hand, proceeds from oil and gas exports have filled Russian state coffers with cash the government lacked in the 1990s. According to estimations, between 2000 and 2012 Russia earned \$2.3 trillion from mineral exports⁽⁴⁸⁾. This in turn helped Russia to increase the defence budget and restore the country's military prowess. Since then, Russia has heavily militarised its foreign policy; interventions in Georgia, Ukraine, Syria and Libya stand as testimony. With no real substitute in sight, it is likely that oil and gas exports will be crucial for sustaining and further modernising Russian military power in the coming years.

On the other hand, oil and gas have created a set of dependencies in the Eastern Partnership states, Western Balkans and the EU, which endows Russia with leverage in foreign policy. Energy diplomacy provides Russia with tools to deepen rifts in transatlantic relations too⁽⁴⁹⁾. Therefore, moving away from the carbon economy implies giving up on some

A strategy of doing nothing

Million tons, 1990–2030



Data: Bloomberg, 2021

traditional instruments of coercion and corruption that Moscow has increasingly relied on to reassert its regional posture and enhance its global status. In spite of energy transition gathering pace and thus gradually rendering energy tools less effective than before as a means of extracting economic leverage, Russia has shown no signs of giving up on them. All of this does not bode well for EU–Russia cooperation on climate change.

RUSSIA AND THE EU AMID THE GREEN TRANSITION

The Russian leadership is between two fires: on the one hand, it is becoming increasingly difficult to ignore the cumulative effect of climate change on the country; on the other hand, decarbonisation and an effective response to global warming put at risk the domestic structure of political and economic power, while undermining the foreign policy toolkit that Russia has developed over the last two decades. Squeezed between ecological problems and power imperatives, the authorities' responses are largely guided by the latter. This in turn creates an unfavourable context for meaningful and ambitious EU–Russia cooperation on climate change.

EU–Russia cooperation on environmental issues is not without precedent. Since the mid-1990s the EU has shown strong interest in putting environmental issues on the agenda and tackling them with Russia. Using a variety of instruments, the EU has supported local projects aimed at raising awareness of climate change among young people, improving waste water treatment, enhancing protection from floods, upgrading energy efficiency, etc.⁽⁵⁰⁾ Thus, on the micro-level the EU has been co-financing efforts to reduce Russia's carbon footprint and enhance its resilience against the effects of climate change. The EU also launched in 2006 a high-level dialogue with Russia on environmental issues (suspended in the wake of the annexation of Crimea) and concluded a roadmap for cooperation with Russia in the energy field until 2050, a document which incorporated goals such as enhancing energy efficiency and developing renewables⁽⁵¹⁾. Gradually, the European private sector also began to enter the Russian market with energy efficiency projects⁽⁵²⁾.

While not without targeted benefits for local stakeholders, this panoply of engagements on environmental issues has not led to widening of cooperation with Russia. On the contrary, it is more difficult for the EU and European companies to push

for projects related to environment and climate change than before. First of all, there are fewer non-governmental partners in Russia to work with. As the Kremlin has gradually tightened legislation on the non-governmental sector, in particular those NGOs who benefit from foreign grants, the ecosystem of environmental organisations has shrunk substantially. In 2017 Human Rights Watch revealed that out of 29 ecological NGOs branded as 'foreign agents' in Russia, no less than 14 had ceased to operate⁽⁵³⁾. Second, local authorities in cross-border regions are more reluctant too, as cooperating with the EU in the midst of a new repressive wave in Russia might be interpreted as a sign of disloyalty and entail adverse consequences for them. Third, Russia is not only cutting investments in renewable energy, but is also erecting barriers to foreign investment in the green sector, thus undermining innovative projects that could foster decarbonisation. Finally, Russia's perception of the green transition as primarily an issue of money and power further complicates matters.

The Russian leadership regards the climate domain as another arena of geopolitical competition, where powers vie for political influence and economic advantages. What draws Russian attention are the side effects of the EU's efforts to reduce the carbon footprint. Russian officials interpret the EU's decarbonisation plans, in particular the Carbon Border Mechanism, as another form of protectionism entailing negative effects for Russian companies⁽⁵⁴⁾. It is estimated that the EU's carbon tax will affect 42 % of Russian exports and will cost Russian companies initially up to €5 billion annually and nearly €8 billion by 2030⁽⁵⁵⁾. After doing this arithmetic, Russia takes Europe's overtures to cooperate on climate change with a grain of salt. In Moscow's view, the Green Deal and related measures are tools to promote EU countries' competitiveness, achievable only through a 'zero-sum game' in relations with external partners.⁽⁵⁶⁾

In response to the EU's decarbonisation plans, Russia does not rule out retaliation measures within the World Trade Organisation (WTO) framework⁽⁵⁷⁾. But pushing back is not the only option. Russia is already implementing a 3-pillar strategy in response to the EU's green transition. The first step is to increase the pace of diversification of markets for carbon exports, with a special focus on Asia. Moscow's bigger oil supplies and push to build a second gas pipeline to China are part of this strategy. The second pillar includes fast tracking investments in new Liquefied Natural Gas (LNG) production capacities. In March 2021, the Russian government adopted a strategy on the development of the LNG sector; according to the document Russia has to boost its share on the LNG market from its current 8 % to 20 % by 2035⁽⁵⁸⁾. This

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move aims to help Russia to adapt to the globalisation of what was a regionally fragmented world gas market. The third step is related to activities to defend and expand Russia's share of the European market by questioning the reliability of renewable sources of energy and framing gas and blue hydrogen (produced from gas) as more reliable and relatively clean fossil sources⁽⁵⁹⁾.

Moscow's calculations are that, if decarbonisation cannot be stopped, then at least it can be slowed down, in turn giving Russia more breathing space under the current political and economic setup. Therefore, the purpose of Russia's climate diplomacy *vis-à-vis* Europe in the coming years is not about embracing decarbonisation, but delaying it. And President Putin's likening the eventual abandonment of hydrocarbons to humankind returning to the caves⁽⁶⁰⁾ leaves little doubt regarding the top leadership's stance on the future of fossil fuels.

WHAT IF RUSSIA CHANGES ITS MIND?

Russia's default scenario is to preserve the comfortable *status quo*, which extends the shelf life of its domestic political and economic model and does not disturb the bases of power projection abroad. However, moderate or radical correction of this approach is not impossible. Several factors can serve as catalysts of change.

First among these are the combined effects of devastating natural disasters, worsening environmental conditions, and local protests. While these might not lead the regime to drastically reformulate its general approach towards climate change, they may induce localised responses which partially tackle the secondary effects of climate change in the most acutely affected areas. Such initiatives might, for example, take the form of enhancing the state's capacity to deal with wildfires in Siberia or adopting legislative amendments which increase penalties for environmental industrial incidents (e.g., oil spills in permafrost regions). In some cases, the confluence of disruptive factors may force the government to initiate sectoral reforms, similar to the 2019 waste management reform. This, in turn, might create opportunities for limited engagement with Europe. Still, the effectiveness of any sectoral reforms under the current political setup is likely to be undermined by vested interests and corruption. While occasionally meeting citizens' demands half-way, the government may simultaneously engage in wider repression against environmental activists or remaining NGOs in the field, further

reducing the chances of the EU being able to engage with Russian civil society.

A second possible factor is a reshuffle at the top of the Russian state. A change of leadership in itself will not automatically lead to more ambitious climate policies. However, if the new leader and his team are outsiders *vis-à-vis* the established politico-economic *status quo*, there is a stronger chance of adjustments in attitudes and policies towards decarbonisation. Such power alternation might generate new momentum for EU–Russia cooperation on climate issues and create favourable conditions for foreign investors in energy efficiency projects in Russia. On the contrary, if power changes hands without changing the nature of the political regime, continuity, at least in the short term, is the most probable option.

The third factor is faster than expected decarbonisation of the world's biggest economies, drastically reducing Russia's revenues from fossil fuel exports. Such a surprising development would inevitably lead the Kremlin to at least start re-thinking its conservative approach towards green transition at home. In this case, a sea change in Moscow's attitude will not stem from environmental concerns, but from anxieties about domestic stability and Russia's global power status. Under this scenario, the chances of EU–Russia engagement on green transition increase. But the EU is not the default partner in such endeavours. Moscow may very well opt for deeper and closer cooperation in the field with fellow authoritarian power China, perceived as politically less threatening than Europe.

In any scenario, the more Russia drags its feet the more costly will be its transition to a greener economy. And while the EU has to keep its hand extended to Russia for cooperation on combating global warming, it should harbour no illusions about Moscow's dual track strategy; while pledging to reduce its carbon footprint, working to delay decarbonisation at home and abroad.

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