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Weaponizing Wheat

Russia's Next Weapon in Pandemic and Climate Eras

Clara Summers and
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There is growing awareness that climate change will cause massive destabilization of social, economic, and political systems worldwide. As rising seas, desertification, disease, food and water insecurity, and extreme weather increase instability, some states may seek to capitalize on these effects of climate change for political and economic gain. Much of the coverage on climate change focuses on its direct environmental effects, but an unstable climate may pave the way for broader geopolitical destabilization, and that destabilization begins with an increasingly aggressive Russia.

In a warming Arctic, Russia is both expanding its military operations in the region and exploiting its prodigious oil and gas reserves. However, its investments in increased fossil fuel extraction are at risk both because of melting permafrost, which threatens infrastructure, and because Russia's key export markets, like the European Union, are decreasing reliance on fossil fu-

els. Energy has long been a major tool in Russia's hybrid warfare strategy. However, the impacts of climate change and decarbonization will eventually decrease Russia's ability to wield influence over other countries using its supply of oil and gas reserves, which will prompt it to seek other forms of resource leverage.

Another way in which Russia could exploit climate vulnerabilities is by harnessing its leverage in global food markets. The state is already the world's top wheat exporter, and climate change is expected to increase its extent of arable land. The state's past tendencies to cut off gas supplies as a form of political leverage is illustrative of how it could also manipulate grain markets for its own benefit, taking advantage of a world in which food insecurity will only become more prominent as climate change worsens.

By linking Russia's growing wheat capacity to its history of hybrid warfare, this article argues that a warming climate may provide Russia with increased opportunities to use food security as a weapon. It begins by detailing how Russia is already capitalizing on climate change to the detriment of other countries, with a focus on fossil fuels and the Arctic. It then shows how Russia has historically used its energy export markets as a tool to gain geopolitical power and how that power is threatened as reliance on fossil fuels and natural gas shrinks. Next, it explores Russia's role as a wheat superpower in a changing climate. Finally, the article closes with policy recommendations to prevent the weaponization of wheat.

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Russia and Climate Change: Increasing Opportunity, Increasing Danger

As the largest Arctic nation, Russia is disproportionately impacted by Arctic climatic changes. Almost 70 percent of Russia spans Arctic and subarctic regions, which are warming two times faster than the rest of the world.¹² In these parts of the country, whose production accounts for approximately 20 percent of Russian GDP, most of the infrastructure is built on permafrost.³ As rising temperatures melt the permafrost, structures will become more vulnerable to collapse as sinkholes appear, and flooding around river systems will increase. The Republic of Sakha (Yakutia) in northeastern Siberia is especially vulnerable, as 85 percent of its structures are located on permafrost.⁴ The thawing ground also has serious implications for heavy industry.⁵ In 2016, 80 percent of natural gas and 15 percent of oil production occurred in these vulnerable Arctic regions. As the permafrost melts, production and pipeline infrastructure also becomes unstable, presenting a danger both to supply reliability and disaster prevention.⁶

Despite the risks to existing energy infrastructure, the Russian government has regarded climate change as an opportunity. Melting sea ice in the Arctic Ocean allows Russia to invest in previously inaccessible oil, gas, and fishery operations. Expanding liquefied natural gas (LNG) exports from the Yamal Peninsula have been accompanied by a marked increase in nuclear-powered icebreaker escorts,⁷ which increases risk for the entire region, as Russia has a decidedly mixed track record on nuclear safety. Climate change and melting ice present opportunities not just for economic expansion, but also for enhanced military presence. While the Arctic has historically been a place for international cooperation, climate change is reinvigorating the tense,

heated sense of competition left over from the Cold War. For example, Russia has recently violated Swedish airspace,⁸ simulated attacks on Norway,⁹ jammed GPS systems during NATO exercises,¹⁰ and tested new missile systems.¹¹ Russia's quest for melting Arctic fossil fuels is part of an overall plan to leverage the advantages they gain from climate change, a plan that is marked by increased aggression and strategic manipulation of climate-vulnerable regions.

The Future of Fossil Fuels in an Age of "Carbon Protectionism"

Russia's permafrost-vulnerable fossil fuel sector is critical to its economic stability, but it is increasingly threatened by the falling reliance on nonrenewable energy sources. Oil and gas revenue made up 36 percent of the Russian budget in 2016 and accounted for over half of total exports.¹² The country is second only to Saudi Arabia in petroleum exports,¹³ which provide significant revenue but are a vulnerability due to lack of economic diversification. Should the price of oil drop to under sixty dollars per barrel, the government may have difficulty delivering basic services to its citizens.¹⁴ Such a capacity gap, especially one persisting over the long term, could undermine the legitimacy of the government and provoke unrest.¹⁵ In fact, some scholars have drawn a parallel between low oil prices in the 1980s and the subsequent collapse of the Soviet Union.¹⁶ Even if low oil prices were not the precipitating factor in the Soviet Union's collapse, it undoubtedly increased pressure on both the state's economy and leadership. Well aware of this history, the Russian government is sensitive to the internal destabilization that oil price changes can cause. Moreover, as importing countries transition away from fossil fuels, demand for Russian oil and gas will decrease, reducing the overall

revenue for the Russian economy. The economic impacts of decarbonization on Russia could lead to major societal disruption. It is therefore no surprise that a decade ago, then-president Dmitry Medvedev began referring to decarbonization policies as a form of “carbon protectionism” that directly threatens Russian geopolitical power.¹⁷

Beyond supporting the economy, the Russian government has historically wielded its oil and natural gas sources to further its political goals. This strategy has been most evident in its relationship with the European Union (EU). In 2017, the EU imported 40 percent of its natural gas from Russia, largely relying on transit through Ukraine.¹⁸ Russia has taken advantage of differential import dependency within the EU to exert pressure on more dependent countries. Countries that fell under the Soviet sphere of influence during the Cold War are less diversified in their energy mixes than those in Western Europe and are highly dependent on Russia.¹⁹ For example, in 2015, the state-owned oil and gas company Gazprom increased prices for the Baltic states, Bulgaria, and Poland.²⁰ EU antitrust regulators found that Gazprom was manipulating gas prices in Bulgaria and Poland to force them to participate in additional pipeline projects.²¹ Such manipulative tactics could indicate future avenues for hybrid warfare, through which Russia combines military strength with economic, resource, technological, or political aggression.²²

Russia's use of energy as a form of hybrid warfare can also be seen clearly in Ukraine. The instability of the Russian-Ukrainian relationship has made Russian energy exports to the EU unreliable. Russia cut off gas supplies through Ukraine in 2006 and 2009 when price negotiations broke down.²³ While shrunken supplies temporarily hurt EU economies, they most dimin-

ished Ukraine, as it relies on transport fees.²⁴ Russia has also targeted Ukrainian energy infrastructure over the course of its war in Crimea. Knowing that Ukraine is economically reliant on serving as a way station to the EU market, Russia has used its power as a supplier to punish Ukraine when it does not comply with Russian demands.²⁵

Recognizing the vulnerabilities that gas transit through Ukraine poses, EU countries have sought to diversify their energy sources.²⁶ In 2016, the European Union comprised 60 percent of Russia's fossil fuel exports. The European Union plans to reduce energy imports from Russia and thus weaken Russia's influence as well as the Russian economy.²⁷ The European Union has one of the most ambitious climate agendas of the developed world, with renewable energy growing to 80 percent of its energy mix by 2050.²⁸ Furthermore, the European roadmap for decarbonization states that import dependence would fall to 20 percent by 2050, which “would positively impact EU's trade and geopolitical position.”²⁹ The EU has also been diversifying its sources of energy, including by increasing its LNG imports from outside of Russia.³⁰

The European Union's decarbonization goals, combined with LNG imports from outside Russia, mean that Russian natural gas is facing displacement.³¹ While this displacement will occur over the long run and is dependent on difficulties in accessing other markets and the European Union's commitment to climate goals, the transition has begun.³² While the European Union's plans to decarbonize include an increase in natural gas usage in the short term, in the long term, its move away from Russian energy supplies could fundamentally alter geopolitical relationships.³³ As its energy influence wanes, Russia may look to another key export to spread its influence: wheat.

Weaponizing Wheat

Russia is the world's top wheat exporter. The majority of Russian wheat production is for domestic consumption and therefore accounts for only 2.3 percent of its exports.³⁴ Because Russia wields its energy exports as a form of coercion, there is a possibility the government hesitates to rely on other countries' food imports. Food security is included as part of the National Security Strategy, promoting domestic production over imports.³⁵ Former president Medvedev has stated that "self-sufficiency in food is one of the cornerstones of security in general."³⁶ Domestic wheat consumption thus takes precedence over exports. Nevertheless, Russian wheat commanded almost one quarter of the world wheat market in 2017.³⁷ The Food and Agriculture Organization of the United Nations (FAO), furthermore, estimates that Russia will comprise 20 percent of the global wheat market in 2028.³⁸ This percentage will only increase in the future, for as the climate warms, Russia will likely see an expansion of arable land, especially in the boreal regions.³⁹ While some models have shown that Russia will lose arable land in southern regions as northern agricultural land expands,⁴⁰ the country is estimated to gain as much as 4.3 million km² of wheat-suitable land under worst-case climate scenarios.⁴¹

It is important to acknowledge that while the Russian agricultural sector may benefit from climate change, it is not invulnerable to the dangers climate change imposes on agriculture. While more arable land could lead to greater agricultural output, this land will also be more vulnerable to extreme weather. Heat waves, fires, drought, and flooding could all contribute to crop failure. In tundra and boreal regions, permafrost dries out the soil as it melts, turning it into a tinderbox.⁴² In 2017, wildfires burned 4.6

million hectares across Siberia.⁴³ Forebodingly, the Russian response to crop failures in the past foreshadows a troubling climate future. In 2010, drought, heat, and subsequent wildfires sharply curbed grain yields. Fearing famine, the government banned wheat, rye, and barley exports. This policy change triggered high food prices worldwide, and researchers have even linked the increased food prices to the onset of the Arab Spring uprisings.⁴⁴

Although the Russian agricultural sector is clearly vulnerable to climate change, it is relatively better off compared to other countries. Desertification, heat waves, drought, and flooding are already curbing crop production elsewhere, including in neighboring Central Asian states.⁴⁵ Climate impacts in other countries will then likely enhance Russia's role as a critical grain supplier. Its increased market share, furthermore, will increase wheat-importing countries' vulnerabilities to food insecurity the next time Russia experiences crop failure. There could easily be a scenario in which Russia expands its food production and exports, only to cause worsened domestic and global food insecurity during an intensive drought or wildfire season.

Russia also limits food exports in times of crisis not directly related to food security. As the COVID-19 pandemic swept across the globe, Russia announced that it would impose an export quota on wheat, rye, barley, maize, and meslin. The export quota ignores requests issued by the World Health Organization and World Trade Organization, which urged countries to maintain food supply chains in the face of the crisis.⁴⁶ Reliance on Russia for food can thus make a bad situation worse, whether the issue is climate change, a pandemic, or something else entirely.

Worse, Russia's wheat production offers

the country a new opportunity for hybrid warfare, withholding exports from countries that fail to comply with Russia's geostrategic objectives. Russia has limited food imports from countries like Ukraine and Turkey during disputes in an effort to inflict economic strain.⁴⁷ Russia's use of energy dependency to further its interests in the past may indicate how it will leverage its large share of the grain market. Already, Russia's wheat relationships are both economically and geopolitically strategic. It is seeking to undercut the United States and the European Union in key Middle Eastern and North African states by selling grain at lower prices.⁴⁸ Turkey is now the largest consumer of Russian wheat, followed by Egypt,⁴⁹ and Saudi Arabia recently approved Russian wheat imports.⁵⁰ Ironically, the low price of oil—which also hurts the Russian economy—has made other oil-dependent, wheat-importing economies look toward Russia for better price options.⁵¹ Syria is only the latest example of how the Middle East has long been a region affected by the rivalry between Russia and the United States, and Russian command of wheat markets will likely add another weapon to its arsenal.

Some may argue that, while lower prices are a factor in Russia's favor, they do not guarantee Russian agricultural dominance. Wheat markets are especially complicated because grain quality varies greatly depending on production region. For example, Algeria's strict quality requirements have kept its market in EU hands, but Russia has been courting it aggressively.⁵² However, grain quality may not mitigate Russian power for long, as a warming climate will shrink production and force countries to be less discerning in their grain quality requirements.

There are other indications that the Russian government's approach to wheat is reminiscent of fossil fuels. Deputy Prime Minister

Alexei Gordeyev, who oversees agriculture, is a proponent of a "grain OPEC." Originally envisioned as a partnership between Russia, Ukraine, and Kazakhstan, Gordeyev is now pitching the idea to EU officials.⁵³ Depending on the membership makeup, a grain OPEC could mitigate or solidify wheat as a tool for Russian hybrid warfare.

Domestic food security remains the highest Russian priority, and the state has imposed an export tax when necessary to protect it.⁵⁴ Countries that rely on Russia for wheat are then doubly vulnerable: they are vulnerable to climate impacts within Russia that cause the state to limit exports, and they are also vulnerable to Russia's use of wheat exports as a manipulative weapon. Russia may use fears of a hungry populace to exert greater control over competing leaders with tenuous support. If countries are reliant on Russia for basic needs like food, the state may not need to interfere in elections to get its way—it could simply threaten to destabilize food security.⁵⁵ This threat becomes more tangible as climate change disrupts food supplies all over the world.

Of course, Russia is not the first country to prioritize domestic food security over exporting to the global market, and domestic politics, and ensuring Russians eat first, surely play a role in Putin's calculations. Global agricultural trade has long been a political battleground, from disputes between the United States and the European Union over GMOs (genetically modified organisms) to battles between the United States and China over soybeans. Nevertheless, the insecurities caused by climate change require a collaborative global response. Russia's approach to food security—both domestically and as a tool of international influence—is unusually dangerous because of its disproportionate grain market share and history of resource weaponization.

Weaponizing Natural Resources in the Climate Era

On the last day of 2019, the Russian federal government released a National Action Plan that seeks to “take advantage of the benefits” of climate change. It laid out twenty-nine strategies to capitalize on the positive aspects of climate change while mitigating the negative aspects. The plan incorporates a focus on drought-resistant crops and industry adaptation in the fields of energy and fuel. Though it does not mention enhanced extraction capacity, it notes the economic expansion afforded by a melting Arctic. It also calls for the Russian Foreign Ministry, Ministry of Industry and Trade, and Ministry of Economic Development to coordinate on counteracting “climate protectionism.”⁵⁶

The economics of clean energy are changing rapidly. Further locking in fossil fuel production will make the transition to a decarbonized world that much more painful for Russian society. Russian fears about carbon protectionism are really fears about losing economic strength and geopolitical clout—losses that come with climate mitigation policies. Energy market dependency by the European Union has helped insulate Russia from sanctions and Ukraine conflict dynamics; EU decarbonization plans should reduce Russia’s energy and political leverage on the bloc. In both the near and long term, climate security experts predict that, as Russia feels increasingly threatened by the EU and other countries’ energy transitions, it is likely to become more aggressive in other spheres.⁵⁷

Russia’s use of hybrid warfare is strategic and patiently planned. After the humiliating collapse of the Soviet Union, Russia has continuously sought to reassert itself on the world stage. The state has proven to be endlessly creative in its forms of hybrid warfare, from gas pricing to internet propaganda to

strategic alliances. Russia’s outsize presence on world grain markets is therefore a cause for concern. Russia is attempting to expand its wheat influence as its energy power is threatened. As its energy policies shift to become defensive, food security may be the next frontier in an offensive, resource-driven foreign policy.

Fortunately, there are ways to combat the weaponization of wheat. First, countries should prioritize climate mitigation and promote food security at home. Other grain-producing countries should explore drought-resistant crop strains, like Russia is already doing. Countries that rely heavily on food imports should consider the climate adaptability and geopolitical aims of the exporting country when determining their import strategy. Secondly, countries should proactively respond to high grain prices in much the same way that the United States responded to the oil embargo in the 1970s by creating the Strategic Petroleum Reserve (SPR).⁵⁸ The SPR is an oil stockpile that the US government maintains for emergency situations: when supplies are low or prices are high. Governments could create a similar reserve for wheat and other grains. A collaborative solution would be a Strategic Grain Reserve managed by an international entity. An internationally managed Strategic Grain Reserve could release grain stores onto the market in emergency situations, lessening both climate impacts and the risks of Russia or others using grain for individual political ends.

The Russian government has chosen to view climate change as an overall advantage, and in some ways this attitude is merited.⁵⁹ The country faces limited consequences from sea level rise when compared to regions like Southeast Asia and does not have to contend with certain kinds of extreme weather, such as hurricanes and typhoons.

But beyond the increasing ease of fossil fuel and grain production, Russia's attitude toward climate change is indicative of deeper, more troubling behavior. Interference in the United States' and other nations' elections has revealed that Russia views destabilization elsewhere as a useful tool of global power projection. Russia actively seeks out opportunities to sow discord in other states; with climate change, much of that work will happen naturally.⁶⁰ Inevitably, states vary in their ability to respond to climate change. Backed by its wheat supply, Russia will be further emboldened to exploit climate-induced vulnerabilities, as it is already doing in the Arctic. There are myriad reasons for world leaders to respond to the climate crisis—Russia's designs on food and other climate vulnerabilities is just one more.

Notes

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