

Ukraine crisis and climate and environment commitments

*William Avis
University of Birmingham
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Question

What potential impact does the Ukraine crisis have on international climate and environment commitments and considerations?

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1. Summary

This rapid literature review collates available literature on the impact of the Ukraine crisis on international climate and environment commitments and considerations. The review draws on a range of sources predominantly blogs, opinion pieces and snap analyses. Given the nature of the conflict (ongoing and evolving), its myriad impacts (on Ukraine, energy markets, domestic and international politics) and uncertain end point, this report should be reviewed with a degree of caution. As the analysis draws heavily on opinion pieces and snap analyses, these will likely be outdated relatively quickly, and some assumptions shown to be flawed. Similarly, as events evolve, some analysis will become redundant (e.g., as sanctions are imposed or relaxed, as markets rebalance or reorient and as the conflict evolves or ends etc.). The report is structured as follows:

- Section two provides a broad overview of factors that influence climate negotiations. Whilst reflecting on past negotiations, it is important to consider how the current conflict will influence these factors. Of importance here is the extent to which national and economic interests influence the tone of negotiations and final outcomes. Here we can see the intersection of domestic politics with international events. Section two also introduces past scenarios developed by Lloyds (2022) to envision potential future negotiations. These provide a lens through which to explore how the conflict may shape dynamics within and between nations.
- Section three focuses on the emerging impact of the conflict on a number of key areas (these are introduced in brief below), it is suggested that these will provide the background to future negotiations as countries navigate the complex and interlinked impacts of conflict and how these shape narratives domestically and internationally. In particular, debates surrounding energy security, volatility in energy markets and broader impacts on cost of living, access to key commodities and a dramatically altered international reality will all shape the context in which negotiations and commitments play out.
- Section four provides a brief overview of the multiple ways the conflict will impact on the global south. It notes that the war in Ukraine could have a devastating effect on a number of countries, threatening economies and seeing governments come under diplomatic pressure to take sides. The impacts will vary from country to country, depending on links to Russia, dependency on certain imports and the presence of fossil fuels. These impacts may influence the degree to which national leaders are supportive or resistant to committing to climate change policies.

The impact of Russia's invasion of Ukraine on international climate and environment commitments and considerations will be complex and multifaceted and likely to evolve over time, key themes emerging in this report are as follows:

Strategic cooperation or competition of states towards climate-related goals has long been anticipated to drive global political developments in the coming century. The nature of these volatile relationships has a determining factor on the scale, speed and final form of the transition to net zero, impacting politically, environmentally and economically.

Climate change is not an isolated area of strategic concern; rather it should be understood as a pervasive condition with implications for most other areas of interstate competition and cooperation, from global trade to regulatory standards. In this sense, actors have climate-related incentives and imperatives to either cooperate or compete according to specific issue areas such as the economy or national security.

Energy security: Russia is a major part of the global energy system, it is a significant oil producer accounting for ~12% of global output, and gas producer responsible for 17% of global output (IEA World Energy Statistics, 2021). Two major narratives have emerged in response to the conflict:

- Calls to accelerate the shift towards more efficient and cleaner energy supplies.
- An increased emphasis on the need to exploit domestic fossil-fuel resources as a means of reducing reliance on Russian exports.

Energy Markets: The global conflict has highlighted how interconnected global energy markets are. Whilst the conflict is disrupting flows in certain directions, new markets are emerging and a reorientation of global trade is expected. This may complicate developing a global consensus on the role of fossil fuels over the short, medium and long term.

Existing plans to transition away from fossil fuels largely rely on new energy generation sources and producing technologies that support a low carbon or net zero future, activities that will require metal that Russia produces. Russia is a leading producer of copper, nickel, platinum group metals and other minerals considered crucial for building a lower-carbon future. As tensions surrounding Ukraine have increased, the metals markets Russia dominates have seen significant increases in price.

Food security: Whilst much attention has focused on the role of Russia as an energy provider, there are increasing concerns regarding the impact of war on agricultural production and supply, with concerns regarding global food security. Russia is the world's largest wheat exporter, accounting for 18.4% of global wheat exports. The conflict in Ukraine is particularly concerning for those fragile countries that import its produce. These include Yemen, Lebanon and Libya. In these countries, grain shortages or cost surges could further destabilise domestic markets and politics.

Domestic Politics: The conflict in Ukraine will, and is already, intersecting with domestic politics in a number of contexts. As noted above, impacts on wheat exports will impose increasing stress on food insecure countries. Domestic politics, particularly issues associated with cost of living, will also impact on countries that have historically led climate negotiations.

Geopolitics: Whilst the conflict has accelerated calls for energy transitions from many quarters, there are some who urge caution, flagging geo-strategic concerns. Whilst calls for renewables to be expedited in order to support energy self-sufficiency, others have flagged that the renewable economy depends on "critical minerals," whose supply is dominated by a number of countries (including China).

2. Factors that influence climate negotiations and commitments

Strategic cooperation or competition of states towards climate-related goals has long been anticipated to drive global political developments in the coming century (Colgan, 2021). The nature of these volatile relationships has a determining factor on the scale, speed and final form of the transition to net zero, impacting politically, environmentally and economically (Lloyds, 2022). Historically, multilateral climate negotiations are complex, with a number of factors influencing outcomes. Past climate negotiations have seen countries attempt to protect national and economic interests, with compromise shaping final outcomes (Maizland, 2021).

States positions also evolve, alternating between cooperation and competition in shaping the norms, rules, and institutions of the international order. Some argue that cooperation is driven primarily by a state's interests, others highlight moral values that transcend state interests and some emphasise inherent features in the state's national identity or mindset that dictate its behaviour (Lloyds, 2022). Lloyds (2022) argue that climate diplomacy reflects elements of all three: interest-driven states and organisations, driven by their distinct psyches, in pursuit of a challenge that transcends national boundaries.

The global economic crisis (2008); the election of Donald Trump (2016); the COVID-19 pandemic (2019) all exerted a significant, and often, disruptive impact on climate negotiations. For example, the UN Secretary-General noted that whilst the Conference of Parties (COP) 26 culminated in the adoption of an outcome document, this reflected the interests, the contradictions, and the state of political will globally rather than climate needs (UN, 2021).

Climate negotiations thus intersect with contemporary events, as noted above, COVID-19 influenced COP 26 negotiations both positively and negatively. The creation and roll-out of a successful vaccine was seen to increase faith in science and governments to deliver solutions to complex problems. Whilst the emergence of vaccine nationalism and the challenges of international cooperation undermined notions of a global consensus (Wade, 2021). The current conflict in Ukraine will thus influence the tone of negotiations over climate commitments between and within countries as well as the broader geopolitical environment in which these discussions play out.

Climate action scenarios

Climate change is not an isolated area of strategic concern; rather it should be understood as a pervasive condition with implications for most other areas of interstate competition and cooperation, from global trade to regulatory standards (Lloyds, 2022). Lloyds (2022) continues that in this sense, actors have climate-related incentives and imperatives to either cooperate or compete according to specific issue areas such as the economy or national security. Assessing how these considerations interact with each other to form a coherent climate strategy for every state is a complicated exercise, especially in an increasingly interdependent and multipolar world (Lloyds, 2022).

In early 2022, Lloyds (2022) developed three scenarios to capture the uncertainty associated with climate action. Each scenario is associated with a trajectory of changes in energy and land use, carbon emissions, and geopolitical relations to assess the possible transition and geopolitical risks for each pathway. Scenarios are outlined below and provide a lens with which to consider how the Ukraine crisis may impact on climate negotiations and the attainment of consensus – whilst these scenarios were developed before the current crisis, they illustrate the types of tensions the conflict will intersect with and exacerbate:

Scenario 1- Coordinated transition (Green Globalisation): In this scenario, global transition to clean energy resources is driven by consensus among world leaders recognising the need for concerted action. Characterised by cooperative dynamics and a united international policy drive, coordinated efforts lead to a deep and accelerated decarbonisation against the backdrop of increasingly ambitious global emission reduction targets, the formulation of compatible policy signals from major powers and the creation of a coherent global regulatory framework.

Scenario 2 - Chaotic/fragmented transition (Climate Anarchy): In this scenario, while many promise to 'build back better', states build back as fast as possible – doing whatever it takes to

revive growth, including financing high-emitting infrastructure projects and subsidising carbon intensive industries. Change is slow and uneven, actors move on their own or through ad hoc opportunistic coalitions, and mitigation efforts are too narrow and too slow to meet climate targets. Responses are characterised by improvisation and compromise, prioritising short-term gains over long-due structural changes. The primary drivers behind this scenario are states' self-interest and mistrust, both reinforced by the failure in finding a multilateral solution to the global health crisis and, most importantly, by the lack of a solid leadership behind global efforts in climate change mitigation.

Scenario 3 - Confrontational transition (Green Cold War): In this scenario, also driven by an interest-centric approach to geopolitics, major powers compete in the development, production, and deployment of critical technologies for the low-carbon transition of the global economy. The competition goes beyond leadership in technology manufacturing and trade, and quickly extends to geopolitics. Major powers fail to compartmentalise climate cooperation, as political leaders refuse to separate an otherwise mutually beneficial collaboration to slow global warming from confrontational relations on other fronts. The energy transition becomes an arena for great power competition and the world fractures into regional blocs, with countries gravitating around technology leaders and regional alliances forming around their respective integrated energy systems. Within these blocs, access to critical raw materials such as rare-earth metals, cobalt, and lithium as well as clean energy technologies such as batteries, photovoltaics, wind turbines, and electric vehicles is facilitated through integrated supply chains and free-trade agreements. Access to these same goods is restricted for countries outside of the bloc.

3. Impact of the Ukraine conflict on climate negotiations and commitments

The following provides an overview of some of the impacts of the Ukraine conflict and how these may influence the context in which climate negotiations will take place. These should be considered indicative and subject to change.

Energy security

Russia is a major part of the global energy system, it is a significant oil producer accounting for ~12% of global output, and gas producer responsible for 17% of global output (IEA World Energy Statistics, 2021) (see Figures 1 and 2).

Russian energy supplies are particularly important in Europe, which receives around 70% of the country's gas exports and half of its oil exports, according to US data (EIA, Russia Country Analysis) (see Figures 3 and 4).

Figures 1 & 2: Top 5 crude oil (left) and natural gas (right) producers (Source: IEA World Energy Statistics, 2021¹)

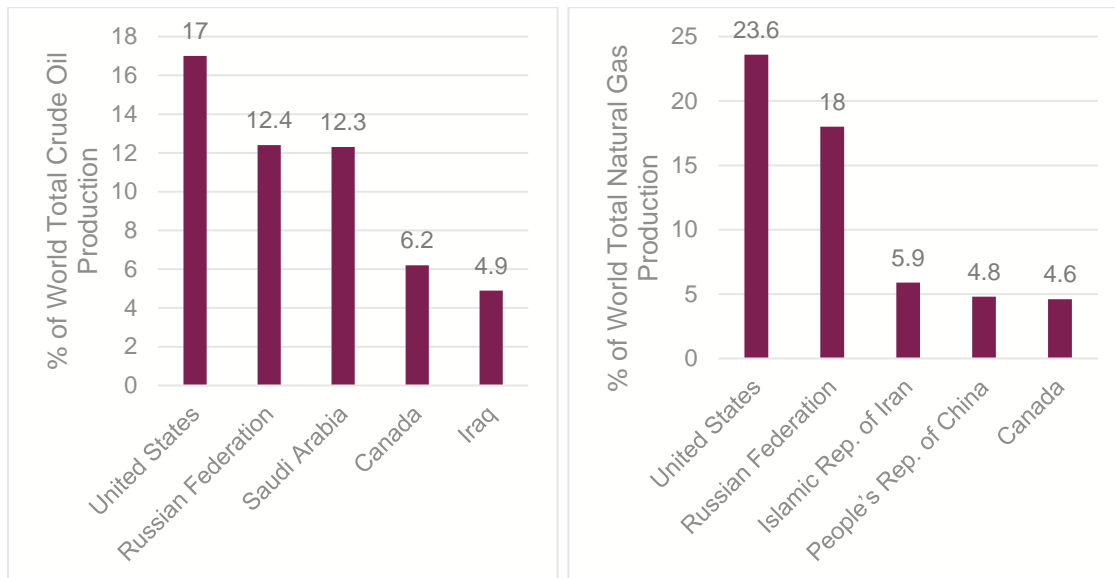
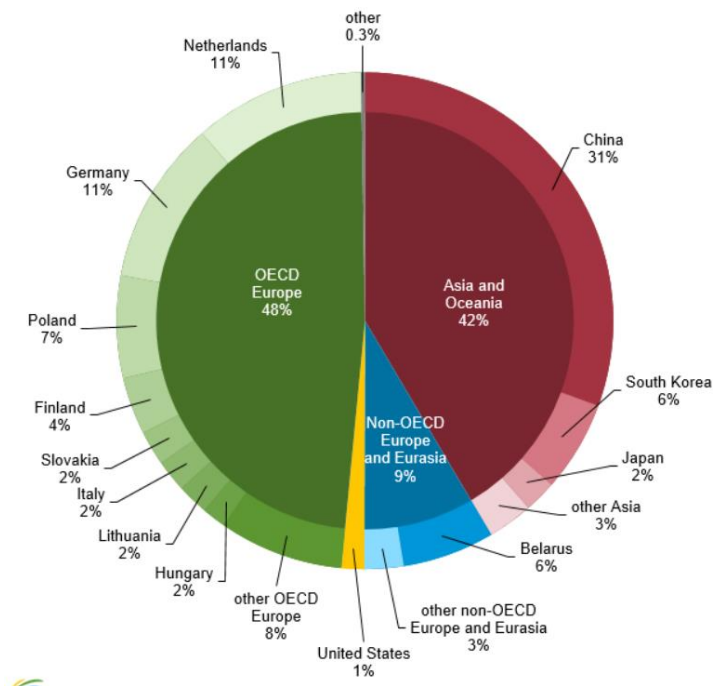


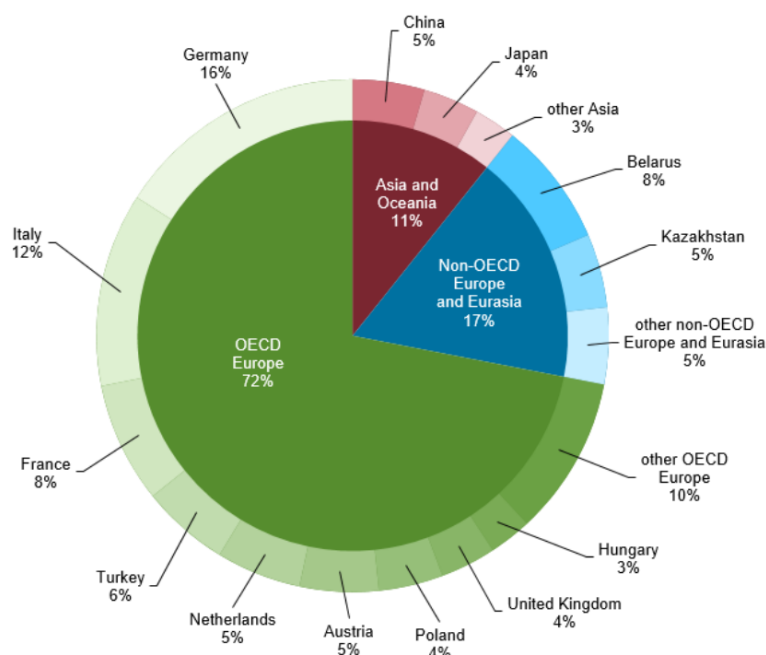
Figure 3: Russia's crude oil and condensate exports by destination, 2020 (Source: IEA, Russia Country Analysis, 2021²)



¹ <https://www.iea.org/reports/key-world-energy-statistics-2021/supply>

² <https://www.eia.gov/international/analysis/country/RUS>

Figure 4: Russia's natural gas exports by destination, 2020 (Source: EIA, Russia Country Analysis 2021³)



There is speculation that the Ukraine crisis could disrupt gas supplies to Europe, either as collateral damage from conflict or via a political move from Russian President Vladimir Putin. Concerns over energy security are particularly acute in Europe, which is heavily reliant on Russian exports of coal, oil and gas (see above). The price of gas and oil has seen significant increases since the start of the conflict. Two major narratives have emerged in response (Carbon Brief, 2022).

- The first argues for accelerating the shift towards more efficient and cleaner energy supplies in order to move away from fossil fuels altogether.
- The second emphasises the need to exploit domestic fossil-fuel resources as a means of reducing reliance on Russian exports,

Many governments are pursuing a dual track, for example, the UK's Business Secretary Kwasi Kwarteng has pressed the case for expanding "both" renewable capacity and North Sea oil and gas production (BBC, 2022).

Shift towards efficient and cleaner energy supplies

A number of countries and commentators have called for a significant shift to cleaner energy. The German government is aiming to accelerate a shift to a 100% renewable electricity system by 2035, according to reports (Reuters, 2022). Kurmayer (2022) reports that Germany might consider keeping its coal and nuclear plants open for longer to reduce demand for Russian gas. In contrast, Appunn (2022) reports that economy and climate minister Robert Habeck played down the potential for doing this, noting that Germany imports much of its hard coal from Russia.

³ <https://www.eia.gov/international/analysis/country/RUS>

In the UK, Dunne (2022) reported that the government's advisory Climate Change Committee recently noted that when new projects in the North Sea are given a development licence, it takes an average of 28 years for them to start producing oil and gas. Similar concerns have been linked to the potential scale up of domestic shale gas industries which could take up to a decade (Dunne, 2022).

In Europe, commentators have stated that the continent could reduce its gas dependency by investing in energy efficiency via the electrification of heat and renewables (Rosenow & Holl, 2022). Analysis from the Institute for Energy Economics and Financial Analysis (IEEFA) argued that Europe should focus on diversifying its energy supplies with more clean energy rather than simply repeating its historical focus on diversifying the suppliers of its fossil fuels (Jaller-Makarewicz & Williams-Derry, 2022).

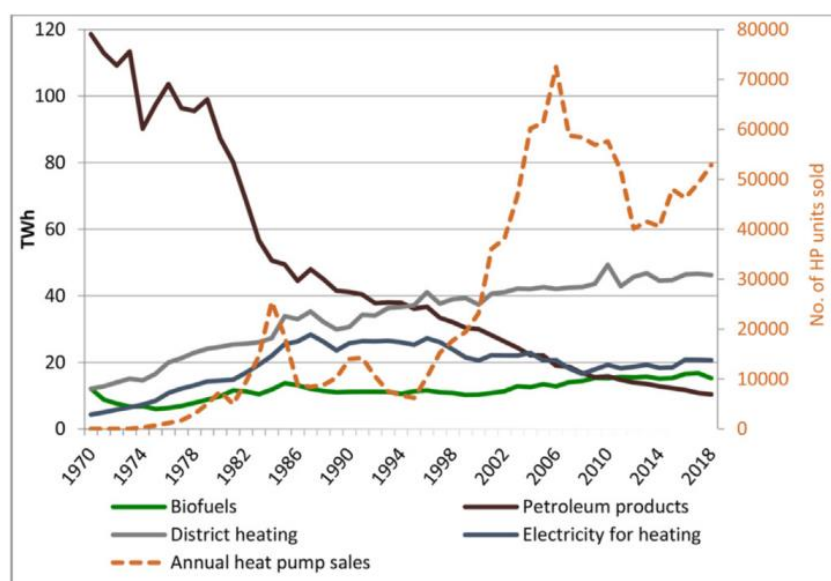
Leaks of a European Commission communication to outline a strategy to break free from Russian gas by cutting demand for the fuel by 40% by 2030 quoted that "the best solution for more energy resilience, less dependence from gas imports and lower prices is the acceleration of the implementation of the European Green Deal. Rapid implementation of the Fit for 55 measures and in particular investments in renewables and energy efficiency is the best answer for the future" (Taylor, 2022).

Timera Energy (2022) analysed near-term options for energy transitions and concluded that it was "delusional" to suggest Europe could survive now without Russian gas, the firm noted, however, that high gas prices were accelerating the momentum behind energy transition in Europe. More positively, Franklin (2022) asserts that "in the longer-term, the environmental agenda is perfectly aligned with the security agenda."

Those calling for widespread adoption of renewables highlight that the Netherlands and Spain were able to cut gas demand in their electricity sectors by 22% and 17%, respectively, in just two years between 2019 and 2021, by building more renewables (Ember, 2022).

Similarly past responses to energy crises have seen shifts in energy use, Andreas Graf of thinktank Agora Energiewende tweeted the below chart illustrating how Sweden shifted away from oil in the 1970s. He notes that at the beginning of the oil crisis in the early seventies, buildings in Sweden consumed 40% of the country's total energy supply and were 90% dependent on oil imports. Today space & water heating needs are largely supplied with renewable energy and electricity via heat pumps & networks.

Figure 5: Total energy use in the Swedish residential service sector (left axis) and the estimated total number of heat pump units sold, not including air-air heat pumps (right axis)⁴.



Reflecting on the alignment of the clean energy agenda and that of energy security, Murray (2022) wrote “clean technologies are peace-keeping and patriotic. Putin hates them. As such they need to be deployed at a pace and scale that is completely unprecedented in the entire sweep of human history. Our climate security, our energy security, and our national security depends upon it.”

Myllyvirta (2022), described how much clean energy Europe would need to deploy to reduce dependency on Russian gas. Myllyvirta concluded that Europe could end Russian gas imports by building around 370 gigawatts (GW) of wind and solar at the same time as rolling out heat pumps, enough to boost clean power generation in the EU and UK combined by around 40% and could be delivered within a “few years”. Despite these bold claims and the availability of technology, others note that permitting for renewables is a more significant barrier to expansion than government ambition (Carbon Brief, 2022).

In Italy, utility firms are reported to be looking to reduce their exposure to fossil fuels, with Enel reportedly moving to build battery storage sites instead of converting two coal plants to use gas (ANSA, 2022).

In the longer term, Habeck “has described the accelerated capacity expansion for renewable energy as a key element in making the country less dependent on Russian fossil fuel supplies” (reported by Reuters, 2022).

Expanding domestic fossil fuel production and use

In contrast to the above, there have also been calls to expand domestic fossil fuel production and use. For example, in the UK, Net Zero Watch (2022) issued a press release arguing that

⁴ https://twitter.com/andreasgraf/status/1497533765475704834?ref_src=twsrc%5Etfw

fracking for domestic shale gas in the UK could “substitute for Britain’s rapidly rising imports which are increasingly dependent on Russia’s European gas flows” (Net Zero Watch, 2022).

The group also repeated claims about the amount of shale gas under the UK i.e., that just 10% of the shale gas recovered from the Bowland basin in the north of England could supply 50 years of current UK gas demand and would significantly undercut the demand for imported gas (UK Net Zero Watch, 2022). These claims have been widely rebuffed for ignoring more recent evidence suggesting the amount that could be economically extracted might be equivalent to less than five years of the country’s annual demand (see for example twitter commentary here⁵).

UK government ministers have responded to the crisis by giving strong backing to continued offshore oil and gas production commenting that “North Sea gas is crucial for our energy security” and committing to drilling for new wells whilst acknowledging that “increased North Sea production could bring down prices” (Gosden, 2022). Other commentators have called for the UK to build new nuclear in “record time,” start fracking and “allow the North Sea’s gas fields to be fully exploited” (The Daily Telegraph, 2022).

Reflecting similar debates in the US, some have referred to shale gas as “America’s most powerful weapon against Russian aggression” (Smith, 2022). In Germany, opposition energy policy spokespeople for the Christian Democrats called for the country to pause its coal phaseout in response to the crisis (Smith, 2022).

Whilst the Glasgow climate summit (COP 26), made ambitious pledges to reduce fossil fuel use, the debate about the transition to renewable energy has been impacted by energy security concerns. According to Van Geuns (quoted by Cohen, 2022), for more than a decade, policy discussions about cutting back on gas, oil and coal emphasised safety and the environment, at the expense of financial and economic considerations. Contemporary events have reversed this position, as she notes, “Gas prices became very high, and all of a sudden security of supply and price became the main subject of public debate.”

A concern, according to Cohen (2022), in terms of climate negotiations is that the renewed emphasis on energy independence and national security may encourage policymakers to backslide on efforts to decrease the use of fossil fuels.

Global increased prices have spurred additional production and consumption of fuels that contribute to global warming. Coal imports to the European Union in January rose more than 56% from the previous year (Saul & Chestney, 2022). The British Coal Authority has responded to the current crisis by providing a mine in Wales permission to increase output by 40 million tons over the next two decades. In Australia, there are plans to open or expand more coking coal mines. And China, which has traditionally made energy security a priority, has further stepped up its coal production and approved three new billion-dollar coal mines (Cohen, 2022).

Dual track approaches

As alluded to above, many countries are pursuing a dual track approach. Rhetorically, at least, heralding an opportunity to drive a transition to net zero, whilst simultaneously (over

⁵ <https://twitter.com/DrSimEvans/status/1495706700489318402>

short to medium terms) seeking to replace supplies of Russian oil and gas from other sources.

In the US it is reported that officials are negotiating with Venezuela, Saudi Arabia and Iran to increase access to alternative sources of oil and thus deprive Russia of income (Liptak et al., 2022).

Similarly in Europe, EU commitments to wean the continent of dependency on Russian imports (aiming to cut imports by 2/3 by the end of year) are subject to much debate. Critiqued for focusing on gas and ignoring coal and oil and seeking to replace imports from other locations (Taylor, 2022a)

Taylor (2022a) highlights that Europe's energy crisis has made many EU countries rethink their path to clean and green energy. Many EU countries, particularly those in central and eastern Europe, were betting on gas as a steppingstone away from coal. But the gas option looks less realistic in the wake of the Ukraine crisis and the European Commission is now saying that countries could burn coal for longer provided it is part of a wider transition to renewables (Taylor, 2022a).

Global Energy Markets

The conflict has highlighted how interconnected global energy markets are. Whilst the conflict is disrupting flows in certain directions, new markets are emerging and a reorientation of global trade is expected (see earlier comments on Venezuelan and Iranian oil). This may complicate developing a global consensus on the role of fossil fuels over the short, medium and long term. Although Europe is the main destination for Russian energy exports, Russia has increasingly turned to China for energy and general economic cooperation. The Financial Times (2022) has postulated that China could "throw Russia an economic lifeline" to "weather the storms of sanctions" by, for example, buying more energy from it.

To provide an overview of how the conflict has impacted on energy and wheat prices see figures 6-9.

Figure 6: Natural Gas price 05/03/22 (Market Insider
<https://markets.businessinsider.com/commodities/natural-gas-price>)



Figure 7: Coal price 05/03/22 (Market Insider: <https://markets.businessinsider.com/commodities/coal-price>)



Figure 8: Oil (Brent) price 05/03/22 (Market Insider: <https://markets.businessinsider.com/commodities/oil-price?type=brent>)



Figure 9: Wheat Prices 05/03/22 (Market Insider: <https://markets.businessinsider.com/commodities/wheat-price>)



Impact of conflict on the production of resources integral to energy transition technologies

Existing plans to transition away from fossil fuels largely rely on new energy generation sources and producing technologies that support a low carbon or net zero future, activities that will require metal that Russia produces.

Russia is a leading producer of copper, nickel, platinum group metals and other minerals considered crucial for building a lower-carbon future. As tensions surrounding Ukraine have increased, the metals markets Russia dominates have seen significant increases in price, for example the price of nickel reached an 11-year high in early March. Nickel is a crucial commodity for making lithium-ion batteries for electric vehicles (Holzman, 2022).

Russia is also the world's largest producer of palladium, producing about 40% of the world's supply last year. Palladium prices have increased following the Russian invasion. Palladium

is a valuable material used to make catalytic converters and to store and purify hydrogen. One option for manufacturers is to replace palladium in new catalytic converters with platinum, however, Russian miners are the second-largest producer of that metal (Russia produces 10% of the world's platinum) (Holzman, 2022). Market Watch (2022) reported that in late February 2022, platinum was trading 12% higher than it was last year. They continued that this "steep price rise" is expected to continue as the situation in Ukraine deteriorates.

In terms of Cobalt, primarily used in lithium-ion batteries, although a distant second to the Democratic Republic of the Congo, Russia is the world's next-largest producer of the metal, accounting for just over 4% of the global total (NS Energy, 2021).

A key actor in Russian mining, Nornickel has suggested in the past that its products are so vital to the energy transition and economy that they could be seen as "impossible to sanction" and the company has also "sought to promote itself as a future provider of pivotal metals for the energy transition" (Holzman, 2022).

Exports of key resources (% of global export markets) (source: OEC data⁶) and uses:

- Nickel 28.2% of Global Exports (geothermal, batteries for EVs and energy storage, hydrogen, hydro, wind and concentrating solar power. It is also necessary in nuclear energy technologies as well as carbon capture and storage.)
- Palladium 16% of Global Exports (key component in pollution-control devices for cars and trucks e.g., catalytic converters)
- Platinum 16% of Global Exports (key component in pollution-control devices for cars and trucks e.g., catalytic converters)
- Cobalt 3.73% of Global Exports (essential component of the cathode in lithium-ion batteries)

Food Security

Whilst much attention has focused on the role of Russia as an energy provider, there are increasing concerns regarding the impact of war on agricultural production and supply and impact on global food security. Russia is the world's largest wheat exporter, accounting for 18.4% of global wheat exports in 2019 (OEC Data⁷).

Russia and Ukraine together represent a significant breadbasket, accounting for nearly a quarter of world's wheat exports in 2019 (OEC Data⁸). Ukraine is the fourth-largest supplier of wheat and corn in the world. It contributes nearly 12% to the world's wheat exports and 16% of corn exports (Braun, 2022). The country's agricultural production is concentrated in Ukraine's eastern regions (Kharkiv, Dnipropetrovsk, Zaporizhia and Kherson). Ukraine supplies the EU with almost half of its corn and a quarter of its cereals and vegetable oil.

Among the regions that could be worst affected by the war in Ukraine are the Middle East and African nations which account for almost 40% of Ukraine's exports. The Middle East also relies on maize, barley and cooking oil imports from Ukraine (Braun, 2022).

⁶ <https://oec.world/en/home-a>

⁷ <https://oec.world/en/home-a>

⁸ <https://oec.world/en/profile/hs92/wheat> [ps://oec.world/en/profile/hs92/wheat](https://oec.world/en/profile/hs92/wheat)

Egypt, the world's biggest wheat importer, is particularly at risk, given that it imports almost 70% of its grain from Russia and Ukraine and its stability depends on these imports, The Economist (2022) highlights that the Egyptian government relies on wheat imports to make subsidised bread for citizens.

The conflict in Ukraine is particularly concerning for those fragile countries that import its produce. These include Yemen, Lebanon and Libya, "where grain shortages or cost surges could not only deepen misery, but churn up unpredictable social consequences" (Carbon Brief, 2022). Ukraine's exports account for 22%, 43% and 21% of Yemen, Libya and Lebanon's wheat consumption, respectively (Carbon Brief, 2022).

Beyond cereals and corn, the Black Sea region accounts for 60% of world sunflower oil output. According to Jadhav (2022), nearly 380,000 tonnes of sunflower oil shipments from the region to India, worth US\$570mn, are now stuck at ports and with producers. The world's biggest edible oil importer could see sunflower oil scarcity "within a few weeks" if loading is not resumed, traders said, and might pivot to soy oils and palm oil imports again.

Sanctions aimed at Russian fertiliser could also heavily impact Brazil's agriculture sector and global soy production, Mano (2022) reported. Brazil imports nearly 85% of its fertilisers and counts Russia as its biggest supplier of the "NPK" mixture: nitrogen, phosphorus and potassium. Last year, Brazil hit a record high for fertiliser imports, with Russia accounting for 9mn tonnes of imports.

Domestic Politics

The conflict in Ukraine will, and is already, intersecting with domestic politics in a number of contexts. As noted above, impacts on wheat exports will impose increasing stress on food insecure countries. Domestic politics, particularly issues associated with cost of living, will also influence the policies of those who have historically led climate negotiations.

United States

US energy policy is affected by the Russian invasion, in particular the increasing cost of oil. For the US, high oil prices may cause inflation and exert an influence on impending November mid-term elections. Reports from the US suggest that support for the Democrats is dwindling and that Senate Democrats are keen to suspend the 18.4 cents federal gas tax, which funds highway programmes (Zeballos-Roig, 2022). Commentators suggest that this is an admission that Democrats have failed the climate policy stress test. That is, they show a low resolve to push for climate policy when there are adverse changes in the policy environment (Zeballos-Roig, 2022).

The federal gas tax suspension also suggests that carbon pricing is either abandoned or on hold. With a conservative Supreme Court, administrative and regulatory actions via the Environmental Protection Agency (such as the Clean Power Plan) look increasingly difficult. If Republicans win back the House in November 2022, legislative progress on climate policy might be over (Zeballos-Roig, 2022).

More broadly, Dolsak and Prakash (2022) report that the Ukraine Crisis will have a detrimental impact on US climate policy. They highlight that whilst the climate movement wants to phase out fossil fuels, fracked shale gas is making a comeback. They suggest that two dozen US gas tankers are headed to Europe and an additional 33 might follow. With renewed fortunes of fracked shale gas, fossil fuel divesture in states such as Pennsylvania

(which are considered swing states in U.S. Presidential politics) will become politically difficult. Moreover, banks may rethink their pledges not to finance fossil fuel projects (Dolsak & Prakash, 2022).

They conclude that in terms of the policy narrative, shale will get portrayed as a national security imperative, a guarantor of US (and even European) energy security. This will pose a serious problem for the climate movement because House and Senate Democrats from swing districts will have a harder time justifying fossil fuel divestiture over national security.

Cost of living crises

Prolonged war and sanctions may also exacerbate cost-of-living crises and provide space for those who advocate for reductions in foreign aid budgets and push for international climate finance to be used for domestic purposes (Bourke, 2022).

Cost of living crisis and the increased costs of staples can have a dramatic impact on national politics. For example, The New Statesman (2022) reports that the links between climate change, supply chains and conflict have become increasingly clear. In 2010, a heat wave in wheat-producing Russia and Ukraine reduced yields and pushed up the global price of bread – leading to an increase in poverty and civil unrest in places such as Egypt and Mozambique. Similarly, in 2007, the destabilising influence of an intense drought led the then UN secretary general to describe the conflict in Sudan and Darfur as the “first climate war”.

In Egypt, the world’s top importer of wheat, the government was moving in the wake of the Russian invasion to find alternative grain suppliers. In Morocco, where the worst drought in three decades was pushing up food prices, the Ukraine crisis was set to exacerbate the inflation that has caused protests to break out. Tunisia was already struggling to pay for grain shipments before the conflict broke out; the war seemed likely to complicate the cash-strapped government’s efforts to avert a looming economic collapse (The New Statesman, 2022).

Geopolitics

Whilst the conflict has accelerated calls for energy transitions from many quarters, there are some who urge caution, flagging geo-strategic concerns. Whilst calls for renewables to be expedited in order to support energy self-sufficiency, others have flagged that the renewable economy depends on “critical minerals,” whose supply is dominated by a number of countries (including China). Sivak (2022) provided calculations of US dependence on imported “critical minerals”:

- 100% for Natural Graphite and Manganese,
- 76% for Cobalt,
- 50% for Lithium and Nickel,
- 37% for copper.

China is the top supplier for many of these minerals. Sivak (2022) concludes that the crucial challenge is to develop a national consensus on whether securing “critical minerals” domestically should override objections of local communities and environmental groups.

The current Ukraine crisis raises particular questions for many countries’ foreign policy. For example, for the US and the European Union the need to address China’s dominance of the

renewable energy supply chain. This requires building a domestic consensus on mining “critical minerals.” This also requires reflection on the role of nuclear energy, public funding for new technologies including fission and green hydrogen and what role carbon capture can play (IEA, 2021).

Rebalancing of markets for fossil fuels may also impact on geopolitics. As the European Union and the United States impose sanctions to deny Russia access to European oil and gas markets, oil-producing African countries could seize on the opportunity. They could circumvent Organization of the Petroleum Exporting Countries (OPEC) pressures and increase their production, which would increase state revenues. With soaring prices, oil companies might expand prospection operations. Mauritania and Senegal, which have undertaken substantial natural gas prospection, might be encouraged to move to the exploitation phase. However, should Russia manage to sell its oil to China, African suppliers may suffer as China is the main buyer of African oil and would bargain for lower prices (CSIS, 2022).

4. Impacts on the global south

The war in Ukraine could have a devastating effect on a number of countries in the global south, threatening economies and seeing governments come under diplomatic pressure to take sides in the escalating feud between Russia and Western powers. The impacts will vary from country to country, depending on links to Russia, dependency on certain imports and the presence of fossil fuels. These impacts will also influence the degree to which national leaders are supportive or resistant to committing to climate change policies.

South Africa: It is reported that South Africa has investments in Russia amounting to nearly 80bn South African rand (US\$5bn; £3.7bn), while Russian investments in South Africa total around 23bn rand (Business Insider SA, 2022).

Democratic Republic of Congo: Russia is actively engaged in the Democratic Republic of Congo and was, prior to the conflict, ready to help end the armed violence in the east of the country (BBC, 2022).

Egypt: Egypt is also heavily dependent on tourism from Russia, which has helped its tourism industry recover from the COVID-19 pandemic, giving the country cause for alarm (Masr, 2022).

Nigeria and Angola: The budgets of oil-producing countries like Nigeria and Angola might get a boost from the rising prices, but the cost of transport is likely to rise for people across the continent. This will have a knock-on effect on the prices of other products (BBC, 2022). Commentators have speculated that the war may provide opportunities for oil- and gas-producing countries. BBC (2022) report that “Europe has to rapidly find alternatives to Russian gas, and the most reliable alternatives are in Africa. It’s a great opportunity for African states to move in, and get new deals done quickly”. As Europe turns away from Russia amid its ongoing aggression in Ukraine, Africa may find itself being wooed for its energy resources (BBC, 2022).

New oil and gas reserves have been discovered across Africa (Senegal, Sierra Leone, Mozambique, Uganda, Namibia, Nigeria, South Africa, etc). Many countries were wary that these finds would become stranded assets, especially after the creation of the Glasgow Financial Alliance for Net Zero, coupled with pronouncements at COP26 and recent decisions by the EU to label gas and potentially nuclear power as “green energy sources”.

Now, it appears, the potential collapse of Russia's Nord Strom One and Two projects, which feed gas to Europe, could mean closer ties between Africa and the EU (Ngam, 2022).

Resnick (2022) asserts that EU countries are going to be queueing up to fund the construction of the Nigeria-Niger-Algeria Trans-Saharan Gas Pipeline. Mozambique and South Africa, with a combined potential of 160 trillion cubic feet of offshore gas (Mozambique is understood to have 100 trillion cubic feet of gas while South Africa has roughly 60 trillion cubic feet plus approximately nine billion barrels of oil) will probably also find it much easier now to attract investors (Resnick, 2022).

An EU move closer to Africa, Ngam (2022) asserts, could mean that the focus on greening economies will be put on the backburner (Ngam, 2022). Africa went from being clear that it had to transition from coal to more carbon-neutral energy sources, to a realisation that fossil fuels had become attractive again (Ngam, 2022).

Kenya: The impact of war and financial sanctions on Russia - could have an impact on Kenya's vital tea industry. Russia is among the top five consumers of its tea, helping Kenya earn foreign currency (Kolo, 2020).

Lebanon: Lebanon imports more than half of its wheat from Ukraine, and is seeking alternative markets e.g., India and the United States to secure wheat purchases (Bassam, 2022).

Sahel: France has built a robust coalition of Western powers and donor countries to support international stabilisation efforts in the Sahel, including the Sahel Alliance. The US is a key contributor to these initiatives. It remains to be seen whether these countries will re-focus their resources on the war in Ukraine and reduce their contributions, which would further destabilise the Sahel (BBC, 2022).

Various countries: Beyond its effect on the price of bread, the uncertainty and turmoil brought on by the war will push up interest rates and lower access to credit, which, in turn, would quickly force governments to spend more to service their high debts and squeeze essential spending on other areas health care, education, wages and public investments. The impact on financial support for climate transition could be particularly stark (Yee & Alami, 2022).

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