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War Ecology:
A New Paradigm?

GREEN



Géopolitique, réseaux, énergie,
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Scientific direction **Pierre Charbonnier**

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The invasion of Ukraine by the Russian army in February 2022 has, in the opinion of many, ushered in a new era in European and world history. As is often the case, the war does not end at the front lines, nor with the suffering or death it causes. Viewed from a distance, the war gives off an economic, geopolitical, ideological, and now an ecological aura that this volume of GREEN, one of the scientific reviews published by the Groupe d'études géopolitiques, attempts to capture.

In retrospect, the hope for a universal liberal order based on the free circulation of capital and the guarantee of formal freedoms for individuals seems like a pleasant illusion. First inspired by the allied victory in 1945 and then the collapse of the Soviet Union after 1989, this illusion collapses under the weight of imperialism and contemporary crises. The dream of political stability which motivated liberal democracies is now threatened by an empire which is determined to trade the dividends of peace for the opportunity of territorial expansion – and, it must be said, by its internal shortcomings. Added to this long overdue realization is the climate clock, which is constantly ticking faster, and which also demands that we examine the growth model and geopolitical balances currently in place¹.

Viewed from this angle, the year 2022 marks a historic milestone whose importance seems difficult to overestimate. If we overlay the vast networks of energy dependence deployed by Putin's Russia, the European Union's desire to reclaim a certain degree of strategic independence in its green transformation, the inflation caused by the war and the choking of economic channels, the accelerating damage caused by climate change, along with the stranglehold of debt and underinvestment that is holding back the global South, the historic picture that is painted is as complex as it is tragic. It is complex because the measures needed to address each of these problems separately are not always compatible; it is tragic because what is at play in this moment is the build-up of absolutely decisive disruptive tensions, with global stability and prosperity – and perhaps even the Earth's habitability – at stake.

1. The next issue of GREEN, to be published in November 2022, under the scientific direction of Laurence Tubiana, will be dedicated to this subject.

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In other words, the climate crisis is disrupting the very framework of geopolitical rivalries by raising the threat of a war in which all sides would lose, or an impossible peace in a perpetually unstable world. This volume of GREEN seeks to describe and analyze what historian Adam Tooze calls the “polycrisis” marking the beginning of the 21st century. During the “interregnum” previously described in the pages of le Grand Continent², history was fumbling its way forward: the amassing of power, of capital, of resources, of social movements that characterize the present moment are undergoing undeniable destabilization, though no clear order is discernible. The social sciences are being called upon to explain these uncertainties, and to sometimes speculate on possible futures. This is what we did this past spring during the first weeks of the war in Ukraine by putting forth the idea of “war ecology”³.

The centrality of the energy stakes both in this war — through the mutually imposed sanctions by Russia and the Western bloc — and in climate policies make the principles of international security and ecological sustainability inseparable. “War ecology” therefore refers to a context in which the reinvention of an economy bound by planetary limits and international power relations merge together. On the one hand, political ecology is redefined by geopolitics to the extent that the shift towards sustainability be based on the need to fight a strategic rival — in this case Russia, an aggressive petro-state — which is reshaping the landscape of assets and obstacles in the transition.

The first series of writings seek to describe the current landscape of power relations as they have been changed — directly or indirectly — by the war in Ukraine. The marginalization of Russia by Western sanctions has caused a partial realignment of state actors, according to the moment’s opportunities, as well as an acceleration of the European Union’s search for a geopolitical identity, defined by the intersecting of security and sustainability.

2. Le Grand Continent, “Politiques de l’inter-règne”, Paris, Gallimard, 2022.

3. Pierre Charbonnier, “La naissance de l’écologie de guerre,” Le Grand Continent, March 18, 2022.

This is explored in the texts by Helen Thompson, author of a recent landmark study on the geopolitics of energy⁴, Laurence Tubiana, Mona Ali, Tim Sahay, and Stefan Aykut and Amy Dahan.

A second section focuses on the political economy of the transition and the quest for sufficiency. The increase and instability of energy prices since the beginning of the war has shaken up the dominant economic model and confirms certain environmental arguments about its fundamental instability. But the implementation of an alternative institutional architecture is still hotly debated, especially given the historical echoes of both the war economy and the planned economy. The contributions of Éric Monnet, Massimo Amato, Cédric Durand and Razmig Keucheyan examine this issue.

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Finally, political thought is also addressed as state sovereignty – the national ideal of autonomy – and the dynamics of geo-economic alliances are being redefined by the principles of security and sustainability. In the same way that the First World War gave birth to a new world, where the explosion of liberal capitalism and imperial colonialism gave birth to the communist, then fascist and totalitarian, experiments, the war in Ukraine can be understood as a revolutionary war in the way that Élie Halévy defined this term in his Era of Tyrannies⁵: a war that signals a state of decay of an order, that frees it from its demons and its potential to be surpassed. This section includes our contribution on war ecology, along with contributions by Angélique Palle, Adrien Estève and Adrien Opillard, Étienne Balibar and Bruno Latour.

Pierre Charbonnier • Scientific Directeur

4. Helen Thompson, *Disorder: Hard Times in the 21st Century*, Oxford, Oxford University Press, 2022.

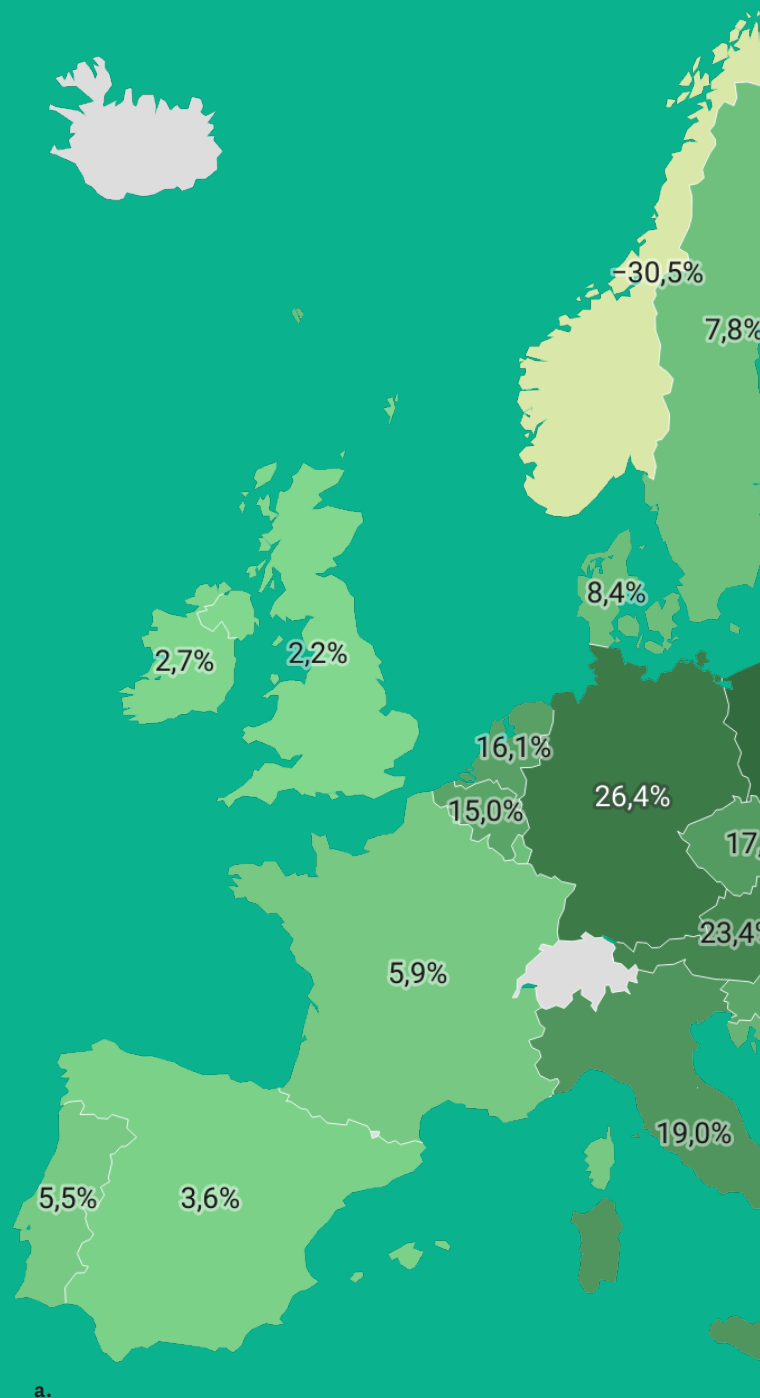
5. Élie Halévy, *L'Ère des tyrannies : études sur le socialisme et la guerre*, Paris, Gallimard, 1938.

The physical reality of the European dependence on Russian gas and oil

In 2021, the EU imported more than 40% of its total gas consumption, 27% of its oil and 46% of its coal from Russia, for a total value of €99 billion¹.

Russia provided 100% of gas supplies to Estonia and Finland, 99.5% to Bulgaria, 81% to Poland, 80% to Austria, 77% to Hungary, 53% to Germany, 33% to Italy, 7.6% to France and only 0.5% and 0.1% of gas imports for Spain and Ireland respectively.²

Russian gas is delivered mainly through four pipelines: Nord Stream 1, which runs under the Baltic Sea, is essential for Central Europe and especially Germany. Ukraine transit is important for Italy and the Balkan countries, while the Yamal pipeline runs through Poland and Belarus and partly supplies the Netherlands and Belgium. Turkstream, which runs under the Black Sea and through Turkey, supplies both the Balkans and Hungary.

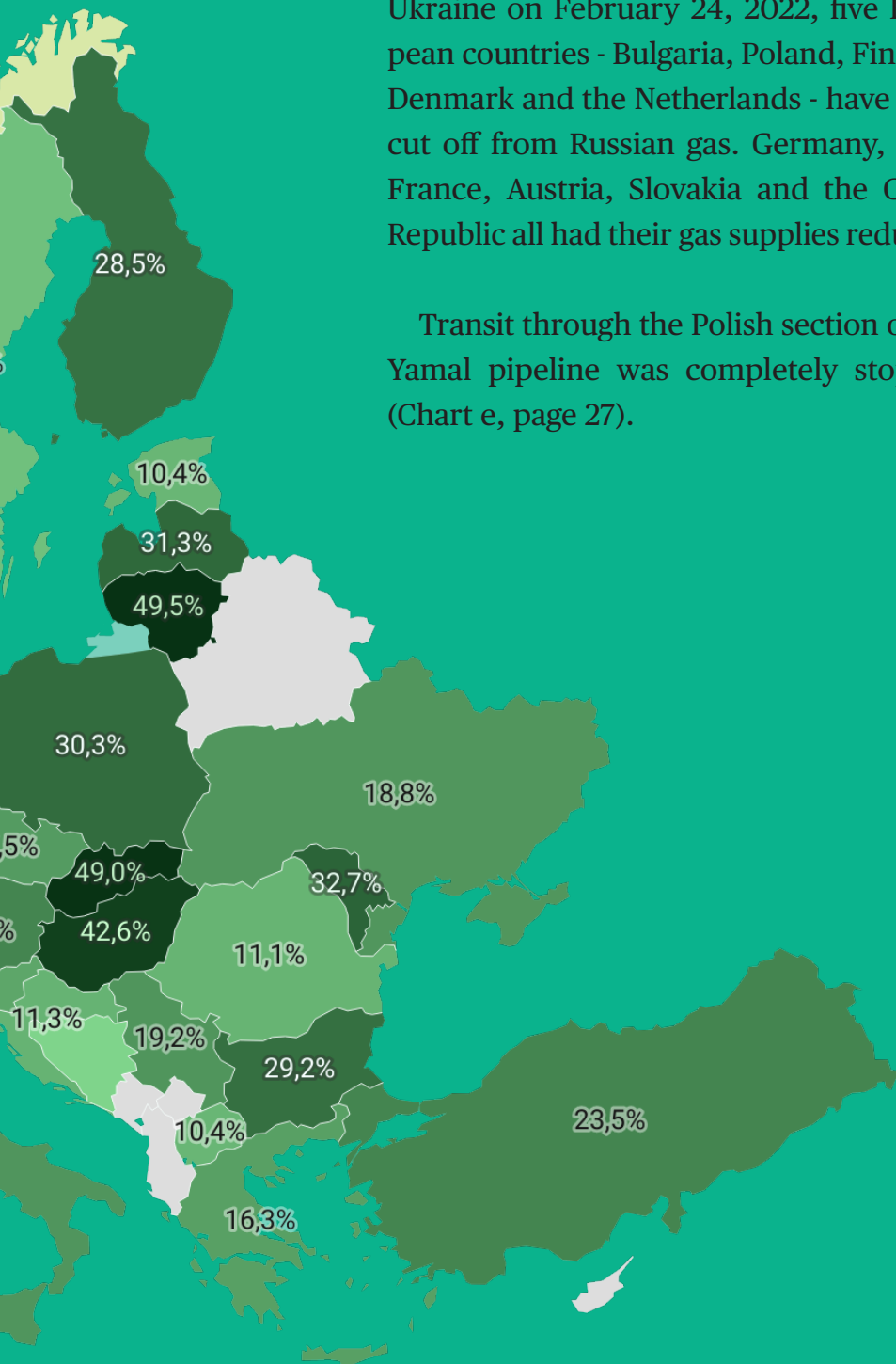


1. European Commission.

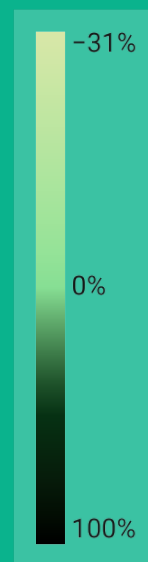
2. Entso-G, Eurostat.

Since the start of the Russia invasion of Ukraine on February 24, 2022, five European countries - Bulgaria, Poland, Finland, Denmark and the Netherlands - have been cut off from Russian gas. Germany, Italy, France, Austria, Slovakia and the Czech Republic all had their gas supplies reduced.

Transit through the Polish section of the Yamal pipeline was completely stopped (Chart e, page 27).



Dependency rate



a • We use Eurostat 2019 data for imports and exports of solid fuels, oil and Gross Domestic Consumption, and Bruegel 2021 data for the share of Russian gas imports, due to significant gaps in the Eurostat data.

The dependency ratio of an input (e.g. gas) is the ratio of Russian imports to total imports of that input, weighted by the share of net imports of that input to Gross Domestic Consumption. The ratio that is mapped is the sum of the ratios for gas, solid fuels and oil products, which account for the bulk of Russian imports into Europe.

Credits: Thomas Belaich/le Grand Continent. An interactive version of the map is available in Le Grand Continent, at the following link: <https://legrandcontinent.eu/fr/2022/04/01/cartographie-notre-dependance-energetique-a-la-russie/>



After the invasion of Ukraine: geopolitics in the Anthropocene

Around the world, Putin's war has caused a seismic shock. The tectonic plates are shaking. How can the new front lines be understood?

◀ Destroyed buildings in Borodyanka, Ukraine. Thursday, April 21, 2022.

© Ken Cedeno/UPI Photo via Newscom



Helen Thompson • Professor of Political Economy, Department of Politics and International Studies, University of Cambridge

The Front lines of the Green War

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Vladimir Putin's bid to annihilate the independence of the largest state on Russia's western border has produced a moment of convulsion for the whole world. When Russia is the world's resource superpower, it could never have not done. Prior to 24 February 2022, Russia was the largest exporter of all petroleum products, gas, and wheat, the second largest crude exporter, and the third largest coal and potash exporter. Quite simply, any outcome to the war changes the geopolitical predicaments around energy and resources Russia's power generates for Eurasia and Africa as well as the United States' strategic choices.

The cumulative shock to the world economy from Russia's actions and the counter-actions to them is seismic, beginning with soaring fossil fuel energy prices. The Brent crude spot price – the European benchmark – spiked by around 25 per cent in a week. At the end of May, it stood at its highest level since 2012 before the shale oil began gathered momentum. Diesel prices in early May stood at twice as their previous peak in mid-2008 when crude oil prices were in inflation-adjusted terms around \$70 a barrel higher. During the first fortnight of the war, EU natural gas prices rose by around 25 per cent. On one day in early April, Newcastle coal futures – the benchmark for the Asian market – jumped more than 6 per cent on news that the EU would impose an outright ban on coal imports from Russia. Although the conjunction of several governments ordering releases from strategic petroleum reserves and China's lockdown of Shanghai lessened the pressure in April and much of May, even those markets that have been least directly affected by supply constraints have exhibited the strain: in mid-April US natural gas prices, which are largely insulated from international dynamics, hit their highest level since the peak of the last commodity boom in mid-2008.

Rising energy prices quickly translated into high food

and fertiliser prices. Since the war is disrupting the supply chains that connect some of the world's most fertile agricultural land to the rest of the world as well as Russia's exports of fertilisers, these markets also experienced their own shock. In March, the UN Food and Agricultural Organisation price index reached its highest ever level since it started in 1990. Already struggling with food security and energy shortages, a number of countries in the global south have sunk into an "everything" crisis. Probably, nowhere has the crisis been so overwhelming as for Sri Lanka. Needing to preserve dollars for essential food and fuel imports, Sri Lanka suspended foreign interest payments on 13 April. By mid-May, the new Sri Lankan Prime Minister Ranil Wickremesinghe, who had come to power after rioting forced his predecessor to resign, was laying out to his compatriots just how dire Sri Lanka's economic prospects had become. Warning that 'the next couple of months will be the most difficult ones of our lives', he explained that the country's foreign exchange reserves were decimated, petrol and medicines were running out, and long daily power shortages were inevitable.

In any circumstances, Russia's turn to war would constitute an inflection point. But this war began in already turbulent times characterised by a fossil fuel energy crisis, fault lines generated by Russian geopolitical power, and a bid to drive a rapid energy revolution away from fossil fuels. The stakes of the present war-shaped tumult only become comprehensible if that disorder is also understood as part of these longer turbulences.

The fossil fuel energy crisis

The prior fossil fuel energy crisis starts with the supply of oil in relation to demand. Here, the issue was beginning to manifest before the pandemic struck. In 2019, oil production fell for the first time in a decade, even as oil consumption rose by almost one million barrels per day. The fall in crude production in 2019 was particularly notable as natural gas plant liquids and other liquids increased. During 2021 recovery was slow, with production still lower for the year than for any year since 2014. Of the significant oil producers, only Canada, Iran, Libya, and Mexico supplied more in 2021 than 2020.

Unsurprisingly, the era of falling and then relatively low oil prices that had prevailed from the oil price crash in mid-2014 through the second quarter of 2016 had also ended before the pandemic. With Saudi Arabia having established an alliance with Russia to form OPEC Plus in 2016, two of the world's three largest oil producers were co-operating to ensure a floor for prices. In the summer of 2018, WTI prices went above \$80 a, the highest level they had hit since oil's sharp tumble in the 2014 crash. Although, notwithstanding the fall in production, prices were lower through 2019, the world economy was then experiencing what the IMF termed a 'synchronised

slowdown', with growth slighter than at any time since the 2008 crash.

After the post-shutdown economic recovery began, the strains in oil markets quickly rematerialised. By October 2021, the WTI price had moved above \$80 again; by January 2022, it was above \$90. As early as the summer of 2021, the US and Chinese governments were openly worrying about the direction prices were headed. Just a month after OPEC Plus had enlarged production quotas, President Biden made his first request to the cartel to increase production further in August 2021. The following month, China released oil reserves for the first time from its Strategic Petroleum Reserve. With OPEC Plus unreceptive and China's move leaving the market untouched, the US co-ordinated strategic reserve releases with China, India, Japan, the UK, and South Korea. This unprecedented co-ordination between the world's two largest oil-consuming countries was the counter-part to the unparalleled co-ordination engineered by Trump between the world's three largest oil producers to reverse the price slump in March 2020. Each move spoke to the problem that has bedevilled the world economy since the mid-2000s: most of the time, oil prices either are too high for oil importing countries or too low for producers.

On the supply side, this oil crisis has several causes. Conventional oil - non-shale and tar sands production has been for the most part stagnant since 2005. Back in the early 2000s, the question of whether the world's largest conventional oil field at Ghawar in eastern Saudi Arabia was in decline became politically charged. Then the Saudi state oil company Aramco was keen to debunk any such idea. But a bond prospectus published by Aramco in April 2019 revealed that Ghawar was only in a maximum production scenario able to supply 3.8 million barrels per day (bpd), 2 million less than market participants' working assumption. Saudi Arabia's fellow OPEC member Kuwait has more obvious production problems. In 2021, Kuwait still produced nearly 300 million barrels per day less crude than in 2019, representing a 10 per cent fall. In March 2020, a consortium of North American, European, and Japanese banks lent Kuwait \$1 billion to help Kuwait increase its productive capacity. Meanwhile, Russia's west Siberian fields had been in decline for around a decade by 2019.

As production at these large old oil fields became more difficult, relatively few new conventional fields replaced them. Discoveries have been trending sharply downwards since the 1960s. The last decade was no exception: annual conventional oil discoveries were just over a quarter in 2019 what they were in 2010 and only in one of the decade's intervening years did they hit 50 per cent of the 2010 total.

After the slump in prices in 2014, oil companies seve-

rely cut their investments. In 2021, upstream investment in oil and gas was only 50 per cent of what it was in 2014; most of that fall driven by the five western majors.

At the start of the last decade, Iraq was the big hope for improving the conventional supply landscape. Iraq has the fifth largest reserves in the world and is the third largest producer in OPEC Plus. All its major fields are onshore; production and the capital costs for producing in Iraq's are very low compared to anywhere other than Saudi Arabia and Kuwait. In 2009, the Iraqi government had awarded oil contracts to various partnerships of the majors, Asian companies, and the non-state-owned Russian company, Lukoil. The then Iraqi government hoped Iraq could raise production from 2.4 million bpd in 2009 to 12 million bpd within 6-7 years. If, many in and around the global oil industry, deemed this overly ambitious, realism was taken to be 6-7 million bpd. Even this aspiration has proved excessively ambitious. Iraqi output hit 4 million in 2015. By 2018, it had reached only 4.8 million. In 2021, Iraq produced less oil than it did in 2020.

The problems in Iraq have been pervasive. Early on, there was evidence the majors were doubting what could be realised in southern Iraq and were frustrated by the terms of the technical services contracts. In 2011, Exxon-Mobil signed a deal with the regional government in Kurdistan that led the Iraqi government to give an ultimatum that the largest direct descendant of Standard Oil had to choose between its contracts in Kurdistan and the rest of Iraq. The stand-off led to ExxonMobil selling some of its share of West Qurna to PetroChina and the Indonesian company Pertamina. The price crash in the second half of 2014 and the rise of ISIS the same year deepened the difficulties. With significant parts of its territory absorbed into the new caliphate and its revenues tumbling, the Iraqi state was beleaguered. The creation of OPEC Plus raised prices, but the new cartel also left Iraq with tighter production quotas for which the Iraqi government was supposed to compensate the oil majors without the fiscal means to do so. Although the Iraqi government declared ISIS territorially defeated in 2017, ISIS attacks on oil installations still continue, while other violence against western companies headquarters has also grown. By 2019, most of the western oil companies were looking for a way out or showing serious reticence about staying. Most consequentially, Shell withdrew from the Majnoon oil field in 2018, giving its operations to Iraqi-stated owned firm Basra Oil Company, while Shell and ExxonMobil have left the West Qurna 1 field.

The return of the majors to Iraq from 2009 constituted a de facto experiment in whether western companies could return to the post-imperial Middle East. While the ongoing presence of BP and TotalEnergies, as well as the Italian firm ENI, is evidence that the European companies at least still see opportunities, the political terrain

has turned out to be much more difficult than anticipated. Past history, as well as the internal devastation wrought by the second Iraq war, rendered this outcome predictable. But the fact that Iraq is one of the countries in the world most at risk of extreme weather from climate change could only intensify the problems of the bid to use Iraq to address the world's oil supply problems.

Without the hoped-for rapid resurrection of Iraqi production, the world economy though the 2010s depended on shale oil. US crude oil production (including lease condensate) increased from 5 million bpd in 2008 to 12 million bpd. But, by the end of 2019, it was possible that the shale boom was approaching its limits. After falling between 1980 and 2007, US proved reserves moved sharply upwards from 2008 when fracking started. After a dip in 2015, they grew at least 9 per cent a year until 2019 when they stalled. Much of the shale sector has struggled to recover after the pandemic-induced price collapse in March 2020. In part shale's woes in 2021 were a function of investors demanding capital discipline after years of poor returns. What is unclear is just what kind of adjustment the sector and its investors can make now the old supply chains around Russian oil are disrupted. The US Energy Information Administration is forecasting US crude production to average almost 13 million in 2023. But of the shale plays, only the Permian basin - what is now the world's largest oil field running from west Texas into south-eastern New Mexico - had surpassed its 2019 output by the end of the first quarter of 2022. The North Dakota Bakken field, where shale oil began, is still producing around 20 per cent less than in 2019 and the mid-western Niobrara formation remains about 25 per cent down. Meanwhile, the Eagle Ford field in Texas reached a peak as early as 2015.

Rather than being the primary cause of the oil crisis, the war is instead compounding structural problems between supply and demand that are only absent when economic activity is curtailed. Now, the war is bringing that underlying crisis into dramatically sharp relief. It would always be consequential to deploy sanctions that prevent the world's largest petroleum product exporter from engaging in its usual business. Never before have the oil exports of either of the two large oil exporters been sanctioned in this way. After Khrushchev resurrected the Soviet export capacity, west Europeans accepted oil imports from the 1960s without interruption during the remaining crises of the Cold War, including the Soviet military intervention in Afghanistan and martial law in Poland. Even American imports of Russian petroleum products doubled between March 2014, when Russia annexed Crimea, and May 2021, just after the Russian military build-up on Ukraine's border began. Seen from this historical perspective, it is quite extraordinary for anyone in Washington to consider that the US can use the war 'downgrade [Russia's] status as a leading energy supplier',

as one as one Biden administration official contemplated on 8 May.

Conditions in global gas markets prior to the invasion compound the likely consequences of any such aim. Here, China is pivotal. Between 2010 and 2020, China's gas demand grew 300 per cent, accelerating from the latter part of the decade as China's Ministry of Ecology and Environment made a push to move household heating from coal to gas. Through the course of the 2010s, China's domestic production as a proportion of its consumption fell sharply to the point where in 2021 imports were well over 40 percent of the total. In 2021, Chinese demand for LNG grew at a staggering 19 per cent, as the structural shift to gas was reinforced by the post-pandemic economic recovery. During the course of 2021, China replaced Japan as the world's largest importer of liquid natural gas (LNG), even as China's imports through the Power of Siberia pipeline also increased. For other gas importing countries in Asia and Europe, this was a huge energy shock more than comparable in size to past oil shocks. In December 2021 EU natural gas futures were eighteen times higher than in January 2020, the last month before pandemic fears hit.

Yet the crucial fact about China's general energy strategy is its willingness to move all ways, including between Russia and the United States, to try to ensure that it has multiple sources of supply. Gas is no exception. When Putin and Xi Jinping met in Beijing, just prior to the invasion of Ukraine, they agreed that China would import another 10 billion cubic metres from Russia via pipelines. Either side of this deal, Chinese energy companies signed a string of sale and purchase agreements with US LNG firms, including two large long-term and one medium term deals with Global LNG. The deals in October 2021 brought to an end a period in which the US-China gas relationship was diminished first by the 2018-19 US-China trade war and then the pandemic. Seen in the wider picture, this development, allied to the co-ordination of reserve oil releases, suggested some complementarity of US-China energy interests, even as other more adversarial dynamics remained in place.

The war has now sprung another shock on LNG markets, centred around the imminent entry of Europe's largest economy and largest gas consumer, which could unsettle again the US-China energy relationship. It has pushed all three of the world's largest export-oriented economies - two of which, Germany and Japan, are near entirely dependent on foreign gas and the other of which, China, in absolute volume consumes more gas than either - into a direct and intense competition for supply while giving American exporters and with them decision-makers in Washington more strategic options.

Russian geopolitical power and the Ukraine fault line

Russia's bid to conquer eastern and southern Ukraine that has catapulted this new gas world into being has a long prior geopolitical history with profound implications for Europe's future. Post-Cold-War Europe was marked by a number of fault lines around Russia and Ukraine. Ultimately, these worked to weaken Ukraine's security. Where the west-European-Russian energy relationship was concerned, history, far from ending with the fall of the Soviet empire in 1989 and the Soviet Union's dissolution in 1991, began. Russia inherited the Soviet economy where oil and gas were the principal exports with pipelines that went through independent sovereign states sitting between Russia and Germany: Ukraine and Belarus in the case of the Druzhba oil pipeline and Ukraine in the case of the Brotherhood gas pipeline network. Russia also sold oil to western Europe from its Baltic ports. From the moment of Ukraine's independence, Russian government looked for means to reduce gas transit through Ukraine. In 1993, the Polish and Belarusian governments agreed to build the Yamal Europe pipeline. Four years later, some Russian gas entered Germany for the first time without transit through Ukraine.

For Ukraine, Russia's ongoing need for transit became an effective material condition of independence, preventing Russia cutting off the country's energy supply. Even before the Orange Revolution, the Ukrainian Parliament insisted that Ukraine should manage the pipelines in its territory as a matter of sovereignty. But with Ukraine having one of the most energy intensive economies in the world, Ukraine's own energy needs were also an Achilles heel. In 1998, the Ukrainian government signed an agreement that tied Russian transit fees to the below market prices Gazprom charged to Ukraine. After Viktor Yushchenko became President in January 2005 to complete the Orange Revolution, Gazprom made its second move to reduce transit dependency by securing the agreement of two German energy companies and Gerhard Schröder's second Red-Green government to build the first Nord Stream pipeline under the Baltic Sea.

The 2008 economic crash increased Ukraine's vulnerability. As the Ukrainian currency tumbled, Ukraine had to turn to the IMF. One condition of IMF credit was reducing the energy subsidies that on top of Russian discounts maintained living standards. Faced with the desperate need for lower energy prices, President Viktor Yanukovich, who came to power after the February 2010 election, did a deal with Moscow to extend Russia's lease of Sevastopol until at least 2042 in exchange for a 30 per cent reduction in gas prices.

Despite his reputation as a pro-Russian President, Yanukovich sought to use the shale revolution to change

Ukraine's energy predicament. This meant using western capital and technology to exploit Ukraine's shale gas deposits in the Dnieper-Donets Basin in the Donbass and the Oleska field in western Ukraine. As well as agreeing in 2012 and 2013 contracts with Shell and Chevron for these contracts, Yanukovich also opened up offshore gas exploration in the Black Sea at Skifska to Shell and ExxonMobil.

In this manner, Ukraine became a site of resource fault lines in Europe on top of the transit ones that had existed since 1991 at a time when Ukraine was negotiating an associate membership deal with the EU and Ukraine's immediate energy difficulties remained an acute vulnerability. The fact that domestic prices for consumers were subsidised and heavily regulated constrained the ability of Ukraine to receive substantial and sustained financial support from both the IMF and the EU as each demanded the sector be liberalised. When Ukraine faced a financial crisis in late 2013 at time when the EU wished to finalise the agreement for associate membership, Putin stepped in and offered Yanukovich a large reduction in gas prices and to buy \$15 billion worth of Ukraine's sovereign debt. In exchange, Yanukovich ditched the EU agreement, setting in motion the events that produced the Maidan Revolution, Russia's annexation of Crimea, and violent attempt at secession by pro-Russian factions in Donetsk and Luhansk.

The 2014 crisis smashed more than Ukraine's territorial integrity; it rewrote the energy landscape in and around the country. With Ukraine in tumult, the western energy companies suspended their activities in the country. After several bitter disputes mediated by the EU, Ukraine stopped buying gas directly from Russia in November 2015, instead purchasing what were largely Russian imports from several eastern EU members, principally Slovakia. On the transportation side, the 2014 rupture led Putin to intensify his moves to cut Ukraine entirely out of Gazprom's transit of gas to the EU by committing to new pipelines under both the Baltic and Black seas. Moreover, the depth of the crisis in Russia-Ukraine relations could only incentivise Germany and the central and southern Europe states to support Putin's new Nord Stream 2 and Turk Stream projects to protect their gas security.

Russia's move towards annexation in 2014 also reconfigured Russia's geoeconomic orientation. In adjusting to the sanctions imposed by western states, Putin imposed a ban on food imports from the US, EU, and Canada and cultivated more domestic production. Complete control of Sevastopol and the central north Black Sea coast from March 2014 allowed Russia to develop the port infrastructure required for it to become a significant agro-food exporter, especially to the Mediterranean basin. By the time Putin turned to war in 2022, Russia had become the world's largest wheat exporter, taking nearly a quarter of the market, as well as the largest fertiliser exporter.

Turning to war has only strengthened Russia's capacity to disrupt food flows and ultimately divide NATO members. With the Russian navy quickly closing the Kerch Strait that connects the Azov Sea to the Black Sea and patrolling the waters around Odessa, Russia was able to stop Ukraine using its ports when before the war 80 per cent of Ukraine's exports were transported across water. Since Ukraine is a significant food exporter, not least of wheat, the Russian blockade has translated directly into a near catastrophic food crisis for some countries in the global south, where supply is short and prices high. What might be done to ameliorate this food crisis quickly turns back into a complex issue for NATO since Turkey would have to give permission to allow NATO naval forces into the Black Sea and if it did the risk escalation would be unacceptable to Germany and France.

Neither Russia nor the rest of the world cannot escape what Russia has geopolitically set in motion. If Russia were to retain its present control of most the north coast of the Black Sea, a good part of the Donbass, and the city of Kherson on the Dnieper Estuary, the war it will have fought to secure this territory will have dramatically strengthened Ukrainian nationhood and external support for an independent Ukrainian nation-state. That nation-state might well be materially unviable without a change in the present military balance of power in southern Ukraine: aside from any other consideration how Ukraine is going to import gas in a world in which Europe turns to seaborne gas if Ukraine is left landlocked beyond Odessa and Russia controls the waters around Odessa? But precisely for this reason, a short-term Russian victory that landlocked Ukraine would mean the war could not in fact end without western countries abandoning Ukraine, an outcome that neither the EU nor NATO will tolerate.

The stalled energy transition

The weight of Russia's energy power is testimony to the ongoing centrality of fossil fuel energy to the world economy and everyday life. The energy transition, which if successful would in fact be an energy revolution, is proving thus far to be very slow. In 1992, the year of the Earth Summit in Rio de Janeiro, fossil fuel energies constituted 87 per cent of total world energy consumption. Now, they constitute 84 per cent. Without technological breakthroughs on storage, solar and wind remain intermittent primary energy sources for generating electricity, and, even if personal electric vehicle sales are rising, the transport on which the world economy runs - ships and trucks - requires oil products. Germany, which has in one way or another been committed to an energy transition since the 1980s and where less than 50 per cent of the electricity mix comes from fossil fuels, still used fossil fuels for 77 per cent of its primary energy consumption in 2020. While, by contrast, the practical solutions for replacing gas in household heating exist in heat pumps and serious

insulation, governments have not moved to convince citizens of their necessity or committed the funds to the work required.

Europe's issues around the transition in electricity generation were very evident during 2021. Through the late winter, spring, and early autumn of last year wind speeds were often low. As a relatively narrow northern island, the UK has some of the most propitious conditions for wind power in the world, but the UK wind company SSE reported that between April and September 2021 its renewable assets that centre on onshore and offshore wind produced 32 per cent less power than it expected. With wind levels weak, power stations had to use more gas. By autumn, this imperative increased demand at a time when natural gas import prices were spiking under pressure from the China shock and Gazprom's unwillingness to deliver additional supply.

Rising fossil fuel energy costs simultaneously invoke a desire to hasten the energy transition and, in serving as a reminder about how fossil-fuel dependent the world still is lead governments to prioritise whatever form of energy the immediate moment requires. China's energy crisis in the autumn of 2021, which began with disruptions around coal and saw electricity rationing in 20 provinces between September and November, indicative of this predicament. Worried about from just where energy to meet demand was coming, the Central Committee of the Chinese Communist Party and the State Council issued new official guidance that warned against 'any excessive response' in reducing carbon emissions.

The war has also exposed some harsh realities about the energy transition, not least the sustainability of present worldwide energy consumption. Engulfed in its autumn 2021 energy crisis, the Chinese leadership promised a 'comprehensive conservation strategy' and a strategic aim of 'appropriately controll[ing] total energy consumption'. By contrast, for western countries, the memory of the politics of the 1970s make appeals to sacrifice extremely politically unpalatable. If some leading European politicians like Mario Draghi have been willing to suggest that citizens should use less energy to render energy sanctions against Russia feasible, none has been quite willing to suggest this may be the new normal to advance the energy transition.

In so enhancing the stakes, war always brings the hardness of here and now into dramatic relief while releasing chaotic forces. By contrast, the way governments were pursuing the energy transition was more an attempt to suspend the present and jump into the future by sheer force of will. European governments have new deep geopolitical reasons for reaching for the future they already desired where, as Merkel said in January 2020, Europe would become 'the first continent to be CO2 free'. In the

geopolitical and economic necessity of oil lay subordination. In the hope of solar and wind energy plus electrification lay Macron's bid for European sovereignty. But the war could not have made it clearer how tough any such material change is. Energy constrains even those who pursue war and those subject to it: Ukraine is transporting Russian oil and gas to Europe through its pipelines and Russia is paying Ukraine to carry those exports. Where energy is concerned, even the transformative power of war has its limits.

The choices now are starker. The commitment to a different energy future is already inhibiting Germany's pursuit of non-Russian gas supplies in the present. In March, the German Economy Minister, Robert Habeck, headed to Qatar to try to secure an LNG deal. When an agreement was finally struck on 20 May, Germany only had a Qatari commitment for gas exported from Qatar's American Golden Pass plant from 2024 and further discussions about long-term supply.

A good part of the problem is that Qatar wants a 20-year-plus deal and Germany wants to be out of the gas market before 2040.

More generally, the question of whether governments and citizens will have to face the supply constraints about fossil fuel energy in relation to the ecological imperatives of the energy transition is getting closer to an answer. Micawber-like, western politicians may hope something will turn up. In the global south, where energy rationing is already a fact of life, reality already presses much harder. By one means or another – whether by the war or by trying to reduce carbon emissions more rapidly or by recession – western countries are heading to reduced energy consumption.



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Peace-building in the Age of Wartime Ecology

18

The invasion of Ukraine by Russia brings together a range of security issues: energy, military, finance, food, climate, etc.

These fields, which are usually addressed separately, can no longer be treated as such, given the depth with which this crisis aggravates all these factors beyond the conflict itself. Soaring energy and commodity prices, inflation that seriously threatens households, a debt servicing ratio that is reaching dangerous levels for many countries, the threat of an economic recession, the reorientation of the multilateral system driven by Cold War dynamics ... the European response has been to tie the climate imperative to energy security through the "RePowerEU"¹ plan, by accelerating the transition away from fossil fuels – primarily Russian fossil fuels – by 2027 at the latest.

But this convergence is above all a convergence of crises and also narrows the field of action, even as the physical impacts of climate change are already becoming violently apparent at almost 1.2°C of warming. Without decarbonization, the future promises ever mounting turbulence in the form of increased climate impacts, economic contraction, diplomatic and financial retreat, and unprecedented conflict and humanitarian crises. Little by little, these predicted shocks will rob us of the tools to deal with them.

This new convergence of crises is still in need of a prism capable of mobilizing governments and the multilateral system in a common direction, which is the Paris Agreement. Climate action was built in another era, one that was obviously more conducive to multilateral progress. The year 2015 was also the year in which the United Nations' Sustainable Development Goals were ratified, as

well as the Joint Comprehensive Plan of Action on Iran's nuclear program.

How, then, can we protect the climate today within a profoundly different geopolitical trajectory – whether we view it as de-globalization or, in a more nuanced way, as "geo-economic fragmentation"², to borrow Kristalina Georgieva's expression?

Green Deal diplomacy in the age of wartime ecology

In the very notion of the new "war ecology", as Pierre Charbonnier so richly describes³, we understand that this new ecological imperative brought about by the Russian invasion is not necessarily conducive to diplomacy and cooperation. This imperative carries a risk of being invalidated or diverted in favor of energy security and the search for alternative sources of fossil fuels at all costs, as these energy sources have suddenly found renewed legitimacy. Wartime ecology could be a trap for the European Green Deal.

As the reaction of European institutions and member states shows, the so-called "war ecology" indeed has a strong unifying capacity, a wide range of actions, and a polysemy of (often) legitimate stakes, all of which are intended to accelerate ecological action. But it also tacitly encourages the blending and merging of objectives (isolating Russia, achieving energy autonomy...) and time frames (heating ourselves/staying warm this winter, reducing our emissions by 55% by 2030...), at a rhythm that our institutions are losing control over.

In this sense, the climate imperative has been distorted by the prism of wartime ecology. From energy security to agriculture as a strategic foundation, the European Green Deal is being refracted into distinct fields. This relegates its main objective – to succeed in decarbonization and, through a ripple effect, to increase the likelihood of decarbonization of the entire planet – to the background, or even to the status of an externality.

But the climate issue is about protecting a global public good. This challenge is of a magnitude that no amount of conflict or attrition can incorporate, since zero-sum games have no place in climate protection.

Moreover, it is obvious that this new paradigm of wartime ecology is sui generis to Europe's leadership in climate governance as it has been organized to date. As a matter of fact, the European Union, through the precision of its commitments, has been leading the way for years in terms of climate ambition and has been a key interlocutor for China, the United States, and the G20 on issues of

1. European Commission, A plan to rapidly reduce dependence on Russian fossil fuels and fast forward the green transition, May 2022.

2. Kristalina Georgieva, Why We Must Resist Geoeconomic Fragmentation—And How, IMF, May 2022.

3. Pierre Charbonnier, "La naissance de l'écologie de guerre", le Grand Continent, 18 March 2022.

greenhouse gas reduction and the objectives enshrined in the Paris Agreement. This is the role that Putin is targeting today, as this commitment would permit Europe to carry the multilateral system beyond the era of fossil fuels, which would ultimately deprive Russia of 70% of its gas, oil and coal export market, its largest source of income.

In addition to asserting Russian sovereignty in its self-proclaimed sphere of influence, the invasion is imposing terribly difficult and divisive energy choices on European states, as evidenced by Hungary's position on the invasion and the exceptions granted to it under the embargo on Russian oil imports. For its part, France became the world's largest buyer of Russian liquefied natural gas since the beginning of the war.

And yet, Europe's resilience in the face of these daily contradictions also shows us the Green Deal's contribution to European stability today. It recalls the Green Deal's resilience to the economic shock of the pandemic: one-third of the NextGenerationEU stimulus package, or €800 billion, was dedicated to it. It is difficult to imagine the geopolitical upheaval the Russian aggression would have triggered if Europe did not have a clear, credible and financed framework and roadmap for fossil fuel divestment. The magnitude of the impact would have been completely different.

It is still possible to overcome this magnitude of change. In the final lines of his text, Pierre Charbonnier rightly concludes that,

"inventing a model of development, cooperation and civic construction that integrates the planetary imperative with the game of geopolitical rivalries depends on Europe's ability to not fall entirely under the influence of Putin's totalitarian model."

To begin with, the Green Deal has an internal issue at stake. In France, as in Hungary and many other countries, far-right populist movements give ground to the Kremlin's geopolitical agenda. It is essential to counter these populist trends by successfully establishing a new social contract⁴ through the Green Deal, and it is legitimate to use the devices or the rhetoric of the war context, particularly in order to encourage historic efforts towards energy sufficiency and independence.

On the other hand, the climate imperative must never be subjugated to Russia's geopolitical games. For a long time, the Russian discourse has been one of denial and doubt over climate action. Now it intends to use the present convergence of crises to blame a European policy that, in the words of Vladimir Putin, has caused inflation in part because it has "blindly bet everything on

renewable energies". The aim of this cynical discourse, addressed to the rest of the world, is to isolate Europe in its support for Ukraine. In addition to this, Russia supports European populist movements that make climate denial a mark of identity.

Yet, for Ukraine as well as for the climate, Europe cannot go it alone. Here we see the existential necessity for Europe to succeed in a real diplomatic transformation within the framework of the Green Deal.

This ambition of a great climate diplomacy is embedded in the philosophy behind the Green Deal. It has now been reaffirmed and explicitly reframed by the Russian aggression. Representing the positions of the Commission and the European Investment Bank, Josep Borrell and Werner Hoyer published an opinion piece on this subject following the outbreak of the war⁵, highlighting the fact that it "has reinforced the strategic logic" for all countries to move away from fossil fuels. This conclusion, they say, will drive Europe's international investment choices.

In other words, by anchoring and enriching climate action, Russia's gamble will be emptied of its purpose and replaced by a new geopolitics – that of renewable energy. The diplomacy of the Green Deal will be seen as a peace deal. But if the war has reinforced this imperative, the international reaction to the invasion shows that this will be a difficult message for Europe to convey.

The Green Deal against the new non-alignment

The Russian invasion is the most violent transgression of state sovereignty since the American invasion of Iraq in 2003. This observation, via shortcuts of Western alliances and Cold War histories, facilitates a kind of equivalence that favors ambiguity and non-alignment on the part of many states around the world with respect to Ukraine.

This weakens the hope for a quick resolution of the conflict, humanitarian support for the Ukrainians, and weakens European diplomacy as a whole. Despite its proximity and horror, the conflict in Ukraine is critical not because it is in the West, as some believe, but because it mobilizes the major powers to become the most important determinant of global security – not only in the nuclear field, but also in the climate field.

Yet this non-alignment also reveals the enormous deficit of trust and goodwill that European diplomacy has created over the last few years, particularly with regard to African countries. Missed deadlines for climate financing, the brutal management of migration policies, debt, failure to share the intellectual property of vaccines... the communiqué from the summit between the African Union

4. Laurence Tubiana, "Le Green Deal est le nouveau contrat social", le Grand Continent, September 2021.

5. Josep Borrell, Werner Hoyer, "Decarbonization Is Now a Strategic Imperative", Project Syndicate, 27 April 2022.

and the European Union, held on the eve of the invasion and 18 months late because of Covid, has the appearance of a "reset" on all these thorny preliminary issues, but makes no mention of the hundreds of thousands of Russian forces massed on the Ukrainian borders. A chasm of the unspoken, which has since threatened to widen.

Since the invasion, the General Assembly of the United Nations has on three occasions held votes on the invasion of Ukraine. Three times this non-alignment has been made evident. On March 2, a resolution condemning the invasion, while supported by 141 states, saw key European partners abstain including – and particularly important for the climate – China and India. Half of the African countries, including South Africa, also failed to support the resolution, either by abstaining or by being absent⁶.

As the conflict continues, the multilateral system is seeing a deepening of this support for Russia. On April 7, the day when the mass executions of civilians in the town of Bucha were revealed, a vote in the General Assembly to eject Russia from the Human Rights Council revealed this stark contrast: 93 states in favor, 58 abstentions and 24 against. Nearly half the states, in one way or another, did not wish to support this form of condemnation.

Of course, these votes are above all an affront to peace in Ukraine and the protection of Ukrainians. This was not a climate issue. But this shows - if it were necessary - that moral force or the proof of abuses alone will not delegitimize the Kremlin's gambit in the eyes of the world. This dangerous dynamic threatens to fragment the multilateral system at the most decisive moment for climate action, just when the IPCC gives us three years to implement global decarbonization with adequate momentum.

Energy partnerships amidst a background of tension

The Green Deal is currently the world's only instrument capable of breaking through this dynamic. Yet, among the states that voted against or abstained from this latest vote are partners that are essential to Europe's climate ambitions. One example in the Mediterranean region is Algeria and Morocco, two countries that are candidates for deeper partnerships with Europe, but which are finding new levers – energy – to establish their strategic ambiguity in response to the Ukrainian crisis. This example also highlights the extent of existing fault lines, in this case the Western Sahara issue.

A territory largely controlled by Morocco but not recognized by the European Union as belonging to it, and to which the United Nations has conferred the special

status of "non-self-governing territory." It is the source of persistent and growing tensions with Algeria, which supports a separatist movement there. With diplomatic (and energy) ties severed, and with Algeria weaning itself from exporting gas to Morocco since last year, the situation is so serious that some analysts see the potential for an armed conflict between Africa's second and third largest military powers.

In March 2022, Morocco's announcement of a plan to grant Western Sahara some degree of autonomy was supported by European governments, with a commitment from Spain to compensate for the loss of Algerian gas, as well as the restoration of diplomatic relations with the new German government (after more than a year's freeze), which could herald the revival of an infrastructure project for the production and export of green hydrogen. This project was also halted last year when relations between Morocco and Europe were at their lowest.

This new and tentative reconciliation is clearly not enough to see Morocco support the European position on Ukraine, but it does indicate that solutions to Morocco's energy challenges are a compelling area for European diplomacy.

For its part, since the invasion, Algeria has signed deals with Italy to increase its gas exports and has threatened Spain with cutting off its gas supply because of its growing ties with Morocco. Algeria supplies more than ten percent of Europe's gas imports, and its main military partner for weapons is Russia, to which it also pledged – before the invasion – to become a major purchaser of wheat.

We see in Algeria's position this distinct desire for non-alignment. But we can see more broadly how the current confluence of crises makes the country vulnerable, whether to soaring food prices or to climatic impacts. A somber metaphor for this climatic-geopolitical juncture: last summer, in response to devastating forest fires that killed 90 people, Algeria purchased eight Russian water bombers.

Yet the proposals emerging from the current crisis demonstrate the possibilities for Green Deal diplomacy. The Italian think tank Ecco⁷, for example, has highlighted the great potential of a European partnership with Algeria and Egypt for an energy transition away from gas and towards renewables. Through its existing infrastructure, Algeria – whose energy system is 99% dependent on gas – could create tens of thousands of permanent jobs and diversify its energy infrastructure in a way that is compatible with the Paris Agreement while also generating significant revenue and meeting European gas needs during the transition. This is both desirable and necessary.

6. See "Trois cartes pour comprendre le bouleversement géopolitique que constitue la guerre en Ukraine", le Grand Continent, 8 April 2022 and "Cartographier les réactions à l'invasion de l'Ukraine", le Grand Continent, 24 February 2022.

7. Annalisa Perteghella, Elena Corradi, Gas-to-clean transition in the Mediterranean: Towards New Partnerships with Algeria and Egypt, ECCO April 2022.

In this sense, it is good news that the European Commission's new partnerships with gas exporters, such as the recent agreement with Egypt, include a provision for investment in clean energy. This initiative is all the more valuable given that Egypt is hosting COP27 this year and is facing macroeconomic pressures that make it particularly vulnerable to the current convergence of crises, as explicitly recognized by the G7 in a June communiqué. This kind of initiative could be replicated by other countries, such as India with its "solar alliance," or China, which is working to make its Belt & Road Initiative investments more green.

South Africa, certainly the most vocal of the "non-aligned" countries today, is another glaring challenge. It is a partnership with which European climate diplomacy is most advanced and innovative, but one which the Ukrainian crisis gives a new dimension and an obligation to succeed.

South Africa is the country with which Europe (along with the United States and the United Kingdom) has developed the most concrete and precise "Just Energy Transition Partnership" (JET-P) for international cooperation to date. This partnership, whose first phase intends to channel \$8.5 billion in funding, is designed to support the country's transition away from coal and, in particular, to focus on the communities most affected by the closure of this sector, as the extractive industries employ half a million people, 20% of them in coal.

The announcement of this partnership, unveiled at COP26 in Glasgow last year, was widely recognized as one of the highlights of that summit. It is a focused, coherent, and seemingly well-funded support package that has the potential to develop a strong base of expertise in energy transition that should serve as an example to the G20 and beyond, and quickly. However, the South African government and its president, Cyril Ramaphosa, are at the forefront of the non-aligned states, not only in their votes and their proposals for texts in the General Assembly, but also in a speech that blamed NATO for the Russian invasion.

It is obviously difficult for European diplomacy to accept such positions, as evidenced by the response of the European Union's ambassador to South Africa, Riina Kionka, after the first vote in the General Assembly. "We are still trying to understand," she said. "We are puzzled," she further told the local press, "because South Africa sees itself, and is seen in the world, as a country championing human rights, international law and the rule of law."

Beyond these predictable diplomatic postures, Europe must realize that it is difficult for South Africa to accept that their climate action will amount to nothing more than a new accumulation of debt to Western donors.

"I'm not negative about the opportunities that this money presents," South Africa's environment minister Barbara Creecy explained more recently, "but I am realistic that we have to look at it properly and we shouldn't rush when looking at it properly. There is a lot of skepticism out there that it's only loan financing, that it's going to worsen our sovereign debt situation."

In April, South Africa experienced devastating floods that killed hundreds and displaced tens of thousands. President Ramaphosa directly attributed these disasters to the climate crisis, and science proves him right. Beyond power relations, the urgency to act and the political will to do so are clearly there. It is up to European diplomacy to provide a financial package and a cooperative project that is attuned to the current convergence of crises, and therefore to concretely implement the €300 billion commitment allocated to the European Union's international "Global Gateway" infrastructure investment project.

The trajectory and progress of this partnership – as well as the expected announcement of other just energy transition plans with other candidate countries, such as Indonesia or India (both also non-aligned) – will be a critical test of Europe's ability to make the climate imperative prevail over Russia's geopolitical calculations.

In this area, Europe appears to be lagging behind, as evidenced by the "International Energy Strategy" launched at the same time as the RePowerEU plan to spell out the continent's new energy diplomacy. Whereas RePowerEU injects renewed political will into Europe's long-term climate goals, the international strategy appears more like a race against time to replace Russian gas with all new dependencies on other hydrocarbon exporters. The actions of some members, including Germany, further muddy the waters, as illustrated by German Chancellor Olaf Scholz's visit to Senegal, where agreements on new gas field exploration were reached without accompanying investment in renewables.

Given that fossil fuel projects span decades, mobilize huge amounts of capital, and require expensive infrastructure, it is difficult to see how such dependencies address the current crisis and provide security for Europe or the world. If these infrastructures are lasting, they lock us into long-term energy choices that will stymie the transition.

The European Union should instead look to its response to COVID and its vaccine procurement policy, and fully embrace the proposal to jointly procure non-Russian gas, so as to minimize the need for new infrastructure and avoid damaging competition between member states and potential exporters.

At the same time, the global rush towards gas is taking place at a time when some member states are also

planning to extend the use of coal. Even if this is a temporary measure to mitigate the crisis, it is difficult to reconcile with our international rhetoric. Our international partners, especially those in the G20, take a very dim view of these decisions, all while Europe has further included gas financing in its taxonomy by categorizing them as "green" under certain conditions.

Furthermore, the European Union, although a leader in renewable energy subsidies, is much slower in reducing its support for fossil fuels. The 27 member states subsidize renewable energies at a cost of €78 billion compared to €56 billion for fossil fuels.

Climate and safety, a seldom considered prism

Despite these dangerous oversights, which underscore the inherent risks of fossil fuel geopolitics, the European Union remains a beacon of political will and institutional commitment to decarbonization. These crises are putting our institutions to the test, but they also give us insight. They reveal Europe's singular responsibility today to realize a vision of the world anchored in security and solidarity.

In the short-term, the greatest test – and the most serious manifestation of this maze of crises – will be the global food shortage predicted by all authoritative observers. According to the World Food Program, the number of food insecure people has doubled since 2019 from 135 million to 276 million, a trend already exacerbated by climate impacts on agricultural yields, protracted conflicts, and the pandemic's ongoing economic impacts.

Moreover, Russia and Ukraine supply almost 30% of the world market's wheat and barley, as well as three quarters of sunflower oil. Their food exports account for about 12% of all calories on the international market. The blockade of Ukraine's ports and the massive destruction of commodities by Russia have exacerbated tensions in the agricultural commodity markets.

The Russian war is having a domino effect on the rest of the world, particularly in terms of higher energy and food prices, and especially for the least developed countries that lack bargaining power. This is in addition to the string of record droughts since 2021 in several parts of the world, and the risk that producer countries will suspend exports. A number of countries in Africa and the Middle East, and others such as India, Serbia and (briefly) Indonesia have already resorted to embargoes. A devastating macroeconomic situation now exposes 1.6 billion people in 94 countries to food insecurity according to the United Nations and poses a clear risk of famine in many regions. These factors are reminiscent of the conditions that preceded the Arab Spring, but on an unprecedented scale. Revolts have already broken out in Ecuador and Sri

Lanka.

Europe says it is already mobilized to respond to this crisis, although the institutional apparatus cannot fully compensate for a shock of this magnitude. In addition to the emergency measures that must be considered, the fundamental question that arises is this: what analysis and what tools would allow this convergence of crises to be more widely prevented rather than endured, at an inestimable human cost, and at the risk of further undermining the multilateral system?

Viewed over the long-term, the concept of "climate security" is proving to be the cornerstone of the system that must be thought through. The sophistication and precision of IPCC models of the physical impacts of global warming must revolutionize the way institutions grasp and operationalize this concept.

Yet the notions of "risk" and "security" as they appear in the climate governance system suffer from the outset because they lack a multilateral framework to address them. Although the conclusion of the Paris Agreement at COP21 in 2015 began to address this lack, translating the Agreement into commitments and actions for decarbonization by states – as well as financial markets, local authorities, and a constellation of other non-state actors – is a fluid and decentralized process.

Moreover, the very design of the Paris Agreement protects states' red lines on the preservation of their sovereignty, drawing on the failures of previous attempts to endorse climate targets, and relies on incentivizing decentralized momentum at all levels of action. The most sensitive and political issues, such as security issues, are therefore difficult to address within its framework. Added to this is a path dependency that privileges the reflection led by state and, in large part, military actors. In the run-up to COP21, a special "climate and security" conference organized by the French Ministry of Defense, was the first of its kind.

Among the impact factors usually included in these projections are natural disasters, drought, desertification, and food insecurity. These are all "variables" that could be described as conventional because they are understood to be "intensifiers" of scenarios that already dominate the diplomatic, humanitarian, and military crisis management apparatus of states, as they are already critical. In other words, they are problems where the multilateral system is already in a state of obvious failure.

Let us look at migration first. We know that each year since 2008, an average of 21.5 million people worldwide have been forced to leave their homes due to climate impacts. According to the World Bank's "best case scenarios", there could be as many as 216 million climate

migrants from sub-Saharan Africa, South Asia, and Latin America by 2050.

Conflict adds to this as well. Last year, the United Nations High Commissioner for Refugees reported 82.4 million people displaced by conflict in Africa in 2021. The Institute for Economics & Peace estimates that there could be 1.2 billion displaced people in the world by 2050, due to the proliferation and intensification of conflicts caused by climate inaction.

The IPCC, for its part, does not have a mandate to provide such quantifiable cost simulations (whether human or financial), but its findings are no less alarming. With "high confidence", its latest report is unequivocal: "Climate hazards are a growing driver of involuntary migration and displacement (high confidence) and are a contributing factor to violent conflict (high confidence)."

For the reasons discussed, the multilateral system is struggling to formally address even these basic and immediate issues of security and conflict. We saw this in December 2021 at the Security Council when a resolution sponsored by Niger and Ireland on the importance of integrating climate risk into conflict prevention planning did not receive unanimous support. India and Russia were opposed while China abstained.

Although this issue by definition appears relevant to the Security Council's mandate, one of the main objections raised concerned the best multilateral framework to deal with it, while the United Nations Framework Convention on Climate Change (UNFCCC, under which the Paris Agreement was developed) could also be competent to do so. Furthermore, the recent IPCC report has been used as a pretext by Russia and India – as well as Brazil – to assert that the complex and non-linear links between climate and security established therein show (perversely) that it is not a matter of direct causality.

As such, Russia has warned the Security Council "against attempts to assert an inherent climate-security nexus", thereby rejecting the prospect of integrating climate with issues of war and peace. But for its part, the UNFCCC is in no way equipped to deal with them.

The tools of the multilateral system to deal with the complex links between climate and security are inadequate or non-existent. Whether it is the financial system, which is not responding to the need for investment, or the absence of a mechanism to anticipate and manage conflicts, when 50% of the countries most vulnerable to climate impacts are already gripped by armed conflicts. We could also mention emerging issues such as geoen지니어ing.

Humanitarianism in the immediate future

Absent a rapid and successful overhaul of the multilateral system, European diplomacy can certainly do more to integrate climate and security issues by addressing immediate, relevant, and overarching humanitarian issues.

One example is health. The destruction of biodiversity favors the spread of zoonotic diseases, such as Ebola, COVID-19 and 60% of infectious diseases, 75% of which are of animal origin. Every year, five new diseases become transmissible to humans, a phenomenon that is expected to accelerate as humans continue to encroach upon and weaken ecosystems. The "One Health" concept, which links human, animal and ecosystem health, is gaining importance, especially among European health institutions. This is a trend that should be followed closely in diplomacy and cooperation as it underlines the clearly globalized dimension of any infectious disease today. The pandemic illustrated the extent to which these diseases can profoundly disrupt the multilateral system.

Food security is also concerned. The shocks once again affecting the global food system only confirm a trend. This is the third such crisis in 15 years. As the International Panel of Experts on Sustainable Food Systems recently pointed out, this is an inherent risk in a system that relies heavily on the import and export of food, where highly indebted and often food-insecure countries must export their agricultural yields to finance their debts, and where staple commodities are subject to excessive speculation on financial markets. European diplomacy could in particular act to prevent speculation and support the creation of regional grain reserves, as well as the diversification of food production and the adoption of agroecology.

Additionally, Europe could also provide humanitarian and medical solutions to food insecurity, particularly child malnutrition. There are solutions that are well known to those working in the field for protecting the first 1000 days of a child's life – through nutrition and vaccination, in particular – which could be extended with minimal investment. By contrast, the World Bank points out that malnutrition costs between 3% and 16% of GDP in certain countries, due to its devastating impact on the population, especially women and children.

Conclusion

Europe, in the throes of major turbulence and the return of tragedy to its soil, is meanwhile writing the first pages of the post-fossil era. In so doing, Europe intends to free itself from a geopolitics of hydrocarbons which, through the concentration of staggering earnings, is becoming an obstacle to the construction of democratic institutions and a proven factor in conflict.

By committing itself to a new geopolitics of renewable energies, Europe is also committing itself to economic perspectives which, given the current situation, appear even more compelling than they already were. Apart from the effect on reducing greenhouse gas emissions, renewable energy should also allow Europe to prevent the kind of out-of-control energy inflation that is currently being imposed by Russia.

But this new geopolitics will also be extractive, underpinned by a need for rare metals and minerals essential to solar, wind, geothermal, and electric vehicle infrastructure, such as cobalt, lithium, copper, zinc, and dozens of others. According to the International Energy Agency, the extraction rate of some of these raw materials will have to increase by as much as 44 times in many producer countries in order to meet market needs. According to the World Bank, the production of graphite, lithium, and cobalt will have to increase by up to 500% by 2050. The need to fully recycle these materials is therefore essential to avoid a new resource war.

As in any extractive industry, security issues are resurfacing due to the question of competition for access to resources. Analyses suggest that we will see a dynamic of dependence which – though it will generate tensions between states – will not generate the same degree of volatility, notably because expected revenues will be less disproportionate and trade of these raw materials will not allow states to establish the same continuous income dynamics, as oil and gas have done for decades.

These supply needs will tend towards the diversification of these value chains. For example, there is discussion of lithium mining in Serbia. But the mining company Rio Tinto and the government have recently faced massive opposition to such a project from local communities. Whereas in more geographically remote parts of Europe, the mining industry would certainly have imposed itself through corruption, force and abuse, here it must come to terms with a new situation.

There is currently only one lithium mine in the European Union – in Portugal – but dozens of viable plans exist in Germany, Austria, Spain, Finland, Portugal and the Czech Republic. The geopolitics of renewables will have to proceed within a regulated and proper framework or it will fail because these projects will be not only be rejected by those who are most affected – such as in Serbia – but also because it will see the renewable industry demonized in the eyes of citizens and consumers, which will profoundly undermine climate action as a whole. Thanks to existing European regulations, as well as multilateral initiatives such as the Extractive Industry Transparency Initiative, and respected certification bodies such as the Initiative for Responsible Mining Assurance, there is already a solid basis for Europe to operate within a transparent framework. Efforts in Europe to ensure traceability of timber imports and to combat deforestation should also serve as a benchmark. Finally, as with the issue of non-Russian gas purchases today, a common procurement policy would also allow Europe to establish new agreements within a coordinated framework that is less prone to tension or transgression.

Here again - and the example of Serbia, a candidate country for accession to the European Union, also demonstrates this - Europe must embrace the extent of its projection power and its capacity to become a bedrock of climate and human security for its own citizens, as well as those in the “neighbourhood” and those around the world.

Living up to these challenges also means keeping a promise to another EU candidate country: Ukraine.

If the Green Deal is successful in its plan for peace, we would be able to offer the Ukrainian people a future worthy of their courage and sacrifice.



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Between Tragedy and Techno-Optimism: The New Climate Realpolitik

Empire

The Prado and the Reina Sofia museums were closed to the public for the two-day NATO summit held in Madrid in the last week of June. A day before the summit, at the Sophia, in front of Picasso's *Guernica*, Extinction Rebellion, and Fridays for Future staged a die-in. Five thousand NATO delegates had descended upon Madrid. They were doubled by a security entourage numbering ten thousand. That same week the US Supreme Court had rescinded the reproductive rights of women, clamped down on the US Environmental Protection Agency's ability to curb greenhouse gas emissions, and eased the right to carry concealed weapons in the United States. Yet the chaos that America's legal machine had unleashed, was temporarily set aside by Biden's team at the Madrid summit, replaced by revived notions of hegemonic stability.

In NATO's hierarchy, the US occupies the role of supreme commander. NATO's Strategic Concept, its vision statement, explicitly affirms America's nuclear capability as the crux of North Atlantic security¹. Following Russia's war on Ukraine, NATO's newly updated policy manifesto strikes out its planned strategic partnership with Russia in 2010 to an aggressive stance against the Eurasian power. A more constant feature of the Strategic Concept over the decades is the reminder that if one NATO member is attacked, Article 5 may be invoked, allowing the alliance to engage in retaliatory attack. Ukraine's EU membership may take years but over a hundred thousand US troops are now stationed in Europe. Since January, this number has increased by twenty thousand.

America's largest military expansion in Europe since the Cold War—is accompanied by its refueling of Europe. US liquified natural gas now accounts for almost half of

European LNG imports, a stunning reversal from just last year when US LNG was shunned by Europe out of ESG concerns. Much to the chagrin of climate activists, the EU parliament has voted to include gas, a fossil fuel, in its taxonomy of sustainable energy. Securing its largest foreign market while rewriting the rules (ESG taxonomies) of the game, the foreign policy hawks in the Biden administration have pulled off a remarkable coup d'état for the hydro-carbon dollar.

Henry Kissinger recently remarked: 'A curious aspect of this war is that it almost looks like World War I.'² A common myth propagated by economists, is that in breaking down international trade and investment, wars interrupt globalization. Adam Tooze and Ted Fertik³ complicate this narrative. They argue that World War I activated the networks of 19th century globalization and violently realigned them. The war in Ukraine has irrevocably altered the global landscape. The invasion was followed by the Group of 7 nations expelling Russia from the Western-controlled global financial system. The West's counter-warfare against the Russian incursion has been fought on economic turf via embargoes on Russian trade, seizures of Russian foreign exchange reserves, and significant military support to Ukraine. The coordinated expulsion of Russia from global financial and trade infrastructures has been unprecedented in scale if not complexity.

When the European Union launched its sixth round of sanctions against Russia this summer, it agreed to join the American and the British in embargoing Russian oil. Soon after the US Treasury's plan to cap the price of Russian crude oil was accepted by European governments, on September 2, 2022, Putin suspended the supply of natural gas flows to Europe via the Nord Stream I pipeline. The Russian autocrat promises that the gas will only flow again if the West's sanctions are removed. Initially proposed by Janet Yellen, the US Treasury Secretary, with the expressed purpose of reducing domestic inflation, it has been repackaged as a benevolent gesture to enable the flow of cheaper Russian oil to low and middle-income economies.

Before the war, 40 percent of Europe's gas was supplied by Russia. In its immediate aftermath, Russian commodity exports were exempted from Western sanctions. Taking out Russia, a major hydrocarbon producer—which, before the war, supplied 14% of global oil and gas—has created energy shortages and escalated prices, especially in Europe.⁴ The ratcheting up of global commodity prices, particularly those of fuel and food, has made for levels of inflation not seen in over forty years. The war in Eastern Europe has reassembled the entire global economic and energy system.

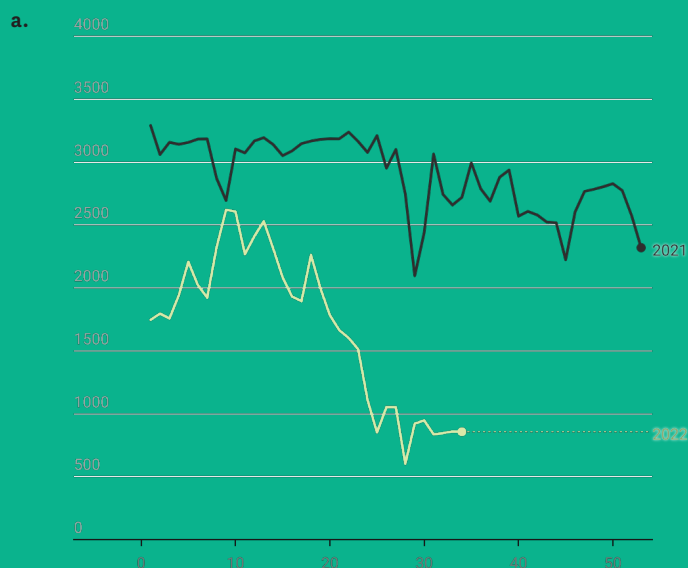
2. Henry Kissinger, Interview, PBS Newshour, 8 Juillet 2022.

3. Adam Tooze, Ted Fertik. « The World Economy and the Great War. » *Geschichte Und Gesellschaft* 40, no. 2 (2014): 214–38.

4. Energy Fact Sheet: Why does Russian oil and gas matter?, IEA, March 2021.

1. NATO's Strategic Concept, 29 June 2022.

Weekly natural gas imports from Russia at European level (in million m3)



a • Chart: Groupe d'études géopolitiques. Source: Bruegel

b • Chart: Groupe d'études géopolitiques. Source: Bruegel

c • Chart: Groupe d'études géopolitiques. Source: Bruegel

While European imports of Russian gas are at their lowest, (figure a) imports of liquefied natural gas (LNG) have reached record volumes (figure f).

Norway has also been able to offset some of the Russian deliveries. Europe is also looking to increase gas import volumes from Azerbaijan and Algeria.

The European Union aims to eliminate Russian oil and gas imports by 2030 through diversification of supply, energy savings and accelerated energy transition.

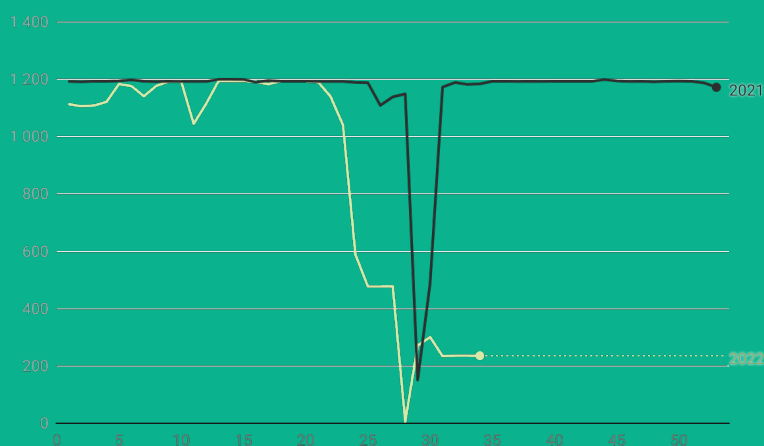
The immediate challenge is to fill the stocks as much as possible before the winter and to secure supplies in a tense market context.

Transit via Ukraine, 2021 versus 2022



b.

Nord Stream 1, 2021 versus 2022

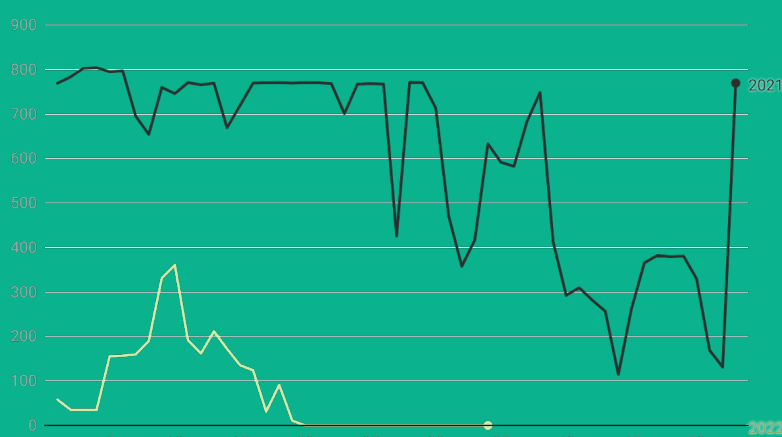


c.

Out of the four pipelines connecting Europe to Russia, since the start of the war on February 24, only the transit via Turkstream (figure f) has not been negatively impacted, seeing, on the contrary, an increase in flows compared to the same period in 2021.

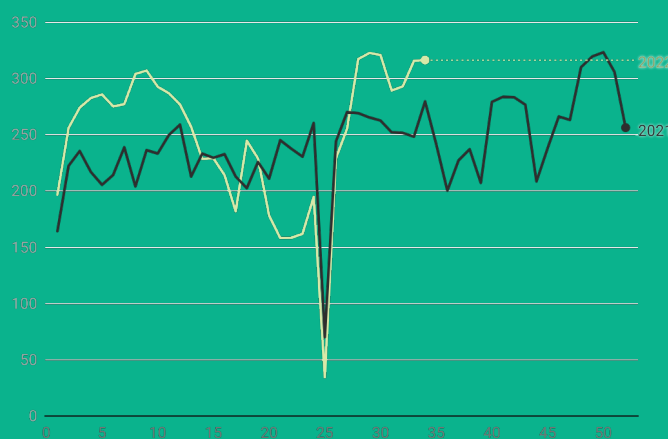
From July 11 to 21, Nord Stream 1 underwent a routine maintenance (figure d). On September 2, after the G7 agreement on a price cap for imported Russian oil, Gazprom stopped the transit via the pipeline for an unspecified period of time on the pretext of a leak.

Yamal (Poland), 2021 versus 2022



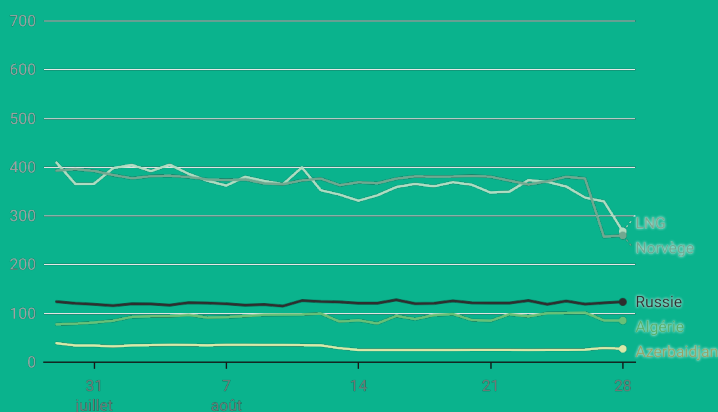
d.

Turkstream, 2021 versus 2022



e.

Daily gas imports at European level from Russia, Norway, Algeria, Azerbaijan, and LNG (2022)



f.

d • Chart: Groupe d'études géopolitiques. Source: Bruegel

e • Chart: Groupe d'études géopolitiques. Source: Bruegel

f • Chart: Groupe d'études géopolitiques. Source: Bruegel

A major decision that came out of the Madrid summit was the establishment of a permanent US military base in Poland. NATO represents the concentration of global financial, legal, and military power in the North Atlantic. It is primarily a transatlantic military alliance. In its self-described 360 degree approach to integrated deterrence—involving cyber-tech and ‘interoperability’ between Allied defense systems—it is a 21st century Benthamite panopticon, under whose gaze lies the rest of the world. In the name of upholding democratic values and institutions, NATO has assigned itself the role of global crisis manager. Its extra-territorial mandate now spans the gamut from ‘conflict-related sexual violence’ to climate adaptation.

By the close of the 2022 summit, NATO had committed that its military forces would achieve net zero carbon emissions by 2050. Out of Madrid emerged a new security framework, one which embeds climate in NATO’s framework of ‘military and political adaptation.’ In a naked power grab, NATO proposed that it ‘should become the leading international organization when it comes to understanding and adapting to the impact of climate change on security.’ It intends to do this by ‘investing in the transition to clean energy sources and leveraging green technologies, while ensuring military effectiveness and a credible deterrence and defence posture.’ Call this ‘militarized adaptation’: a new climate framework in which the energy transition has effectively been co-opted into an imperial project.

War Ecology Meet Militarized Adaptation

In weaponizing the linkages between national defence, energy independence, and economic security, NATO’s new climate framework is a militarized version of Charbonnier’s ‘war ecology’⁵: a framework in which decarbonization is integrated into geopolitics. Charbonnier’s own conceptualization of war ecology is somewhat orthogonal to NATO’s ‘militarized adaptation’. At first glance, Charbonnier’s appears to be a peculiarly European vision, one which proclaims energy austerity as Europe’s resistance to its Russian ‘toxic resource’ addiction. Charbonnier urges that Europe break its dependence on imported fossil fuels and reclaim energy and economic sovereignty via decarbonization. He also argues that political ecology should harness decarbonization to a grand narrative—one that links the energy transition to broader social transformation. A grand narrative, Charbonnier claims, will enable a broad-based coalition around decarbonization.

Large-scale financial, technological, and administrative mobilizations required for a clean energy transformation have historically been associated with ‘total war.’ This vision is now manifest in the European Union’s RePowerEU agenda. Its American counterpart—originally

a trillion plus omnibus climate and social spending bill known as Build Back Better—has been whittled down in the newly passed Inflation Reduction Act (IRA), which legislates \$370 billion in climate spending but also contains various incentives for oil and gas production. Meanwhile policies to reduce child poverty in the United States such as universal pre-school and paid family leave were axed from the IRA.

The weaponization of energy that has followed in the wake of the Ukraine war has accelerated the commitment to the energy transition—six months into this conflict only confirms Charbonnier’s ‘war ecology’ thesis. His geopolitical understanding mediates between the tragic view—that declares the impossibility of limiting carbon emissions to avoid the most catastrophic impact of climate change—and the naïveté of techno-optimists for whom carbon sequestration technologies can be scaled up in time to limit planetary warming to 1.5 degree Celsius. Cognizant of the asymmetric nature of economic warfare waged by the West in response to Russia’s invasion of Ukraine and the suffering it entails for ordinary people, Charbonnier warns of the possibility of political ecology’s subordination to the war imperative. He cautions that ‘war ecology’ may transpire into ecological nationalism. While a realpolitik around the energy transition is the call of the hour, climate advocates must disrupt its complete co-optation by powerful (financial and fossil fuel) interests while channeling the financial, logistical, and administrative capacities of ‘big states’ and ‘big energy’ towards green investment and infrastructure.

Charbonnier’s ‘war ecology’ concept prompts those of us in the US to consider the possibilities of linking the transformative growth agenda of the energy transition to the one place exempt from the inertia of American procedural legalism—its military-industrial complex.

Defense is the only element of American politics that is truly non-partisan. (Even before Russia’s invasion of Ukraine, in the midst of a pandemic, world military expenditures surpassed an unprecedented \$2 trillion in 2021. US spending alone amounted to an entire 40 percent of the total: about \$800 billion a year. Whilst the National Defense Authorization Act, enabling greater defense spending got the green light across the partisan divide, the child tax credit, a wildly successful Covid-era experiment to lessen child poverty in the US expired in December 2021 and was not extended. Given what Cass Sunstein⁶ calls ‘the dark cloud that now looms over the administrative state’ enfolding climate financing into the US department of defense budget may be the path forward.

At first glance, ‘militarized adaptation’—the NATO version of war ecology—appears as an immaculate solution to

5. Pierre Charbonnier, *La naissance de l’écologie de guerre, le Grand Continent*, 18 March 2022.

6. Cass R. Sunstein, *Who Should Regulate?*, *The New York Review*, 26 Mai 2022.

otherwise delayed climate action. (As interest rates rise, financing climate change mitigation and adaptation becomes more costly.) Militarized adaptation is the evolutionary outcome of the normalization of emergency powers over the pandemic. In the US, the Defense Production Act has been activated several times over the last two and a half years, to produce ventilators and vaccines, import infant formula and, also, to seize the foreign assets of other governments. Declarations of emergency might ire libertarians as well as Agamben⁷ but pass under the radar, not opposed to by much of the American public.

In fact, climate activists pushed President Biden to declare a climate emergency and to deploy emergency powers to enact a green new deal. Biden responded with his June 6 executive order: the Defense Production Act For Clean Energy⁸. Passed before the IRA, this executive order bypasses electoral gridlock to expand green infrastructure, for instance, wind farms on federal land. The order also mandates fair labor practices to build America's clean energy arsenal⁹. A double-edged sword in terms of foreign relations, this new legislation simultaneously rolls back tariffs on Asian solar technology imports (critical to US solar manufacturing capacity) while avowing to 'friend-shore' green supply chains between Allies.

Market Turmoil

About a third of the world's energy supply comes from oil, a bit less than a third from coal, and about a quarter from natural gas. Renewables comprise less than a tenth of global energy supply. The war has been hugely profitable for oil and gas producers whose income has more than doubled¹⁰ its five-year average. Surging oil prices have made Saudi Aramco overtake Apple as the world's most profitable firm. The world's biggest oil company is also its greatest carbon emitter. However the US is the world's biggest oil and gas producer.

For various reasons—including the collapse in crude oil prices in 2020 as well the fear of stranded fossil fuel assets as the energy transition accelerates—oil and gas producers are increasingly reluctant to ramp up investment. This has translated into low inventories and high prices. While Saudi Arabia has the largest inventories, globally, the biggest upstream investment increases in the industry are expected from US oil and gas firms. Investment in liquified natural gas has been the strongest across fossil fuel asset classes. Following the Ukraine crisis, the US is poised to become the leading LNG exporter. The war has been a boon for the US fossil fuel industry. Windfall oil and gas profits this year alone are enough to fund a decade of in-

vestment in low emission fuels that could meet the global net zero emissions target. As is clear following the blow-back against the Russian sanctions which have dislocated global energy supply and prices, big states interfering in global markets compromises efficiency. But governments not interfering in markets can be costly on a planetary scale. War-profits earned by the fossil fuel industry should be taxed so as to fund the clean energy transition.

As fossil-fuel prices have soared, wind and solar alternatives become all the more cheaper. The largest increase in investment in clean tech is overwhelmingly driven by European oil and gas majors. The energy shock in Europe will accelerate the demand for renewable sources of energy. However upstream disruptions (e.g. in the supply of rare-earth minerals—of which China is the largest supplier) have slowed down green production chains. While the boom in oil prices benefits petroleum producers, rising prices at the pump are a significant driver of US voter dissatisfaction.

Forecasts that democrats will hemorrhage votes in the upcoming US midterm elections has propelled a massive bid by the Biden administration to tamp down gasoline prices. Progressives have jumped on the bandwagon. Recent proposals by left-leaning think tanks in the US include state-backed funding for new domestic drilling and building state-owned oil refineries. The desire to tamp down commodity inflation has prompted the administration to U-turn on former promises. The Biden administration has conducted its first onshore oil-lease sales on public land, released a plan for offshore oil drilling, and supplicated a tarnished Saudi monarch in an attempt to bring more Saudi oil online. How this will pan out is unknown. The American stance is that building new fossil fuel infrastructure or orchestrating regime change, is preferable to drawing down Russian sanctions in exchange for more Russian energy exports.

Core Vs. Periphery

In the cross-hairs of a weaponized world economic order lie the climate futures of developing countries. As the world's manufacturing powerhouse, China's energy consumption is about a quarter of the global share. Asia consumes almost half of all global energy supply; the US about 16%, and Europe about 14%. Weaponizing financial and trade infrastructures has compounded the energy and economic crisis which now engulfs large parts of the world economy. Global supply-chain disruptions have also contributed to broad-based inflation¹¹. The confluence of inflation, interest rate hikes, and relentless dollar appreciation has catapulted debt crises in fifty four economies. (Russia, too, has defaulted on its debt, not for a lack of finances but because West refuses to process Russia's dol-

7. Giorgio Agamben, *State of Exception*, 2003.

8. FACT SHEET: President Biden Takes Bold Executive Action to Spur Domestic Clean Energy Manufacturing, Maison Blanche, 06 Juin, 2022.

9. FACT SHEET: President Biden Takes Bold Executive Action to Spur Domestic Clean Energy Manufacturing, Maison Blanche, 06 Juin, 2022.

10. IEA, *World Energy Investment 2022*, June 2022.

11. Determined by the digital movements of supply and demand in highly financialized markets, the prices of commodities—such as wheat, oil, natural gas—are inherently volatile.

lar-debt repayments.)¹²

Germany's new rearmament commitments (beyond 2% of GDP) and the push for a new joint European armed force (EU Rapid Deployment Capacity) run parallel to commitments to deepen and stabilize European sovereign bond markets. Reforms to the EU's Stability and Growth Pact that remove military and green spending from SGP deficit and debt strictures have been proposed. The drive for renewables in Europe is inextricably tied to energy independence from Russia. The energy shock has prompted the European Central Bank to commit to greening its central bank asset purchases, distinguishing it from the US Federal Reserve and the Bank of England that have shelved their green asset purchasing programs. As the euro hits a twenty year low against the dollar, bolstering European public finances and defence is a bulwark against threats to European sovereignty, not only from Russia but also from American monetary and military encroachment.

30

Obvious mistakes such as Germany shutting down its nuclear energy plants and the US refortification of European security and energy muddy the grand historical narrative of Europe's march towards energy independence. As does the fact that the drive for greater 'energy security' in Europe incurs significant collateral damage on the rest of the world. Liquified natural gas is a much more segmented global market than oil, with starkly different prices in different world regions. Higher spot prices in Europe's gas market are propelling LNG suppliers to break contracts (invoking force majeure clauses) and re-route tankers originally headed for Asia to Europe. Three quarters of US LNG is now headed to Europe, resulting in acute supply shortages in the periphery of the world economy. Outbid LNG importers such as Pakistan have been flung into a deeper inflationary spiral. China just lent Pakistan \$2.3 billion to bolster its dwindling foreign exchange reserves, double the IMF's promised loan program for the country. Presently, the South Asian nuclear power is reeling from an unprecedented confluence of catastrophic floods on top of an energy and external debt crisis. Militarized adaptation in this context (a third of the country is now underwater) means having the army deliver food and tents to the newly unhoused.

For those of us under NATO's nuclear umbrella—which, according to the organization, spans 30 nations or 1 billion people—militarized adaptation increasingly looks like fortress North in a sea of climate refugees.

The poly-crisis in the periphery will propel much greater waves of migration, especially from Africa to Europe. The US defense contractor Raytheon—lauded by the US Environmental Protection Agency for its climate leadership—has touted the demand for military products and services in the face of climate emergency. The same set of military assets may be deployed to control an influx of climate refugees.

The war in Ukraine has crystallized the emergence of two distinct energy, economic, and security blocs: one coalescing around the North Atlantic (NATO) and other around centered the large developing economies or BRICS (Brazil, Russia, India, China, South Africa). Monetary tightening by central banks has strained public finances. In a weaponized world economic order, low- and middle-income economies are re-learning cold war logic to secure favors along different geopolitical axes. India—situated in the BRICS but also the Quad (Australia, India, Japan, US)—has been doing this somewhat successfully in the guise of its neutrality stance. Japan is revising its constitution to eliminate its pacifist foreign policy stance—ironically, put in place by its American occupiers—which will enable the US military presence in the Indo-Pacific. The US essentially backstops Japan's self-defense forces. It is not coincidental that the Japanese have long been the biggest holders of US treasuries. But an intensified 'war ecology' can also produce good outcomes: the G-7's Global Green Infrastructure and Investment plan is, after all, a geopolitical-led responses to China's Belt and Road Initiative.

Amidst the many uncertainties of a weaponized world economic order, what is clear is that the energy transition will involve significant macroeconomic instability and inequality, the likes of which we haven't encountered before. It is also clear that much of the collateral damage will be borne by the periphery. Before the Ukraine war, it was estimated that the global South required \$4.3 trillion to recover from the pandemic. The lending provided by leading multilateral lenders such as the IMF and the World Bank has been grossly insufficient. Of the \$650 billion in the IMF's new Special Drawing Rights issuance in 2021, \$105 billion was spent by developing and emerging economies (DEEs). However sanctioned states such as Afghanistan or Yemen—with a new internationally recognized government—have been unable to convert their SDRs into hard currency. The G-20 commitment to donate \$100 bn in SDRs to DEEs has yet to be realized. The numbers simply don't add up.

12. Right before the war in Ukraine, Russia had \$640 billion in foreign exchange reserves. Half of these have been frozen by western sanctions.



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Geopolitical Boomerang: Are We Still Up to the Global Climate Challenge?

On 28 April 2022, two months after the Russian invasion of Ukraine began, the Secretary General of the United Nations, António Guterres was bombarded in Kyiv by Russia, mere hours after having visited President Putin in Moscow. How symbolic! For several weeks the war had overwhelmed Europe's heart. We were confronted with images of the Bucha massacre, Marioupol and the Donbass in ruins, and millions of Ukrainian refugees. Yet, despite wars in the Balkans, Iraq, and Syria, we must acknowledge— to our profound guilt and shame – that we, the citizens of democratic Europe, no longer imagine war touching us.

Just a few months before, in November 2021, during the opening ceremony of COP26 in Glasgow, Boris Johnson was playing to the Davos crowd, calling for the reinvigoration of capitalism: “We in this room can deploy hundreds of billions. No question. But the market has hundreds of trillions. And the task now is to work together to help our friends to decarbonize...”¹. The friends in question are the fossil fuel, tech, aging or smart technology multinationals – of which several (Shell, Apple, Walmart, and others) have annual revenues that are higher than the GDP of many nations – who are supposed to invest massive amounts of money to decarbonize the global economy and rise to the climate challenge. But we know that decades of effort to mobilize different market strategies, from voluntary commitments to the idea of a single carbon price, to attempts to “de-risk” green investments to redirect private savings, have never had the expected results. Political effort and economic tools have all proven insufficient; they all fundamentally fail to address reality².

We are no longer – if indeed we ever were – looking

at an orderly and gradual transition, facilitated by global consensus, to a greener world. Yet this illusion, along with several others we will come back to, have for three decades tacitly accompanied the global governance and even the framing of the climate problem. The Russian invasion of Ukraine has violently shattered these illusions and its shock wave has exposed the contours of disorderly and unequal dynamics, driven by conflicting forces, in a highly confrontational landscape. The geopolitical lack of thought concerning climate governance is now coming back to us like a boomerang, exposing the fragility of a system that has relied on the civilizing force of markets and the virtues of broad, almost universal international cooperation. The impasse over climate governance is also paired with great difficulties in the democratic functioning of Western states. Inabilities to agree at the national level, the rise of populist movements (the anti-democratic machinations of Trump in the United States or Bolsonaro in Brazil, the rising turnout for the extreme-right in France or Italy, violent anti-vax protests, campaigns against wind power), as well as the explosion of social grievances in countries in Europe and elsewhere, can be seen all over. Never has the dream of erasing development inequalities at a global level and social inequalities at the nation-state level through the virtues of soft trade and market economy alone seemed so vain.

How, then, can we characterize our present moment, what exactly is in crisis today, and how can we still imagine still being able to rise to this climate challenge? These are the questions that this article will attempt to begin answering.

An uncertain and fragmented world faced with the climate drama

At the turn of the 21st century, for the most enlightened and informed minds, climate change seemed to be the major challenge in the years to come. This is without a doubt true! In response to the alarming temperature increase projections made by climatologists for the end of the century, the various medium and long-term scenarios of the third IPCC group of economists and specialized think tanks were presented. But, paradoxically, the way in which we imagined tackling the climate threat was long isolated from the problems (and investments) of industrial, energy, and economic policies – both global and national – which are essential to meeting this challenge. This is the very point of our argument, that there is a schism of reality in global climate governance, as well as our call for a reterritorialization of climate policies at all levels³. As for the fractures caused by the explosion of social inequalities and other environmental problems (biodiversity, water, soil, pollution, etc.) in the planet's various territories or seas, they have also long been separated from the climate

1. <https://www.gov.uk/government/speeches/pm-address-at-cop26-world-leaders-summit-opening-ceremony>

2. Cullenward et Victor, Making climate policy work, John Wiley & Sons, 2020.

3. Aykut, Dahan, Gouverner le climat. 20 ans de négociations internationales, Presses de Sciences Po, 2015.

crisis. On this last front, however, the debates surrounding the notion of the Anthropocene have greatly changed the perception and boundaries of the climate problem, which has become the sign of a necessary and profound ecological transformation of societal relationships with nature, the planet, and its resources. Even mainstream economists can no longer ignore the problem of "planetary limits".

Two decades later it is clear that the greenhouse gas problem is not the only one, as serious as it may be. There are recurring, multiple geopolitical crises which come one after the other and occupy political and media spaces. They monopolize attention and regularly overshadow the urgency of the climate challenge, causing delays in addressing it or implementing measures that have already been decided. Among these crises, we can mention the dramatic attacks of Islamist terrorism, from September 11, 2001 to the attacks on the Bataclan in 2015, the American wars in Iraq and Afghanistan, the color revolutions of the 2000s, quickly followed by Russia's assertion of its desire for domination, the global financial crisis followed by the euro crisis, the Arab revolutions, the war in Syria and the migratory movements that it triggered in Europe, and finally, two years of the Covid pandemic and today the war in Ukraine.

Covid-19's consequences were global: the world economy, trade and commerce came to a halt for several months, and the sovereignty of nations unable to produce masks, medicines, or certain basic necessities was threatened. A worrying increase in government debt followed. Moreover, states have not always demonstrated their capacity to develop rational and transparent policies, independent of various lobbies, giving rise to mistrust of political leaders and sometimes scientists. Yet 2020 is the only year in recent history where greenhouse gas emissions decreased to the level required to meet climate targets; the episode has led to significant experimentation in relationships to work, mobility, consumption, and social life in the territories, etc., without politicians wanting to seize this opportunity to debate them or to include them in projects for the ecological transformation of our societies and lifestyles.

The criminal war in Ukraine has caused shocks in the price of energy, shocks in the price of grains, inflation; it threatens food crises and hunger in several parts of the world. It has put Europe's energy independence on the table, no doubt opening a window of opportunity to reduce fossil fuel use, but also the launch of new exploration and the move towards other fossil fuel exporters. In reality, the window is not opening, or if so, very little. A Churchillian discourse has yet to emerge, one which calls on citizens and nations to seize on this electroshock to set us on the path of sobriety – which is the only way forward not only for the strategic climate objective but

also the tactical objective of drying up Russia's war budget. At the end of a summer marked in Europe by the war and successive heatwaves, forest fires and unprecedented drought, President Emmanuel Macron recently spoke of, "the end of abundance and carelessness". The European Union presented an emergency plan to conserve natural gas. In Germany, the Minister for Economic Affairs, Robert Habeck, called for a "great national effort" and presented two legislative packages on energy conservation. But for the moment these measures and declarations are still not systematic, are fragmented, and at odds with other political priorities. There is no sign of a determined and courageous shift towards other policies, no profound realization of the climate tragedy. Sobriety continues to be viewed as oppressive and punitive. And the new confrontation between blocs reinforces the need for growth and supply security, while increasing the use of resources.

In this uncertain and crisis-filled world it is difficult to clearly see the political terrain that this drama will play out upon in the coming decades. Let us start with mapping it out by outlining the main fault lines that are currently overlapping. Originally, the main division in the climate arena was the one between the developed countries – historically responsible for warming – and the developing countries – who defended their right to development. Superimposed on this initial division is a second one which pits the large emitters in both the global North and South (China, India, Brazil) against the most vulnerable countries and small islands threatened with submersion. This second fault line became very clear at the end of the Copenhagen conference in 2009, when a 'deal' between the major emerging countries and the United States outlined the contours of the future climate system: affirmation of sovereignty concerns, refusal of any constraints in terms of reductions and financing, and emphasis on voluntary contributions. COP26, held in Glasgow in November 2021, showed that this understanding between the big emitters of both past and future, which allows one side to buy time on their transition and the other side to shirk financing, is now a defining axis of international arenas⁴. There may continue to be COPs, but what importance, what impact can they still have in this world? One of the principal arguments in their favor was always that poorer, developing countries have a voice there. But given this de facto pact, this is less and less the case. For example, the \$100 billion per year promised in Paris – which is very modest when compared to what is actually needed for adaptation and the transition in the Southern countries – is nowhere near enough. If climate conferences still serve a purpose today, it is when they sometimes bring to light the impasses and contradictions at the heart of current climate policies. This is the case in rare political moments, where, behind the UN's wooden language and the almost mystical communication of

4. Aykut, et al. *Circles of Global Climate Governance. Power, Performance and Contestation at the UN Climate Conference COP26 in Glasgow, Hamburg*, Center for Sustainable Society Research, 2022.

consulting firms, deep tensions between legitimate but irreconcilable positions are revealed. On the one hand, there is the absolute climate emergency recognized by scientists, young activists, and vulnerable countries who stress the need for very short timeframes for global decarbonization at the risk of appearing to ignore political realities (e.g., "we only have three years left to save the climate"); on the other hand, there is the argument of sovereignty and large blocs, which boasts of prioritizing justice and development at the risk of creating new injustices by putting off the necessary transformations. It must be recognized that if the COPs are an arena where these tensions have been exposed, they have proven structurally incapable of resolving them.

It is not enough to study UN arenas to understand climate politics. These are also a part of the geopolitical realities of our world. In the 1990s and 2000s, the United States was the biggest importer of petroleum in the world, and their historical alliance with the Gulf countries – Saudi Arabia first and foremost – boxed the climate regime into a paradigm that prevented any explicit discussion of energy resources or technologies. Today, this political constellation is changing. Changes that are quicker, more surreptitious, and silent have caught the world off guard. Consequently, the shale gas revolution in the United States has never been mentioned in the climate arena. However, in less than 15 years, the United States has gone from importing 60% of its oil needs to being the leading fossil fuel producer and even an exporter. This has been very unsettling for the Middle East, which the United States has partially freed itself from, and has created a knot of tensions for current geopolitical dynamics as this export capacity makes the United States a new competitor with Russia on the European natural gas market. Another silent revolution has been the explosion of renewable energies – solar photovoltaics and wind – in Europe, China, and elsewhere in the world which has just as profoundly redrawn the energy map. This boom has been accompanied by a sharp drop in costs, reaching -85% for photovoltaic electricity and -56% for onshore wind power between 2010 and 2020⁵. In 2020, China's wind and solar capacity each represented 35% of the global total. These two sectors, which are constantly growing, still only account for 9.3% of electricity production in China (23% in the European Union), due to the overall growth in demand, but Chinese manufacturing capacity in these sectors is enormous. Finally, China is investing in all segments of the industry (lithium, rare earths, batteries) and is securing sites to ensure that the necessary resources will be available in the future.

In this context, Helen Thompson refers to "two geopolitics of energy"⁶ that overlap and destabilize traditional

points of reference. It would be naïve to think of these changes through the lens of a smooth transition to a more stable and cooperative world. It is quite the contrary, as Jason Bordoff and Meghan O'Sullivan write, "there is no way that the world can avoid major upheavals as it remakes the entire energy system, which is the lifeblood of the global economy and underpins the geopolitical order⁷." The oil producing countries are likely to play a major role for decades to come. The International Energy Agency estimates that the demand for fossil fuels will continue to increase everywhere except North America, Europe, and Japan until at least 2030. Additionally, the increasing volatility of fossil fuel prices and the pressure on investors to reduce their assets in this sector could have the adverse effect of increasing the power of large producers such as Saudi Arabia or Russia, which can easily increase their production capacity if necessary.

The geopolitical boomerang

What most strongly characterizes the current moment is the hard and radical challenge to the political order that came out of the Second World War – and even beyond that, as Western dominance has lasted for five centuries. This is apparent in the case of Russia, with its violent aggression against Ukraine, which is taking the form of an imperial war with nuclear undertones. Russia – whose population has fallen by half since the Soviet era and whose GDP is no larger than Spain's – has the world's largest arsenal of nuclear weapons and enormous reserves of gas, coal, and other raw materials and grains which allows it to exploit Europe's energy dependence and to influence the world prices of raw materials.

This challenge is also palpable from China's side. Its exceptional growth during the years 2000-2010 and the United States' willingness to fiercely defend its global supremacy have made this pair a strategic rivalry for some time to come. Now the world's largest emitter with around 30% of CO2 emissions, China surpassed the United States in 2007, nearly 20 years earlier than predicted when climate negotiations began. That same year, President Hu Jin Tao introduced the term "ecological civilization" to define a new political philosophy for the country which was meant to be a part of a great narrative of progress that follows the ancestral agricultural civilization, the industrial civilization established by Mao Zedong, and the material civilization promoted by Deng Xiaoping. In a China fraught with rivalry between the state and the Communist Party, or between central and regional powers, this unifying project will take on a dual function under Xi Jinping. Internally, it becomes a true green authoritarianism⁸, which allows for the alignment of the technological interests of power with environmental issues. This

5. IRENA, Renewable Power Generation Costs in 2020, International Renewable Energy Agency, Abu Dhabi, 2021, p.14.

6. <https://legrandcontinent.eu/fr/2022/03/31/les-deux-geopolitiques-de-lenergie-une-conversation-avec-helen-thompson/>

7. Bordoff and O'Sullivan, "Green Upheaval: The New Geopolitics of Energy Essays", Foreign Affairs, n°101, 2022, p. 69.

8. Y. Li and J. Shapiro, China Goes Green, Polity, 2020.

coercive state environmentalism has non-environmental aims: the centralization of power and the suppression of individual rights and public participation. The response to the most recent wave of the Covid-19 pandemic in Shanghai is a sinister example of this authoritarianism for “the good of the people”.

On the geopolitical level, the ecological civilization project is paired with a grandiose operation to counter-balance the Western order and ensure the energy security of Chinese expansion. The “Belt and Road Initiative” (BRI), announced in 2013 to revive the ancient Silk Road and given a “green” element in 2021, is fast becoming one of the largest operations ever conceived in terms of infrastructure and development programs, with colossal ambitions for trade and commerce⁹. The land-based economic corridor is in fact made up of multiple land routes which, on the one hand, all start from the western province of Xinjiang – which is home to the Uyghur people and it is easy to understand why China considers any resistance in this province to be a major threat to its security – and, on the other, run through Central Asia to Russia and Europe. This corridor is complemented by a maritime route along the coast of South Asia (Pakistan, Burma, Sri Lanka) to Africa and the Middle East. In 2015, 60 countries were part of this initiative; by 2020, there will be 130. The strategic partnership with Central Asian countries, rich in oil and natural gas, means more secure transport of these resources, free from American interference in maritime routes. This financing of physical infrastructure (energy projects, railroads, ports, etc.), as well as social, education and health programs, is done in exchange for the rights to use and exploit resources and to control local economies, often for decades. For several years, Chinese investment banks have been promoting green principles, as have their Western and international counterparts, even though this includes coal-fired power plants, mines, hydraulic dams and other water diversion that often has disastrous ecological and social consequences. With the BRI, China is also strengthening its ties with oil-producing countries. Citing the example of the United Arab Emirates, Li and Shapiro write that with this partnership, China is looking for oil and has digital technology, while the UAE is looking for post-oil solutions, and both of these authoritarian states share an interest in new surveillance technology that can be used on their citizens¹⁰. Within this new geopolitical configuration, the issues of sovereignty are becoming central: from the American campaign against the Chinese telecom giant Huawei to the exclusion of Iranian and Russian banks from the Swift banking communication system, attempts to disconnect certain parts of the world from some markets and services, but also to forge new links or to obtain supplies elsewhere, are redrawing the map of a globalization that is now variable

in geometry and subject to the supremacy of politics. At the same time, competition for market share, control of cutting edge technologies, as well as access to resources and military technologies is becoming increasingly fierce and risks locking the planet into a permanent dynamic of growth and aggravation.

Europe, our only hope

This systemic rivalry is the current geopolitical backdrop against which the climate drama is unfolding. Conversely, the climate is becoming one of the playing fields for the confrontation between political and societal models. Successfully decarbonizing, reconverting industrial sectors, positioning oneself on tomorrow's markets, but also leading social change and shaping society – all these challenges are tests to determine which model will be best able to navigate the rough waters of the 21st century.

In this competition, the European Union is the only major player today that is at once democratic, has social protection policies worthy of the name, and is credibly committed to the climate in the long term. Since the 1990s, the Union has reduced emissions by one third. According to the United Nations Environment Programme, it is the only region in the world that has reached, and even surpassed, its reductions target for 2020 and is also on track to meet 2030 targets¹¹. With 450 million inhabitants, it is the world's largest economy, and its technological, production, consumption and lifestyle choices have a global impact. In other words, Europe is our only hope, imperfect but indispensable and extremely valuable in the race for an ecologically, socially, and politically livable planet.

At the same time, the road ahead of us is long. Even if Europe only emits 8% of global GHG emissions, its emissions remain at 8 tons per person, which is four times higher than in India¹². In 2019, Ursula von der Leyen's new European Commission launched a European “Green Deal”, which combined climate targets, green industrial policies and measures for a just transition. This project seems to have been spared from being completely dismantled in the face of Covid-19 and war. It is now taking shape in the form of a requirement to invest at least 30% of the €800 billion NextGenerationEU reconstruction fund (between 2021-2027) into climate action. A “just transition” mechanism of €100 billion has been created to accompany the conversion of industrial sectors and support the most affected regions until 2050. Furthermore, in June 2021, the European Union adopted the two binding targets of reducing GHGs by 55% by 2030 (compared to 1990) and to reach climate neutrality by 2050. To imple-

9. Armando, E., *Comprendre les Routes de la soie de l'énergie*, Green, n°1, 2021, p. 90-97.

10. Li Y. and Shapiro J., *La transition écologique chinoise : à quel coût ?*, Green, n°1, 2021, p. 116-120.

11. UNEP Emissions Gap Report 2021: The heat is still on - A world of climate promises not delivered, Nairobi, Kenya, United Nations Environment Programme, 2021.

12. All data taken from Eurostat.

ment its objectives, the Commission is proposing the "Fit for 55" package, which contains measures to include new sectors such as maritime transport, road transport, and construction in the European carbon market as well as to tighten its quotas, sectoral regulations (such as a ban on new internal combustion engine vehicles in 2035), and burden-sharing between member states.

Despite pressure from lobbies and a succession of crises for more than a decade, Europe has not, for now, veered off course and is seen as the least bad student when it comes to transforming its economy¹³. Historically, what has driven this climate ambition has been not only the actions of certain member states, but also the Commission's desire for power. Climate issues have allowed the EU to assume new areas of authority and to have a say in strategic matters such as energy and industrial policies. But the war in Ukraine has exposed the flaws in this complicated model of joint governance between Europe and its member states which combines a desire for centralization, competition between national egos, and the hegemony of a free market ideology. By ignoring all geopolitical considerations, this has led to a growing, and now very problematic, dependence on Russian gas. Similarly, this policy risks exposing Europe in the future to new vulnerabilities with regard to China's renewable energy, battery, and rare earth super-power. Indeed, Denmark, and especially Germany, were at the forefront of developing renewables in the early 2000s. But, as Daniel Yergin writes, "what catapulted solar into the mainstream was the marriage of German environmental policy with Chinese manufacturing prowess"¹⁴. It should be added that this marriage has been at the expense of the European solar industry. After complaints of unfair competition from European producers in 2012, Europe made a political choice with far-reaching consequences, deciding not to protect its industry against the price dumping of Chinese producers. With state support, they were able to produce at a much lower cost making it possible to lower the costs of the transition in Europe, especially in Germany. This was a blessing for consumers! But for European producers, it was a massacre, with the loss of 50,000 jobs out of more than 100,000 in Germany alone. The result is the concentration of production in China, which now dominates 70% of the photovoltaic market¹⁵.

In this geopolitical overview – which is hardly complete – we must mention a matter that will be important in the future: Africa. In terms of climate, time is short for this continent, as it is elsewhere. It is the only part of the world where much development is yet to come and which has so much natural wealth, sun, and wind, all while suf-

fering from a notorious lack of food independence. At the United Nations, nearly forty countries from this continent (as well as from Latin America, including Brazil) did not join in condemning the Russian invasion of Ukraine; they chose to abstain alongside China and India. For several years, China and then Russia have sought to strengthen their ties with Africa, holding out the prospect of lucrative economic and commercial ventures for African countries on very different terms from those of the former European colonizers. The presence of Russian security forces, the aggressive and efficient presence of Chinese companies, as well as Russian exports of fossil fuels, grain, and fertilizers – in short, the complexity of the economic interdependence and exploitation of resources between Russia and China on the one hand, and Africa (or Brazil) on the other, largely explain these votes. Europe, and France in particular, should have a significant relationship to develop with Africa given its geographical proximity and linguistic links, and this despite its difficult colonial past, but it does not devote sufficient resources to this. One example among many others: in the debate on the French energy mix, which is focused on nuclear power, there is never any mention of the need to step up initiatives with Africa on renewable energy and access to energy. Yet we are faced with a strategic issue of climate stabilization, which Europe must seize.

Neither the re-enchantment of capitalism, nor the mysticism of the State

In Europe, as in America, there are two main approaches to climate policy which coexist today.

The soft transition through markets model

The first model is that of a soft transition through markets, innovation, and green finance, which currently dominates global governance and inspires some elites in Europe and the United States. This model relies on the leverage of private investment and voluntary action by companies through the strength of transparency, reporting, and green taxonomies. This is the spirit of former Bank of England Governor Mark Carney's "Glasgow Financial Alliance for Net Zero", which boasts of bringing together 450 of the world's largest investors managing over \$150 trillion in financial assets. The initiative is based on the great narrative of a "tragedy of the horizon" and the dysfunction of financial markets as being at the heart of the climate crisis. This failure can be explained primarily by a lack of information on climate risks and perverse incentives that favor the short term and could therefore be corrected. Carney proposes a combination of reporting requirements for companies, green taxonomies for financial markets, and policy measures to "de-risk" low-carbon investments. If reformed in this way, financial markets would become the transition's greatest allies. This narrative forms the basis of what Daniela Gabor calls the "Wall

13. von Homeyer, et al. "EU climate and energy governance in times of crisis: towards a new agenda", *Journal of European Public Policy*, 28(7), 2021, p. 959-979.

14. Yergin, Daniel. *The new map: Energy, climate, and the clash of nations*. Penguin UK, 2020, p. 395.

15. Regional distribution of solar module production. In: *statista.com*.

Street Climate Consensus”¹⁶. According to this perspective, large investment funds, which are more inclined to consider the long-term, could take the lead. The Bank of England with its new environmental mandate, the European Central Bank with its climate roadmap, and the European Commission with its green taxonomy support this policy, as do large private asset managers such as BlackRock and its chief executive Larry Fink.

But this great narrative which underlies this policy is increasingly challenged by the facts. Despite all the initiatives to create more transparency and lofty speeches about corporate environmental responsibility and disinvestment, fossil fuel companies are thriving. The post-Covid recovery and the war in Ukraine has even led to a new rush for black gold and explosive profits for mining and oil giants. In the first trimester of 2022, Shell made \$91 trillion, its largest profits since 2008, and ExxonMobil doubled its profits compared to the previous year. The "Big Three" of major asset managers, far from accelerating the transition of the firms whose assets they hold, are using their influence to block any decisive move towards sustainability¹⁷. Furthermore, apart from the climate champions of Silicon Valley such as Apple, Google, and Microsoft – who see a series of future "smart" markets in the low-carbon transition, rich in data and monitoring technologies – the old economy is faring well and carrying on. The "carbon coalition" lobbies continue to block the transition or slow it by borrowing the tobacco industry's proven strategies¹⁸.

The second model: Green New Deal or Big Green State

In order to break the impasse of an economy which is forever making promises without any real action, movements of the European and American left are now promoting another model: that of a Keynesian transformation propelled by a strong state that would combine regulations, strategic investments, and social policies. This is the Green (New) Deal, or what Daniela Gabor calls the "Big Green State". This second approach would aim to achieve ecological and social objectives through massive public investment in infrastructure and forms of "green" production (instead of de-risking private capital) and a just transition policy. It is difficult to see how this Big Green State could come about, as much in the United States – where President Biden's Build Back Better proposal has long been blocked in the Senate – as in Europe – which may look like a good student in terms of objectives and green investment, but which is not a centralized state and, given how things stand, cannot invest in a coordinated and strategic manner without the consent of member states.

Biden's climate plan, renamed the Inflation Reduction Act to help persuade hesitant democratic senators, was finally adopted by the Senate this summer, though it mainly relies on tax incentives and not on constraints. Experts consider it to be quite encouraging as it calls for investments of up to \$360 billion in renewables (which is huge) and technological innovations and could lead to a significant drop in U.S. emissions by 2030, which some estimate to be 35% to 45% below 2005 levels. Nevertheless, the plan still allows for the exploration of fossil resources and increased investment in hydraulic fracturing for the production of shale oil and gas¹⁹. As a result, this legislation is a continuation of the dominant approach of energy additions and accumulations and demonstrates the difficulty of committing to a real policy of reducing the production and consumption of fossil fuels²⁰.

On a more fundamental level, the model of the Big Green State still entails substituting one environmentally destructive technology for another, consuming just as much and imagining that everything can be replaced: renewables for coal, ammonia for natural gas, hydrogen for oil, etc. It carries with it the risk of a new extractivism aimed at monopolizing the resources needed for the transition – rare earths, copper, zinc, cobalt, lithium – particularly in the countries of the South. Such a policy has its limits, as shown by the soaring prices of these raw materials in the last few years, which the International Energy Agency predicts will continue. In other words, while the state may appear as a solution for some, it is also a battleground for conflicting interests and an actor deeply rooted in the paradigm of growth and productivism. The state therefore plays an uncertain role in the ecological transition.

A final point must draw our attention. If the Covid-19 crisis and the war in Ukraine were windows of opportunity to accelerate the low-carbon transition, we must admit that these opportunities have not yet been seized. Quite the contrary. During the crisis, political and economic elites preferred to revive old alliances and resort to tried and tested routines, despite the climate emergency. This demonstrates the limits of an approach led by markets and technology, as well as by states and governments. The possible alignment of the climate problem with a new geopolitical paradigm should not lead to pinning all hopes on a Big Green and Keynesian state. Above all, it is not enough to say what governments should do, and what instruments they should implement. It is also necessary to explain how, in what world, and under what precise conditions it would be plausible for them to do so.

Integrating structural policies and subversive strategies

16. Gabor "The Wall Street Consensus", *Development and Change*, 52(3), 2021, p. 429-459.

17. Golland, et al. "Proxy voting for the earth system: institutional shareholder governance of global tipping elements", 2022.

18. Cory, et al. "Supply Chain Linkages and the Extended Carbon Coalition", *American Journal of Political Science*, 65(1), 2021, p. 69-87.

19. Cf. Interview with Laurence Tubiana, *Le Monde*, Thursday August 11, 2022.

20. Fressoz "Pour une histoire des symbioses énergétiques et matérielles", *Annales des Mines - Responsabilité et environnement*, vol. 101, n°1, 2021, p.7-10.

Wondering why there was no social movement for the climate, the sociologist Ulrich Beck asked in 2010 “Why does the destruction of the environment not spark a Bastille Day, why not a Red October of ecology?”²¹. If he were still with us, he would have followed with great interest how, barely a decade later, the strike of a Swedish school girl became a catalyst for such a movement to emerge in Europe, led by young people with the Fridays for Future and Extinction Rebellion groups. The mobilization against the Keystone XXL pipeline in the United States also laid the groundwork for the Sunrise Movement for ecological and social politics, and environmental activism in Latin America and elsewhere in the global South has gained momentum and converged with a critique of extractivist and climate-destructive development models. Ulrich Beck connected the absence of mass mobilization for the climate to the hegemony of an expert and elitist discourse that was out of touch with citizens' concerns and social issues. He would undoubtedly have noted the slogan “follow the science” in the Fridays for Future demonstrations, as well as the demands for a “just transition”, which establishes a connection between social and ecological issues and make reducing inequalities one and the same with the fight against global warming.

Beyond states and markets, civil societies around the world are mobilizing, and they are mobilizing for the climate. They do this through demonstrations, by taking legal action against governments and companies, in the form of local experiments in new ways of living, or by creating grassroots economic solidarity networks. As a result, individuals, energy cooperatives, and local authorities dominate new renewable energy installations in Germany; meat consumption in France has dropped by 10 kg per person in 20 years; bicycling saw an huge surge during Covid and is increasingly competing with the car in cities, while sales of second-hand clothes are eating away at the growth of fast fashion. Of course, these developments raise the question of scaling up and generalizing beyond the hubs of transformation amongst educated and urban elites. They must be accompanied by classic social movements and backed up by public action. But they are already opening up new horizons by questioning the dogma of growth and industrial and consumerist development. Beyond the obvious gap between stated objectives and implementation measures – the famous “emissions gap” – the schism in climate governance has historically reflected the way in which the climate problem had been imagined, thought about, and framed (i.e. as an environmental issue and not as a geopolitical one, or as an industrial strategy or an economic and social model). This framing in particular has led to ineffective policy implementation by entrusting it to organizations with limited mandates and no real understanding of the root causes of the problem. Some progress is visible today, notably

in the form of a partial decompartmentalization of the problem and its politicization by social movements, but there are also new, gaping divisions, resulting from a governance by consensus and incantation, based on distant promises, while the old world is perpetuated by crises.

If we affirm that we must seize the current political situation and the possible convergence between geopolitical and climatic timeframes to reduce our dependence on fossil fuels, we also believe that it is necessary to change our intellectual paradigm when thinking about climate policies. We believe it is essential to combine structural and material strategies, aimed at replacing fossil infrastructures, transforming production methods and building new green economic sectors, alongside more subversive²² cultural and societal strategies that broaden horizons and stimulate the imagination by fundamentally questioning our industrial modernity and its global capitalist organization. At a time when, in France, the notion of ecological planning is beginning to be debated²³, when intellectual proposals aim to inject a state-centered realpolitik into ecological thinking²⁴, we believe it is important to not just address governments or focus on top-down measures. We therefore propose four ways to rethink climate policy, directed at researchers, activists, and politicians alike.

First, any policy is now a climate policy

In light of the growing urgency and increasingly visible effects of ongoing climate change, all policy decisions as well as any non-decisions – including in areas that at first glance seem far removed from the problem – have consequences on the future of our climate. These consequences must be made explicit, as well as the links between climate and other issues. For example, a restrictive European policy in terms of global health and access to vaccines weakens the trust needed to build North-South alliances for low-carbon development. Substituting Russian oil and gas with imports from other equally undemocratic countries risks exposing us to new geopolitical boomerangs that will further complicate future climate policies. In other words, we cannot separate these issues and shield people from the new geopolitical and climate disorder, as most European leaders are promising today. We must clearly state the choices and the risks. Let us therefore appeal for Churchillian or Rooseveltian speeches that dramatize the challenges and clarify the options rather than reassuring speeches that blind us to the dangers. It is not enough to add new sources of energy while leaving the old ones untouched, nor without addressing in greater depth the causes of our energy consumption. We must coordinate accelerations and decelerations, invest in inno-

21. Beck, “Climate for Change, or How to create a Green Modernity?”, *Theory, Culture & Society*, 27, 2010, p. 254.

22. Andreas Malm, *Théorie et pratique de la violence du carbone*, *Politiques de l'interrègne*, le Grand Continent, Gallimard, 2022.

23. De Catheu, Louis et al. (2022), “Un État pour la planification écologique”, *Le Grand Continent*, 05.05.2022.

24. Charbonnier, Pierre (2022), “La naissance de l'écologie de guerre”, *Le Grand Continent*.

vation, and use the power of markets to develop alternatives, but also aim for greater sobriety and scale back the productivist frenzy in the advanced economies.

Second, instead of seeking full consensus, we must pursue strategic alliances

The climate problem is too important, too vital even, to wait for everyone to agree before moving forward. It is not a classic political problem that can be resolved by a corporatist agreement between diverging interests; it is now a matter of survival.

Instead of seeking a middle ground, antagonisms must be clarified and morally unacceptable positions must be identified and isolated. This means that at the international level, the consensus-based decision-making process of the UN should no longer be the main focus. We know that such a model favors those who do not necessarily want to reach an agreement²⁵ – i.e. the oil kingdoms and other large fossil fuel producers. Since a change in voting rules under the Climate Convention is highly unlikely, we must now move beyond this framework. The good news is that decarbonization is probably less dependent on there being a universal framework than the originators of the UN process assumed. Long thought of as a classic case of the prisoner's dilemma (where it is essential to ensure the cooperation of all parties), it is in fact more like a conflict of distribution between the winners and losers of the transition²⁶, where a process initiated by a few can lead to many others²⁷. It may therefore be preferable to favor ambition over compromise, and to create more limited agreements between those who are willing to go further on a given matter. More broadly, it is necessary to shake the illusion of a "non-punitive" ecology that would create win-win situations everywhere. We must confront the necessary conflicts head on while supporting the losers of structural transformations wherever possible. Finally, for social movements, it is not enough to have the best argument and to know how to persuade. It is just as important to create favorable power relations at all levels.

Third, instead of the optimism of imagined trajectories, we need to build on existing societal dynamics

"Policy is the art of the possible rather than the calculation of the optimal"²⁸. This observation contrasts with the approach that has long dominated climate debates, which consists of calculating optimal trajectories of reduction in terms of costs, either by a global calculation

of damages from global warming and costs of climate measures, or in relation to a given policy objective (2°C, 1.5°C). The choice of policy measures follows the same logic of economic efficiency. But instead of dreaming of imposing a global price on carbon throughout the world or planning optimal transitions over a 50-year period – how can we expect future governments to follow through? – it is now important to seize existing opportunities and gradually open up the space of possibilities. This means focusing on the purely political dimension of the problem: opposing lobbies, along with building alliances and societal support. For example, the costs of climate policies are less of an issue at the aggregate level (as in economic models); they matter insofar as they affect specific, often already disadvantaged, populations and increase social tensions. Faced with profound uncertainties about geopolitical and technological developments, the low-carbon transition increasingly seems like navigating by sight in a field of shifting forces, which of course requires setting objectives, but also adapting to the terrain, securing gains, and possibly straying from the most direct path when obstacles or opportunities arise in order to advance in other areas.

Fourth, we need to narrow the horizons and localize the stakes.

This last point directly follows from the previous ones. We will reiterate that the search for a global consensus is no longer acceptable. We must act wherever possible, by creating momentum in all territories, at the national level, and of course at the European level, as well as through international sector-specific initiatives. Very long-term objectives can be useful for simulating climate futures, debating climate justice issues, or formulating legal claims. But they are not adapted to the political perspectives of democratic societies. It is therefore necessary to shrink the time scales and to focus on both the short and medium term.

In short, the current brutal and uncertain geopolitical context exposes the impasse of an illusory strategy focused on the cooperation of all markets and voluntary commitments, in the face of the climate emergency. Instead, we are advocating for a broader political strategy that views the climate issue as the great societal conflict of our time and considers the economy, the law, the state and its apparatus, and the various UN arenas, as sub-fields of this conflict. The contours of this strategy are currently taking shape in various struggles and initiatives around the world. It gives a key role to social movements and civil societies, to pressure tactics and to the building of strategic alliances, including within the state and in the territories. Instead of relying on economic measures and technological innovation, which are necessary but insufficient to overcome the obstacles that persist at all levels, new climate policies must be based on these societal dynamics in order to move forward.

25. Fisher, Roger, William L. Ury, and Bruce Patton. *Getting to yes: Negotiating agreement without giving in*. Penguin, 2011 (original: 1981).

26. Aklin et Mildenberger "Prisoners of the Wrong Dilemma: Why Distributive Conflict, Not Collective Action, Characterizes the Politics of Climate Change", *Global Environmental Politics*, 20(4), 2020, p. 4-27.

27. Hale "Catalytic Cooperation", *ibid.* 73-98.

28. Geels, et al. "The Socio-Technical Dynamics of Low-Carbon Transitions", *Joule*, 1(3), 2017, p. 463-479.



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Non-alignment: The BRICS' New Bargaining Chip

On March 25th, as Russia's war in Ukraine intensified, the Chinese foreign minister Wang Yi visited New Delhi and entreated "If China and India spoke with one voice, the whole world will listen. If China and India joined hands, the whole world will pay attention." In April, European Commission President Ursula von der Leyen made her first trip to the neutral Indian capital, where she laid the groundwork for several weeks of frenetic dealmaking on a sweeping agenda ranging from defense to green manufacturing.

In a whirlwind three-day tour of Germany, Denmark and France the following month, Prime Minister Narendra Modi won concessions that Indian policymakers have coveted for well over two decades. Seven European heads of state forked over climate investments, tech transfers, and weapons deals, putting flesh on the bones of a moribund EU-India strategic partnership.

In Berlin, Chancellor Olaf Scholz announced a €10 billion green partnership to help India achieve its 2030 climate targets and high-tech transfers. In Copenhagen, Nordic countries inked wind and solar deals, green shipping and green cities investments. In Paris, Macron signed a deal¹ to invest in India's green hydrogen hubs, boosted Indo-French military-industrial aircraft and ship deals, while EDF moved forward a long-pending partnership to build six EPR-1650 nuclear power reactors in Jaitapur. This followed India's momentous \$42 billion investment deal with Japan for EVs, green hydrogen/ammonia, and heavy industry transition².

The timing of these rapid concessions is no accident.

1. India-France Joint Statement on the occasion of the Prime Minister's visit to France, Indian Ministry of External Affairs, 4 May 2022.
2. India-Japan Summit Joint Statement Partnership for a Peaceful, Stable and Prosperous Post-COVID World March 19, 2022

Modi is negotiating an emerging global order in which the divorce of China, Russia and the West provides a golden opportunity for dealmaking. As the world splits into new Cold War blocs – which look strikingly like old Cold War blocs – the old Indian grand strategy of nonalignment is reemerging³. And this time, the rise of China assures that the new counter-hegemonic bloc will enjoy considerably greater resources than did the old communist powers.

That emboldened confederation stretches beyond the subcontinent. India's last 30 years of catchup growth were achieved under U.S. primacy. Along with other developing nations who have interests independent of Washington's, India worries about the coercive underbelly of American hegemony. Brazil and Indonesia, leaders in orchestrating past nonalignment movements, are also taking advantage of their new pull. Europe should not underestimate the interest of postcolonial elites in charting an independent course.

Friction with the West is assured. But diplomats in the developing world are prepared to pay to avoid a costly and risky confrontation with the Sino-Russian axis. In other words, developing countries' answer to the West's question, "do you want to contain China with us?" is probably "yes". But the answer to the question, "do you want to contain China and Russia with us?" is probably "no".

In the decade after 9/11, the U.S. Treasury, National Security Agency and Commerce Department developed a Panopticon over the key networks of globalization: Surveillance over finance through Treasury's Office of Foreign Asset Control and SWIFT payments system; over information, through Snowden's Silicon Valley internet⁴; and over supply-chains, through the export control list of technologies⁵. Key choke points⁶ were located and operated in the advanced industrialized states of the G7. Meanwhile, U.S. willingness to weaponize the dollar system⁷ against troublemakers escalated. The signal to developing countries was clear: when threatened, the United States resolved to tightly control the technologies underpinning economic growth and military superiority.

G7's command of key technology remains the source of its hard power. It demonstrated that by the design of economic warfare sanctions⁸ after Russia's invasion of Ukraine. While sanctioning Russia's central bank assets

3. The Geometry of Fear in Eurasia India and the Logic of Non-Alignment, Policy Tensor, 28 March 2022.
4. "United States of Secrets": How the Government Came to Spy on Millions of Americans, PBS 2014.
5. Overview of U.S. Export Control System, Government of the United States, 2009.
6. Henry Farrell, Abraham L. Newman, Weaponized Interdependence: How Global Economic Networks Shape State Coercion, 01 July, 2019.
7. Regime Change? Mona Ali, Phenomenal World, 27 April 2022.
8. The Toll of Economic War How Sanctions on Russia Will Upend the Global Order, Nicholas Mulder, March 22, 2022.

and SWIFT cut-off signaled financial war⁹, a technological iron curtain fell, shutting high-tech exports to Russia's economy. The G7 targeted supply of silicon chips from Korea & Taiwan to ground Russia's military (chips are a key component of military hardware), while critical airplane parts were restricted to ground Russia's aviation.

Little wonder, then, that developing countries are adopting a stance of nonalignment to secure¹⁰ the same key technologies - fighter jets, green technology, chips, submarines, nuclear, pharma, 5G - that could power their catch-up growth. The map of countries that remained neutral on Russia sanctions is no bleeding-heart protest for global justice, but a hard-nosed security play. Before signing up to the West's new financial-technological-military regime, they intend to extract maximum concessions. Threats to exit, as any bargainer knows, confer power.

Countries like China, India, Indonesia, Brazil, South Africa, Mexico, Saudi Arabia, and the UAE refuse¹¹ to sacrifice their national interests of security and development to punish Russia¹². Most importantly, they believe their bargaining power in the new Cold War will result in sweeter trade, technology & weapons deals from the West. These countries will account for three-fourths of the world's population and 60 percent of the world economy by 2030. They have aspirations for regional dominance and believe a non-aligned position better serves their national interests. They are also betting that the West will tolerate their foot-dragging compliance with sanctions on Russia, and refrain from imposing secondary sanctions (sanctions for breaking sanctions) for that defiance.

What purpose does their non-alignment stance serve? Firstly, powering future growth through transfer of core technologies. Secondly, boosting security through transfer of advanced military hardware. Thirdly, strengthening of bargaining hand in trade negotiations with export-dependent Europe & a U.S seeking geo-economic allies¹³ in an anti-China, anti-Russia bloc. Fourthly, securing essential commodities like food, energy, metals & fertilizers from the new Russian-Chinese bloc. Lastly, strengthening of bargaining hand in restructuring¹⁴ debt to Western & Chinese creditors during a punishing global dollar debt crisis that threatens their sovereignty.

India's "national champion" conglomerate Reliance,

owned by Modi-backer Mukesh Ambani, symbolizes developing countries' relationship with the G7. 15 years after China became the Manchester of the green industrial revolution with Western partnerships, Asia's richest billionaire has decided to catch up. Ambani's Jamnagar refinery is currently making billions importing Russian crude oil and exporting refined products - diesel and petrol - to the West. The same Reliance site at Jamnagar has received Western green technology transfers even as it flouts Western sanctions. Reliance has invested more than \$60 billion of its own money and \$10 billion in partnerships and acquisitions to manufacture hydrogen in electrolyzers (Danish firm), solar PV wafers (German firm), solar panels (Norwegian firm), grid-scale battery (US firm), iron-phosphate battery (Dutch firm).

How India manages its foreign partnerships to participate in green supply chains depends fundamentally on Dubai. The United Arab Emirates is the new London for Russian-Indian-Chinese-MiddleEastern capital. U.A.E's President Mohammad bin Zayed has positioned the Gulf Kingdom as a Wild Wild West offshore jurisdiction for all oligarchs & merchant banks who are worried about Western sanctions coming for them. Gulf petrostates are set to gain an additional \$1.3 trillion in petro (dollar) exports over the next four years. Dubai offers a workaround for sanctions, using commodities payments settled in Yuan, Rupees, and Roubles, to bypass dollars. Gulf sovereign wealth funds - UAE, Qatar, Saudi Arabia - aim to invest in energy transition across Eurasia. It's the old world - the same Indian-Arab-European sugar, spice, cotton trade route used for centuries - back with a bang.

Under President Joko Widodo, Indonesia is taking control of its abundant energy transition minerals¹⁵, incentivizing investment in processing facilities to move up the value chain and shifting the world balance of economic power. While the dream of becoming an electrostate is new; the tools are old. Indonesia, one of the founding members of the Non-Aligned-Movement, is copying the developmentalist state miracles of the East Asian Tigers¹⁶ and the 1970s nationalization drives of OPEC countries. To howls of outrage by the European Commission at WTO, Jokowi banned exports of nickel¹⁷, forced international companies to refine and process domestically and sought technology transfer to state-owned enterprises.

Indonesia has the largest nickel reserves in the world, with a majority of reserves controlled by its state-owned mining company, MIND ID. While the EU, Brazil's Vale and US's Ford and Tesla initially sought to secure unprocessed

9. The Art of Monetary War. Sanctions and the new phase of economic combat, Dominik A. Leusder, 12 March 2022.

10. Matthew P. Goodman, Matthew Reynolds, and Julianne Fittipaldi, Economic Security in Emerging Markets A Look at India, Vietnam, and Indonesia, CSIS, May 2022.

11. Chad P. Bown, Russia's war on Ukraine: A sanctions timeline, September 16 2022 PIIE.

12. Shivshankar Menon, A New Cold War May Call for a Return to Nonalignment, Foreign Policy, July 1, 2022.

13. Geoeconomics, Finnish Institute of International Affairs (FIIA), 2022.

14. Tapering in a time of conflict: Trade and Development Report Update (March 2022).

15. Géographies en transition, Jewellord T. Nem Singh, Monde Phénoménal, 29 juin 2022.

16. Jewellord Nem Singh & Jesse Salah Ovadia (2018) The theory and practice of building developmental states in the Global South, Third World Quarterly, 39:6, 1033-1055.

17. Overview of Indonesia's EV downstream sector: A focus on nickel, Deloitte Indonesia Perspectives, Third Edition, February 2022.

nickel from the country, Indonesia insisted on grabbing more of the value-chain by creating an EV-producing national champion. Indonesia Battery Corporation, a newly created producer of batteries for electric vehicles, has struck partnerships with China's CATL and South Korea's LG to obtain critical technology required to process battery-grade nickel.

After Jokowi banned nickel exports in 2020, Chinese companies agreed to set up joint ventures in Indonesia with high-pressure acid leach (HPAL) technology. Jokowi's next targets for the 'ban-exports-and-nationalize' treatment are tin (Indonesia is world's second largest producer and the metal is used as solder to make electrical connections), aluminium (Indonesia is world's fifth largest producer and the metal is used in electricity and cars) and copper (used in, well, everything electric)

These muscular expressions of non-aligned power are an incomplete counterweight force to U.S. Sanctions on developing countries' choices. The U.S. leveraged its place at the heart of the global financial system to influence global arms sales by threatening any client for Russian weapons with economic warfare. Indonesia ended up cancelling its purchases of Russia's Sukhoi-35 fighter jets, despite Russian offers of a dollar bypass palm-oil-for-fighter-jets scheme. Instead, in a major defence spending escalation of \$22 billion, Indonesia bought 36 U.S F-15s and 42 Rafale's from France, along with 2 of France's Scorpene submarines (the latter an emollient after France lost out on its sale of diesel subs to Australia). In 2021, Russia shipped two S-400 air-defence missile systems to India. It prompted a furious backlash from the U.S and threats to sanction India for the rupee-rouble deal. Calls for constructive, not coercive sanctions, remain unheeded.

Perhaps most surprisingly, given his regime's increasing closeness with the US, Brazilian President Jair Bolsonaro chose neutrality in the war. The material stakes may make this choice seem obvious: Brazil's soy-corn-sugar-meat exporting complex, heavily dependent on Russian fertilizers¹⁸, has an enormous stake in preserving relations. Moreover, Brazil's trade surplus with China is bigger than all its exports to the U.S. But the ideological current runs deeper. Lula's government (2003-2010) had deepened relations with the U.S., BRICS, and other pink tide governments of Latin America. In 2011, the foreign minister boasted that Brazil had more embassies in Africa than did Britain. Its willingness to make friends in both the Pacific and North Atlantic has given it greater room of maneuver, as when it broke HIV/AIDS drug IP patents in favour of Indian generics.

Bolsonaro's free-market faction has broken with that multilateralist tendency, siding against India, South Africa and China when that bloc demanded IP-free Covid vac-

cines at the WTO. It also joined the G7 on agricultural free trade policy, and has sat out IP fights. Yet the Brazilian right wing's best efforts to quash protectionism were not enough to overcome the country's long aversion to G7 coordinated schemes; Brazil still chose neutrality on Russian sanctions. Elites in Brasília would rather keep their options open and their commitments light.

Green industrial growth compels some choice, however. Looking ahead, Brazil will need to prioritize either domestic industrialists or external allies, as it weighs whether to develop flex-fuel cars fed by homegrown sugarcane ethanol or batteries sourced from China, Indonesia, and the nearby lithium triangle. Brazil may defer choosing between North and South, but the choice between an inward-looking Brazil or an outward-facing one looks more inevitable.

There is a special irony to Brazil's current right-wing capture. Under Bolsonaro, the country is perhaps the most cooperative, among its BRICS peers, with the G7-led order. But Lula, its charismatic former president, represents the developing world's best shot at leading a global nonalignment movement. It will be up to that former unionist metalworker to forge a new coalition based on shared values. Whereas the old nonaligned movement was anchored on moral imperatives - decolonization, anti-racism, nuclear disarmament - the fledgling version lacks a positive social and ethical program. Instead, it stems from the cold commercial and security logic of development. Domestically, Lula's return to power has been partly a reaction to Bolsonaro's brazen contempt for women, environmentalists, and the poor. But whether Lula can sell Green industrial Brasília to a global audience is a matter of inspiring the multi-ethnic working classes of other vast tropical democracies.

Developing countries will use this decade's violently shifting geoeconomic conditions¹⁹ to build on growth models pioneered last century, including industrial policy and developmental state capitalism. Expect states like India and Indonesia to keep conditioning their increasingly coveted cooperation and access to growing consumer markets on hard infrastructure deals.

Within that general trend are enormous variations in strategy²⁰. Brazil's emblematic program of development through social policy may be fully realized with Lula's anticipated return to power later this year. India and Indonesia, meanwhile, have favored policies centered on buildout of electricity, roads, and ports, which can disregard human rights and bias deals toward powerful incumbents. In the extreme version, consider the Gujarat model²¹ that has formed the basis of Modi's aggressive

19. Zoltan Pozsar, War and Industrial Policy, Credit Suisse, August 24, 2022.

20. BRICS Neoliberalism: Past and Future?, Brown University, April 23, 24 2022.

21. Chatterjee, E. (2022), New Developmentalism and its Discontents: State Activism in Modi's Gujarat and India. *Development and Change*, 53: 58-83.

18. The Observatory of Economic Complexity, July 2022.

electoral campaigns.

Even as nonaligned countries negotiate within the new sanctions regime and find ways to use it to their advantage, one should not lose sight of the devastating toll of G7 sanctions²²: a blunt instrument that has torn up supply chains and created inflationary pressures. When emerging market elites can parley these conditions to their advantage, it is impressive.

But even the most creative trade deals struck under terms set by the G7 are insufficient buffers against food and energy price volatility, unleashed by deregulated commodity markets²³ run out of London and Chicago. Climate chaos²⁴ on every continent, meanwhile, compounds these tensions²⁵, devastating the already threadbare lives of many. All the more reason, then, for the G7 to take a leaf out of the BRICS' playbook²⁶ and coordinate investment²⁷ in long-term sustainable infrastructure.

22. The Sanctions Weapon. Nicholas Mulder, IMF, June 2022.

23. How High Energy Prices Emboldened Putin, Tim Sahay, The American Prospect, March 22, 2022.

24. Fact sheets, The Intergovernmental Panel on Climate Change (IPCC).

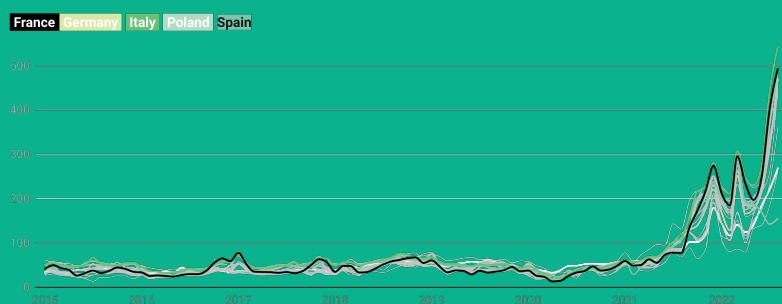
25. Climate Change 2022: Impacts, Adaptation and Vulnerability, IPCC.

26. Climate: An Outline of the New Era Emerges, Ben Beachy, Democracy, Spring No. 64.

27. Investment and Decarbonation: Assessing Green Finance, Anusar Farooqui, Tim Sahay, Phenomenal World, 13 May 2021.

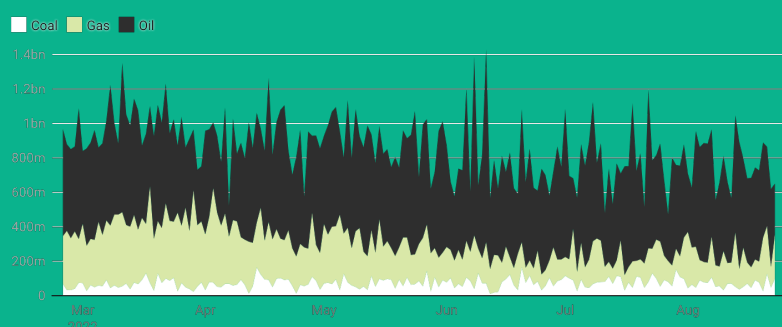
The energy crisis in three charts

The price of a MWh has reached historic levels in Europe



g.

Daily payments to Russia by type of fossil fuel, since 24 February



h.

Since the start of the invasion of Ukraine, the price of a megawatt-hour (MWh) in Europe has reached historic levels, standing at €753.98 in France and €664.79 in Germany as of 30 August (figure g).

During the first 100 days of the war, Russia exported fossil fuels worth a total of €93 billion¹ (figure h).

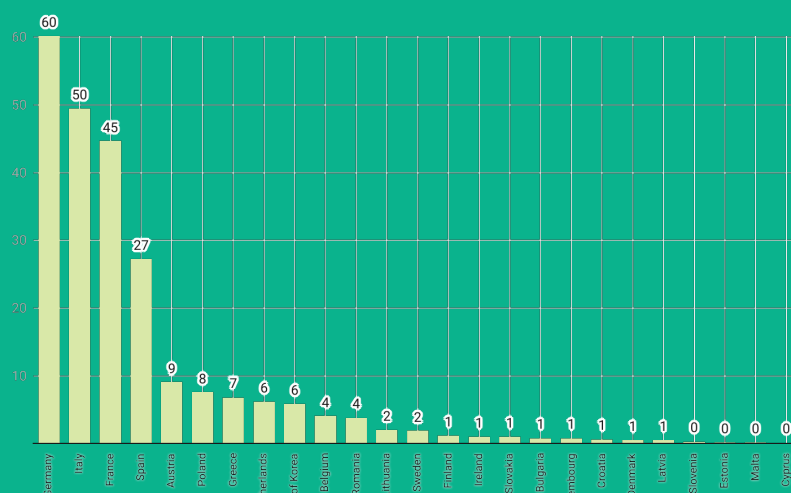
1. Centre for Research on Energy and Clean Air, June 2022.

g • Groupe d'études géopolitiques, Source: EMBER.

h • Groupe d'études géopolitiques, Source: Center for Research on Energy and Clean Air. Data are expressed in euros.

i • Groupe d'études géopolitiques, Source: Bruegel. In billions of euros, September 2021-July 2022. Data on measures taken by Member States are available in Table a, page 60.

Funds allocated by Member States to fund the cost of mitigation measures to protect against rising energy prices



i.

A photograph taken from inside a large, dark, circular structure, looking out through a circular opening. The view reveals a complex industrial interior with a large, light-colored, curved wall. A network of dark metal beams and pipes crisscrosses the space. In the foreground, two bright, glowing orange-yellow lines, possibly heated cables or pipes, run along the floor. A large, white, stylized number '02' is superimposed over the center of the image.

02

War ecology: transform, plan, regulate

Four perspectives for
rebuilding an alternative
institutional architecture

◀ The entrance to Tank 19 at the Red Hill underground fuel storage facility near Pearl Harbor, Hawaii. A fuel leak infiltrated a fresh water well and contaminated taps at Pearl Harbor military housing.

© Shannon Haney/U.S. Navy via AP.



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Economic Planning and War Economy in the Context of Ecological Crisis

46

The terms economic planning and war economy are familiar to historians. They describe practices and modes of government found in many countries during the 20th century. Between the 1930s and the 1970s, these terms were the subject of considerable intellectual debate – though often forgotten since – in an attempt to define them or to connect them. Today, they are being revisited in light of a dual interrogation. First, economic planning is being presented as a possible solution to the ecological crisis by reorganizing production and consumption to keep in line with the objectives of reducing carbon emissions and preserving biodiversity. The concept of the war economy is sometimes added (sometimes referred to as "ecological war") to mean that, as in a war, the whole of the economy's organization must be oriented towards a single objective: victory, the only guarantee of survival for the majority of the population¹. War economy has been used in a second sense in relation to the environmental crisis to highlight the convergence of rising energy prices caused by the war in Ukraine and climate objectives to reduce carbon emissions.

The policy of reducing energy consumption in the winter of 2022-2023 due to possible electricity shortages would provide an opportunity to change our behavior in keeping with the ecological imperative. In this way, war and ecology are converging because they are forcing us to rapidly move away from a resource on which we are still too dependent.

1. This argument, in various forms, is often used in the media by politicians, journalists or activists, without being clearly identified or precisely defined. A successful book in France has recently used the term "ecological war" in this sense: Clément H. (2021), *Journal de guerre écologique*. Fayard, 2020. In a completely different way, Bruno Latour and Nikolaj Schultz have given themselves the task of "explaining" the state of ecological war. Latour, B., & Schultz, N. (2022). *Mémo sur la nouvelle classe écologique: Comment faire émerger une classe écologique consciente et fière d'elle-même. Empêcheurs de penser rond*.

Self-imposed constraints on energy consumption become a prerequisite for winning the war². These two current uses of the war economy concept each especially underscore one of the meanings the concept has taken on throughout history (the two are not contradictory): the total mobilization of production towards a given objective in the first case, and the management of scarcity in the second.

If ecological planning is necessary to face the current environmental crisis, it seems preferable to me to rid it of the war economy vocabulary. The notion of war economy only makes sense as a short-term organization, unlike the ecological policy that is necessary today³. The politics of planning – thought of as an enterprise of coordinating interests with long-term objectives – has historically been constructed as independent of the war economy and not as a mere peacetime extension of it. On the contrary, in the name of economic liberalism, critics of planning sought to equate it with a state of war economy (or reconstruction). Presenting the ecological struggle as a war economy therefore invites criticism that the normal state – the peacetime economy – would be one free of ecological concerns and state intervention.

If the war economy and planning historically had one thing in common, it was the goal of rapidly increasing production. Planning sought "modernization" or "transition", in a sense that essentially consisted of increasing production in industry, trade, or agriculture⁴. Today planning is needed to coordinate the actions of households and businesses to achieve a common ecological goal. If references to past planning make sense to shed light on the present context, this could be the main justification for state intervention and long-term thinking. For the rest, it is especially necessary to stress the singularity of contemporary issues, both in terms of economic and ecological objectives and of democratic practices. What economic planning borrowed from the war economy in the past seems ineffectual today, unless one wishes to retain only the historical circumstances that brought them together.

The conflicting relationship between planning and the war economy

2. Charbonnier P., "La naissance de l'écologie de guerre"; Grand Continent, 18 March 2022, <https://legrandcontinent.eu/>. Mike Davis made a somewhat similar argument to suggest that the constraints on consumption in the United States during World War II were instrumental in winning the war and could serve as a model for the ecological cause: Davis, M. (2008). "Ecology of War: When the United States was fighting against the waste of resources". *Movements*, (2), 93-98.
3. See also, in particular regarding the link between the war economy and the short term, Monnet, E. (2022) "Economie de guerre et écologie : les risques de l'analogie" *L'Economie politique* n°95, août, p.94-102.
4. This goal depended on the combination of rising output, political freedom, and geopolitical power and thus the economic growth paradigm. See Schmelzer, M. (2016). *The hegemony of growth: the OECD and the making of the economic growth paradigm*. Cambridge University Press. Bivar, V. (2018). *Organic resistance: The struggle over industrial farming in postwar France*. UNC Press Books. Charbonnier, P. (2020). *Abondance et liberté: une histoire environnementale des idées politiques*. La Découverte.

The words of the Polish economist Oscar Lange – theorist of "market socialism" and a great detractor of Hayek in the 1930s – are often cited to associate planning and war economy. In a 1958 lecture in Belgrade published in the *Indian Journal of Economics*, Lange offered an apt description of the war economy that we can reproduce here in its entirety:

I think that essentially, it can be described as a sui generis war economy. Such methods of war economy are not particular to socialism because they are also used by capitalist countries in war time. They were developed during the first and second World War. In capitalist countries similar methods were used during the war, namely, concentration of all resources for one basic purpose, which is the production of war materials, and centralized disposal of resources in order to avoid leakage of resources to what was considered as non-essential uses (everything which was not connected with the prosecution of the war) Allocation of resources by administrative decisions according to administratively established priorities and a wide use of political incentives to maintain the productivity and discipline of labour through patriotic appeals were characteristic of war economy and resorted to in all capitalist countries during the war. [...] The difficulties start when these methods of war economy are identified with the essence of socialism and considered as being essential to socialism⁵.

In addition to presenting the essential features of the war economy in a classical manner, this excerpt is interesting in multiple ways. It points to the historical link between economic planning and warfare that was forged in many countries, a link that contemporaries were aware of and that has been documented in retrospect by numerous academic works in history⁶. Finally, and most importantly, Lange ends with a warning not to confuse war economy methods with what would be true socialist planning, to not conflate transitory means of historical circumstance with the essence of a policy. In the remainder of his text, the author therefore attempts – contrary to what is often remembered – to imagine economic planning that would not be dependent on the war economy but would be fully socialist. Polish socialism was a political and economic failure – something that Lange did not foresee in 1958 – but it is interesting to underline that the debate on whether or not the war economy and planning were essentially linked ran through post-war intellectual and economic circles in both Soviet and capitalist countries. This text also testifies to the evolution of socialist thought on war – obviously linked to the end of the war-

ld conflicts – which gradually moved away from the idea held most notably by Otto Neurath during the First World War, according to which the war economy was an opportunity for socialism and planning because it would have acclimated citizens to a state-led economic organization⁷.

Proponents of planning in Western Europe also wanted to dissociate themselves from the experience of war, which was the only way to legitimize policies that needed to be associated with peace and to distinguish them from the practices of fascist or Soviet regimes⁸. On the other hand, critics of state intervention in the economy and defenders of a economic liberalism that borrowed from the 19th century, never ceased to criticize planning by pointing to its status as a war economy⁹. Louis Baudin, who had a classic pedigree as a 20th century "neoliberal" intellectual (from his presence at the 1938 Walter Lippmann colloquium to his support for authoritarian regimes and his membership in the Mont Pèlerin Society), presented his strong opposition to post-war planning this way:

These tendencies towards socialization found favorable ground in France during the war and the occupation. [...] It is curious to observe that such a system, which caused us so much suffering, can still be proposed as an ideal. We have known the economy of preparation for war (Wehrwirtschaft), that of wartime (Kriegswirtschaft), and now the economy of war in peacetime. And liberalism is denounced with utter thoughtlessness and ingratitude because the possibilities it holds and the benefits it has brought are overlooked¹⁰.

By choosing to use the German words *Wehrwirtschaft* and *Kriegswirtschaft*, Baudin was referring to the theorizing of the war economy by German legal scholars and economists during the 1930s, who insisted primarily on organizing the economy to exploit production to the fullest for military purposes. These theories had considerable influence not only in Germany but also in the United States, France and the United Kingdom¹¹. A key element

5. Lange, O. (1958). "The Role of Planning in Socialist Economy". *Indian Economic Review*, 4(2), 1-15.

6. See among others, as an introduction to this literature, Milward, A. S. (1979). *War, economy and society, 1939-1945*. Univ of California Press; Harrison, M. (Ed.). (2000). *The economics of World War II: six great powers in international comparison*. Cambridge University Press. Patel, K.K. (2016), *The New Deal: a global history*, Princeton, NJ: Princeton University Press. Tooze, A., & Martin, J. (2015). "The economics of the war with Nazi Germany". In *The Cambridge History of the Second World War*, 3, 27-55.

7. Neurath, O. (1916). "War Economics", in Cohen, R & Uebel, T. (eds), *Otto Neurath: Economic Writings 1904-1945*, Kluwer, p.153-199.

8. See for example, in the case of France, Fourquet, F. *Les Comptes de la Puisseance*. Encre Recherches, 1980. Rouso, H. (1985). *Le Plan, objet d'histoire*. Sociologie du travail, 239-250; Monnet, E. (2018). *Controlling Credit: Central Banking and the Planned Economy in Postwar France, 1948-1973*. Cambridge University Press, chp.1.

9. See Monnet, E. (2022) "Economie de guerre et écologie : les risques de l'analogie" *l'Economie politique* n°95.

10. Quoted in Badel, L. (1999). *Un milieu libéral et européen: Le grand commerce français 1925-1948*. Comité pour l'Histoire économique et financière, chp. IX §54 URL: <https://books.openedition.org/igpde/2225>. The original reference is Louis Baudin, "Servitude ou liberté économique", *Pour une économie libérée*, Paris, 1946, p. 14-1.

11. On these debates and their influence, see Oualid, W. "Les débuts de l'économie de guerre en France." *Revue d'économie politique* 54.2 (1940): 185-215; Spiegel, H. W. (1940). *Wehrwirtschaft: Economics of the Military State*. The American Economic Review 30(4): 713-723; Kaldor, N. (1945). *The German war economy*. *The Review of Economic Studies*, 13(1), 33-52. Thiveaud, J.-M. and Feltess V., "L'ère Des Tyrannies et l'économie de Guerre : Naissance d'une Théorie (1930-1940)." *Revue d'économie Financière*, no. 16, 1991. Abelshausser, W. (1999). *Kriegswirtschaft und Wirtschaftswunder*. *Vierteiljahrshefte für*

of these debates was that of potential war production ("war potential" or "economic potential for war"), i.e., the maximum production that an economy could achieve if its entire organization was orientated towards war and all resources – capital as well as labor – were efficiently allocated to achieve this objective.

From this brief historical review, let us take note of the tensions that existed in the past between the notions of war economy and planning. Although history brought them together during the Second World War, it was necessary for defenders of state intervention and post-war planning to reject the notion of a war economy, which – apart from its association with political regimes that had been overthrown in some countries – could only be suited to short-term organization requiring sacrifice and not to the establishment of a new form of state and new economic policy objectives. It was partly to counter references to the war economy that planning in France crafted its own mystique, extolling public action and modernization grounded in science¹². It was the product of the intersection of socialist ideals (promoted by politicians who had established a doctrine with the SFIO or the CGT during the interwar period) and an administrative conversion to a new form of state interventionism (driven by a belief in the rational nature of public action and the tools of economic analysis, sometimes in keeping with the administrative techniques developed under Vichy but breaking from that regime's conservative corporatism)¹³.

Socialist planners saw the post-war period as an opportunity to create a new form of collective organization that was distinct from the wartime vision – embodied in particular by nationalization and the creation of social security. In a different way, the separation of planning from the wartime economy was also made by administrative planners through the rejection of scarcity and the need for reconstruction through economic and scientific modernization. This is how long-term vision became an integral part of planning, and how the principle that the state could thereby serve as a guide for the rest of the economy gained acceptance, even among those who rejected socialist ideas¹⁴.

This concept broke with that of the war economy, which saw state intervention only as a wartime exception, as opposed to the normal state of the world, i.e., the peacetime economy based on the principles of economic liberalism. The analogy with war sometimes reappeared, but metaphorically, as in this text in favor of European planning by Etienne Hirsch:

Just as a regiment of infantry must know from the beginning that at a given time it will be supported by tanks and aircraft, so must an industrialist who undertakes big investments be confident that he will be able to find the finance, the labour, the raw materials and the outlets for them¹⁵.

What to do?

The reference to post-World War II planning is today warranted by the recognition of a common economic and social objective that surpasses all others because it is, in a word, vital. In this sense, the analogy with the wartime economy, which was also geared to an overriding objective, may seem appropriate, but it can just as easily be made with the post-war economy geared to the rapid reconstruction of the country. Why not talk about ecological reconstruction rather than ecological war? Post-war reconstruction was considered the only way to lift society out of poverty and rationing, and modernization – FrenchPlan's other objective – the only escape from what was perceived as the "Malthusian" collapse of inter-war civilization¹⁶. In 1946, Jean Monnet spoke in France of "the first vital stage of our recovery" and of creating "the modern economic tools without which neither power nor prosperity are possible"¹⁷. Just as today, there was a shared sense of absolute necessity and a recognition that – despite its imperfections – the state was the proper form of collective organization to guide society and avert catastrophe. The historian Tony Judt repeatedly emphasized this point in his masterful study of postwar Europe:

What planning was really about was faith in the state. In many countries this reflected a well-founded awareness, enhanced by the experience of war, that in the absence of any other agency of regulation or distribution, only the state now stood between the individual and destitution. But contemporary enthusiasm for an interventionist state went beyond desperation or self-interest¹⁸.

Ecological planning today must therefore be based both on full awareness of the danger as well as on trust in public decision-making. This is why it can only be based

Zeitgeschichte, 47(4), 503-538. These few articles are an introduction to a literature consisting of dozens of works in several languages.

12. Gaïti, B. (2002). Les modernisateurs dans l'administration d'après-guerre l'écriture d'une histoire héroïque. *Revue française d'administration publique*, no 102, p.295-306.

13. Margairaz, M., (1991). L'État, les finances et l'économie. *Histoire d'une conversion 1932-1952*. 2 volumes. Committee for the Economic and Financial History of France. Margairaz, M. (2009). "Les politiques économiques sous et de Vichy". *Histoire politique*, (3), 93-109.

14. Hirsch, E. (1962). French planning and its European application. *J. Common Mkt. Stud.* 1, 117; Andersson, J. & Prat, P. (2015). "Gouverner le "long terme": La prospective et la production bureaucratique des futurs en France." *Gouvernement et action publique*, OL4, 9-29.

15. Hirsch, op.cit, p.122 Engineer, Resistance fighter and friend of the SFIO, Etienne Hirsch chaired the Commissariat Général au Plan from 1952 to 1959. He then chaired the European Atomic Energy Community (Euratom) until 1961.

16. The criticism of pre-war economic and demographic Malthusianism was a continuation of Vichy policies. Cf Margairaz M. (2009) op.cit.

17. "Première étape vitale de notre redressement", in *Le Monde*, June 3, 1946.

18. Judt, T. (2005) *Postwar: A History of Europe Since 1945*, Penguin Press, p. 69.

on thorough administrative reform, just as occurred after the war, with the creation of technical ministries, the reappropriation of areas of authority by the public sector and the creation of cooperative bodies¹⁹. Post-war planning was based on vertical (within a sector) and horizontal (between sectors) coordination between the leaders of public and private enterprises, unions, financiers, and the administration²⁰. Today, these cooperative structures must be reinvented. But we also know how the 1950s and 1960s, despite the development of these cooperative arrangements, can hardly be regarded as a democratic model for present-day European societies. The coordination of the 1960s remained very technocratic²¹. The current challenge lies in the need for greater citizen involvement in decision-making, both at the local and national levels. This involvement is especially essential in order to rapidly change agricultural production and consumption habits and make them compatible with the now well-known objectives of limiting CO2 emissions.

If the post-World War II period was truly one of drastically limiting private capital flows to avoid financial destabilization, it was, on the contrary, a period of rebuilding industrial and commercial ties, particularly at the European level. The history of French planning cannot be written without the history of European construction, starting with the ECSC in 1951. Today, more than ever, we know that reflection at the national level is not enough when faced with the climate crisis. We also know that limiting mutual financial assistance to the Europe-United States axis today (in the 1950s, this was to compensate for the lack of private capital flows) without extending it to countries in the South is a non-starter. There can be no fight against global warming without unprecedented financial aid to the poorest countries.

At both the international and national levels, ecological planning therefore requires a reorientation of financial flows. History shows us that this is not a minor shift. It requires a major role for the State in developing the necessary financing for new investments by public development banks (such as the Caisse des Dépôts or the European Investment Bank), drastic regulation to prohibit the private sector from providing international financing for detrimental activities, and support from central banks for priority financing in the fight against climate change.

If the history of planning can offer us some guidance for today's policies, we must also recognize how striking the differences with the past are. This is true not only of our relationship to democracy and international affairs, as mentioned above, but also of the very purpose of plan-

ning. The planning of the 1950s and 1960s completely failed when the focus shifted from the development of industrial and agricultural production to organizing deindustrialization from the 1970s on. Public funding was not geared towards an industrial transition, policies to fight unemployment and support employment were largely insufficient, and assets were sold off at low prices without a coherent vision of regional economic development. Today, the dismantling of certain polluting industrial activities can no longer be overlooked in planning but is instead one of its primary objectives. Research, cooperation, international vision and financing must therefore also be organized around the handling of what are called "stranded assets" in a prudish manner, while the human and social impacts of the closure of these activities are still too often glossed over. The financial cost of these dismantling operations is still uncertain, but we know that it will be substantial, and the public financial organization to manage them has not yet been established, despite its urgency. According to the Paris Agreement, 33% of oil resources, 49% of natural gas, and 82% of coal must never be exploited, in other words, they must be left in the ground. The recognition of the economic and financial consequences of this is not yet fully understood. The costs in terms of job change and decommissioning are still poorly estimated, but they are certain²².

From an economic point of view, the three points raised above (international financial cooperation, financing of national investment and stranded assets) all raise a similar question: who should pay? On this point too, the situation is different from the war or even post-war economy, because today there is no lack of money. There is no longer a need for forced savings, as Keynes advocated in 1941, to finance the war, or to count on the miraculous reappearance of savings kept hidden during the war, as European governments hoped for after 1945²³. More than any time in history, it is a question of distribution. This is true for both taxation²⁴ and finance²⁵. We can today imagine a system where investment in the ecological transition could be financed by monetary creation by banks or through savings (in the form of deposits or bonds). The State has an important role to play in organizing this financing, but the investment does not have to be public investment in the sense of national accounting. It could, for example, be public development banks²⁶. The role of the State is to ensure that these investments truly support non-carbon activities and that the financing of these activities is in the form of safe assets – the low risk being

19. See the avenues developed in France Stratégie (2022) "Soutenabilité! Orchestrer et planifier l'action publique" Report. Durand C. and Keucheyan R. "aL'heure de la planification écologique", *le Monde Diplomatique*, May 2020.

20. Parts of the paragraphs that follow are taken from the following text: Monnet E., "Planification écologique", *Le Monde*, 27 May 2022.

21. See, on the financial aspect of planning, Monnet E. (2018), *op.cit.*

22. Bos, K., & Gupta, J. (2019). Stranded assets and stranded resources: Implications for climate change mitigation and global sustainable development. *Energy Research & Social Science*, 56, 101215. Caldecott, B. (Ed.). (2019). *Stranded Assets: Developments in Finance and Investment*. Routledge.

23. Keynes, J.M. (2020 [1940]), *Comment financer la guerre*, Classiques Garnier.

24. Chancel, L. (2022). *Insoutenables inégalités-Pour une justice sociale et environnementale*. Les petits matins.

25. Offer, A. (2022). *Understanding the Private-Public Divide: Markets, Governments, and Time Horizons*. Cambridge University Press.

26. This was the case after 1945, cf E.Monnet 2018, *op. cit.*, chp.6

able to compensate for a low return. The central bank can guarantee the liquidity and reliability of this mode of financing, as it did after the war, possibly by guaranteeing preferential refinancing opportunities for environmental loans²⁷. The questions that arise are those of coordination and the democratic nature of the choices made and, if the State guarantees private activities, those of the conditions to be demanded from these private institutions. The essential purpose of planning is to coordinate interests and to prevent private interests from clashing with public interests.

Conclusion

In this short text, I have turned to the history of planning and the war economy (as well as their turbulent relationship) to warn against the idea that reference to the war economy could create the possible conditions for an ecological planning that would be able to change our modes of production and our relationship to nature. If historically there was a link between the war economy and the increase in state intervention in the middle of the 20th century, post-war planning was created in an attempt to extricate itself from reference to the war economy, which was seen as a temporary and exceptional moment while awaiting the return to normality of the peacetime economy.

If we want to consider ecological planning today, we must first fight against the still widespread idea (to which the war economy rhetoric contributes) that state intervention in the economy is only justifiable as a temporary and exceptional situation imposed by the enemy.

The energy crisis caused by the war in Ukraine coincides with a belated and insufficient awareness of the need to change our modes of energy production and consumption. Just as during the covid-19 pandemic, it can be an opportunity to make rationing policies that seemed unacceptable or unimaginable a few months earlier visible and tangible. But, in the same way that in the 20th century there was a mistaken belief that war planning would automatically lead to socialism, we must be skeptical of the idea that the current energy crisis can be transformed into a healthy awareness and long-term change of model. It is relatively easy to mobilize and unite interests in times of war, but the real political and intellectual struggle lies in the definition of peace as it is necessary to agree on the long-term and on normality.

27. Monnet, E. (2021). *La Banque-providence: Démocratiser les banques centrales et la monnaie*. Le Seuil.



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An Ecosocialist Internationalism: Socialisation and Emancipation in the age of Ecological Crisis

In his essay, "The Birth of War Ecology", Pierre Charbonnier acknowledges the emergence of a strategic matrix through which the war mobilization against Russia could be leveraged for the real deployment of climate policies. As such, the war in Ukraine could be the catalyst for a socio-ecological transformation. This argument is consistent with the sudden shift in Europe's official discourse on the transition. The Commission's position expressed in its outline of the REPowerEU Plan, published two weeks after the Russian invasion on 8 March, clearly captures the new frame of mind:

The Commission is ready to develop a REPowerEU plan, in cooperation with Member States, by the summer, to support the diversification of energy supplies, accelerate the transition to renewable energy and improve energy efficiency. This would accelerate the phasing out of Russian gas imports and reliance on fossil fuels and provide the best insurance against price shocks in the medium term by fast-forwarding the EU's green transition, with a special focus on cross-border and regional needs. The need for greater security of supply is adding a new impetus to the objectives of the European Green Deal¹.

Within this announcement of an accelerated transition towards sufficiency, renewable energies, and an end to hydrocarbons, there is a promise: war can be an ecological opportunity. The European Parliament's Green party is campaigning on this theme with slogans such as "Isolate Putin, insulate your home"; "More sun, more wind, more peace". Charbonnier also detects the possibility of a

shakeup within the elite. As dependence on fossil fuels becomes a security issue, the range of interests in favor of the transition widens: "We finally have an argument that will mobilize spheres of influence and investment that until now have been resistant to the energy transition." By affecting stability, Putin could make business and finance listen to ecological reason.

As a cautionary note, the author lists several potential obstacles to this evolution: geopolitical failure to sever energy ties with Russia, socioeconomic disorganization, illegitimacy of the distribution of effort, lack of a systemic perspective, and internal geopolitical divisions. He also mentions the risk of an inverse evolution of wartime ecology, that of accelerated extraction of hydrocarbons elsewhere than in Russia, thanks to an energy pivot that would only be geographical. But the emergence of a wartime ecology remains a realistic hypothesis in his eyes. Referring to a possible "internal threat that Putin's regime constitutes for Europe", Charbonnier positions the importance of wartime ecology far beyond Ukraine: "the creation of a development, cooperation, and civic construction model that incorporates the planetary imperative into the game of geopolitical rivalries depends on Europe's ability to not fall entirely under the influence of Putin's totalitarian model". And to warn us: "behind wartime ecology, ecological patriotism is taking shape".

The value of this position is that it takes stock of the historical intensity of the present moment. Wars play a role in accelerating change. The Russian revolution was born of the first world war, and the German war economy served as a template for early Soviet planning. The Second World War precipitated the expansion of the welfare state and the deployment of Fordist regulation of the economy. Wars often push the historical moment to its point of incandescence, where social structures change from one state to another. To put it like Althusser, if the contradiction that war embodies is "overdetermined in its principle", it is also overdetermining. Naturally, according to a war's intensity and the protagonists' position within the world-system, the magnitude and spatial distribution of its repercussions vary. But a society never comes through unscathed.

The links between geopolitics and hydrocarbons are longstanding. As Helen Thompson demonstrates in her book *Disorder*, the presence of energy challenges in power struggles is the rule. Uniquely lacking in adequate hydrocarbon resources, Europe has on several occasions since the 1960s found itself torn between its Atlanticist allegiance and the geographical rationale of its connection to Soviet – and later Russian – territory.

In the current crisis, Thompson also sees the possibility of a step forward for the ecological transition because of "public awareness that the supply of hydrocarbons does

1. European Commission, Communication From The Commission To The European Parliament, The European Council, The Council, The European Economic And Social Committee And The Committee Of The Regions REPowerEU: Joint European Action for more affordable, secure and sustainable energy, s.l., 2022.

not take care of itself". Indeed, "transitioning away from fossil fuels and toward greener energy, a necessary transformation that requires nothing less than changing the material basis of modern civilization, then they [the public] will have to admit that oil, gas and coal – the energy sources of the past, on which we continue to rely – can't be taken for granted. "

By becoming more and more openly involved in the conflict, Western powers are not only putting their relationship with Ukraine and Russia at stake, they are also setting out to change themselves. But the question remains: can wartime ecology be effective from the point of view of the advent of a low-carbon economy? And is it consistent with the values of a politics of emancipation?

Questionable ecological effectiveness

Examined closer, things are much more complex. This is firstly because in the immediate future, reducing Russian energy imports means replacing them with substitutes that are generally more polluting: coal, "blue" hydrogen or shale gas from the United States. These adaptations result in irreversible effects that, far from accelerating the transition, risk derailing it. The Engie case illustrates the troubling turn taken in the name of decoupling from Russia. At the beginning of May the company signed a 15-year contract with the American company NextDecade for the annual delivery of 1.75 million tonnes of liquefied natural gas (LNG) derived from shale gas. This agreement had previously been shelved for environmental reasons under pressure from the French government, which holds 23.6% of the energy company's capital.

American producers are delighted with the shift in the supply of LNG to Europe; they know that this is a lasting change. Increased LNG imports require specially equipped ships and new terminals that require considerable time and expense to build. Embarking on this path means providing guarantees that the transition to cleaner energy will not leave these fossil fuel assets worthless within a decade. As the Sierra Club's Kelly Sheehandi states, "Allowing for the expansion of new and expanded gas export facilities would lock in decades of reliance on risky, volatile fossil fuels and spell disaster for our climate," From a climate change perspective, the conclusion is clear: it is better to maintain supplies of Russian natural gas through existing pipelines rather than to create new infrastructure for higher-emission energy sources. For the environment, hydrocarbons have no homeland.

The other problem is prices. The energy crisis was already serious in the autumn, but it has intensified with the rise in prices since the invasion of Ukraine. Here again the effects are mixed. Rising costs are tipping the world economic situation into a new period of recession, heralding a return of the stagflation of the 1970s, driven

this time not by the class struggle but by the bargaining power acquired by capital as a result of financialization. Added to this is a food crisis with dramatic consequences for low-income countries, as many agricultural supplies are directly indexed to energy prices. Technically, this new context can appear to be a carbon surtax that should change behavior through incentives.

This is not the case. On the contrary, we are even witnessing dramatic reversals, for example from the administration in the United States: "shale producers, together with their financial backers, should do whatever it takes to increase production, and not dividends" said Amos Hochstein, the White House energy adviser, in a recent interview, stating categorically that "The United States government is not standing in the way of additional oil production, categorically". Price elasticity is how society and the productive system respond to the price of carbon. Changing this elasticity, making it possible to reduce demand in the face of a price increase, implies providing the means for behavior to adapt to the new conditions. Such a modification of economic structures is part of a prolonged time frame that the price system understands poorly, just as the shock of the war in Ukraine is a poor immediate driver of structural transformation.

Finally, higher prices have a contradictory effect on the aims of weakening Russia. As Janet Yellen points out, "it would have a damaging impact on Europe and other parts of the world, and counterintuitively it could actually have very little negative impact on Russia" In the short term, increased tariffs offset reduced volumes, resulting in relatively stable revenues for Russia and giving the country time to pivot deliveries to other regions.

Ecosocialism

Let us push this thinking further. What happens when Russia decides to completely stop gas deliveries to European countries? This scenario, which until recently could be dismissed as a paranoid fantasy, seems to be on the verge of becoming reality. Its effects are particularly relevant in understanding the mechanics of a full departure from fossil fuels. The price system is unable to cope with shortages. At the end of August 2022, electricity and gas were trading at 10 times their recent levels on European markets. Such astronomical increases encourage speculation and unnecessarily enrich energy companies. Most importantly, these increases are impossible for our societies to absorb, both for households and businesses. Barring an unlikely détente with Russia, drastic measures for the administrative allocation of energy are unavoidable in order to limit the disruption of productive relations and to prevent excessive deprivation of the population. As Karsten Neuhoff and Isabella M. Weber explain², when

2. Karsten Neuhoff, Isabella M. Weber, Can Europe Weather Looming Gas Shortages?, Project Syndicate, 2 May 2022.

the market breaks down, a political process is inevitable; "clear targets and fair burden-sharing [...] must be negotiated" between social actors in order to share the sufficiency effort.

An observation of this kind, applied to the environmental crisis in its various dimensions, is the starting point for an alternative strategic matrix to wartime ecology: ecosocialism. The geopolitical context is likely to produce changes, even revolutionary changes. But the motor of change can only be found in the dynamics of societies themselves, and in the fundamental restructuring of modes of production and consumption. This restructuring is underpinned by conflicts, the class conflict in particular.

Ecosocialism is based on a key idea: modern economies are permeated by different processes of socialization. There are two parameters that must be taken into account in order to understand these processes. The first is where the impulse to socialize comes from. This sometimes comes from those in power. For example, the creation of the Federal Reserve in 1913 meant that American capitalists accepted that a political institution would set interest rates³. The proliferation of financial crises in the preceding decades is the *raison d'être* for this socialization of monetary instruments. Other forms of socialization result from struggles led by the working classes. Labor market regulations and social security in France are examples of this.

The second is the question of whether socialization works on the side of production or consumption. The socialization of production refers to all forms of overcoming market fragmentation, even partial ones. In its most extreme version, it leads to the complete planning of the economy. The socialization of consumption refers to all forms of collective consumption. These forms of consumption are also diverse. The consumers' associations that emerged at the beginning of the 20th century are one form, whose aim is to assist consumers in their choices, to help them establish their "sovereignty", which is not a true sovereignty. But those in power also socialize supply in order to secure consumption. For example, faced with the explosion of hydrocarbon prices, Mario Draghi recently proposed the creation of a "buyer's club" to deal with the producing countries⁴. Europeans and Americans could use their "market power" to put downward pressure on prices.

In each case, an economic mechanism or resource is subject to collective deliberation. Structural factors are liable to influence socialization, such as new technologies which facilitate communication and therefore increased management of firms or value chains. Whether stemmi-

ng from competitive dynamics or from political will, socialization always reveals a qualitative transformation of economic relations. Often it is reflected in an evolution in the forms of ownership and in the development of social ownership. The creation of joint-stock companies in the 19th century is one example, one in which Marx himself saw a mode of socialization that was truly capitalist⁵. Cooperatives are another, which distribute property to workers, socializing "from the bottom".

Socialization is something other than the embeddedness of markets dear to Karl Polanyi. An embedded market remains a market even if it is highly regulated and made possible through "fictitious" goods. With socialization, calculation in kind becomes more powerful. One deals in real resources, passing behind the veil of money and thus of exchange value. In their Transformation Plan for the French Economy, the Shift Project and its chairman, Jean-Marc Jancovici, propose this definition of calculation in kind:

"The PTEF (Transformation Plan for the French Economy) talks about tons, watts, people, and skills. But it barely mentions money, and never as an input to the problem at hand: faced with this problem, savings and money are not the most serious limiting factors⁶."

Without realizing it, they pick up on Otto Neurath's insights, one of the protagonists of the "socialist calculation" debate and a precursor of economic ecology⁷. Armed with the experience of procurement methods during the First World War, Neurath considers – in opposition to von Mises and Hayek – the calculation in kind as a means of reorganizing modern economies on a basis that is finally rational.

The ecological shift involves projecting oneself into the long-term and an increasingly uncertain environment. Yet the precision and intensity of the price signal are weakening with the prolongation and complexity of temporalities. Calculation in kind is the foundation of sufficiency and implies a judicious use of resources, and thus a direct "connection" of economic calculation to them. It leads to the replacement of GDP by a set of non-reducible indicators to pilot economies. With the return of shortages in the wake of the Ukrainian conflict, calculation in kind methods take the form of energy rationing. If there is in fact an overcoming of market coordination, the shift towards an emancipatory ecological transformation requires a different kind of socialization.

3. See Xavier Werner, "Socialisation, capitalism et socialisme", in *Le marxisme face au capitalisme contemporain*, Paris, Syllepse, 2004.
4. James Politi, Amy Kazmin, Derek Brower, Italy's PM Draghi floats creation of oil consumer 'cartel' after Biden talks, *Financial Times*, 12 May 2022.

5. See article "Socialisation" in Georges Labica and Gérard Bensussan (dir.), *Dictionnaire critique du marxisme*, Paris, PUF, 1982.

6. The Shift Project, *Climat, crises : Le plan de transformation de l'économie française*, Paris, Odile Jacob, 2022, p. 29.

7. See for example John O'Neill, "Ecological Economics and the Politics of Knowledge: the Debate between Hayek et Neurath", in *Cambridge Journal of Economics*, 28, 3, 2004.

Governing based on needs

Ecosocialism places a dual imperative of social justice and sufficiency on the socialization of the economy. It is a "war of position" against capital, aiming at holding productivism and consumerism in check by socializing production and consumption. On the production side, the construction of mechanisms that allow decisions on production to be made according to their ecological impact can put an end to the environmental devastation caused by the anarchy of investment decisions. This presupposes, in particular, the construction of a public banking division aimed at socializing investment so as to orient it towards the ecological shift⁸. At the micro level, ecosocialism is self-managing. In the socialist tradition, the emancipation of labor from its capitalist exploitation is a central objective. Ecosocialism adds an ecological argument: the exploitation of man by man is closely linked to the exploitation of nature by man, with reification affecting both relationships⁹. The emancipation of work will therefore favor a less instrumental or productivist relation to the latter. Hence the importance of doing away with big business. However, self-management alone does not solve the problem of coordination for it is on a macro scale that decisions concerning the allocation of material and human resources must be planned.

On the consumption side, a "punitive" ecology prohibiting unsustainable lifestyles associated with the status quo assets of the wealthiest would produce a cascade of cultural effects, and would favor the rooting of consumption in new patterns of preference. Through the influence of social networks, new forms of collective consumption are emerging. This is "social commerce": certain platforms allow consumers to interact with each other, thus removing them from their atomized condition¹⁰. They evaluate products, then buy collectively, thereby receiving a favorable price. Sometimes production is based on their opinion, which allows the creation of new links between producers and consumers, previously kept apart by the market. At this stage, the thinking remains consumerist. But something essential is at work here: the rise in power of the "collective consumer", resulting from the socialization of purchasing.

Socializing production and consumption results in a government based on needs. Capitalist productivism produces first, then creates artificial needs in order to sell the overproduced goods, notably through advertising and obsolescence. Governing by needs consists in deliberating first, then putting the productive system at the service

of democratically defined needs. Deliberation takes place as closely as possible to the citizen level. In this respect, scale is crucial. Small groups are the most suitable for expression of needs because it is in connection with ordinary daily practices that this expression makes sense. This can take place at the municipal or company level, or in the context of "deliberative mini-publics", of which the citizen's convention on climate change is an example¹¹.

But there is often a need to scale up decision-making, as threats to ecosystems require, among other things, a binding legislative framework to prohibit or ration unsustainable consumption choices. Hence the idea that government based on needs is federalism:

"Every federation leads to interventions," says Carl Schmitt in his definition of federalism. (...) Any genuine federation enforcement action is interference in domestic affairs, which subsumes the fully independent self-determination of the affected state to the federation and which eliminates its enclosed character and external impenetrability, its "impermeability"."

Deliberation regarding needs cannot be entirely "impermeable": it is subject to "interventions" at the federal level. These interventions will set ecosystemic limits to be respected in the meeting of needs, in relation to scientific knowledge on the subject, and will decide on the allocation of resources. However, in order to gain the support of citizens, these "interventions" will have to be legitimate from the dual point of view of social justice and sufficiency.

Socio-ecological internationalism

An internationalist spirit must guide any thinking about the transition. As the costs of climate disturbance are global, though unevenly distributed, and efforts to contain it are local, humanity finds itself in a prisoner's dilemma where only a political process of international deliberation can produce a cooperative framework. Making energy a geopolitical weapon leads to intensifying conflict at the very moment when de-escalation is needed to accelerate a change of matrix in places other than rich countries. To move away from a carbon civilization and avoid any kind of "free rides" by those who control polluting resources, it is inevitable that we propose a desirable path to regions and countries that are heavily dependent on fossil fuels. This is the world-system counterpoint to the question of how to support populations dependent on high emitting industrial sectors on a national or European scale. Contrary to wartime ecology, the ecosocialist perspective opens up a feasible path to this internationalism of transition.

8. See Benjamin Lemoine and Bruno Théret, "Il est possible de construire un circuit du trésor européen écologique", in *Gestion & Finances publiques*, 4, 2020.

9. For a version of this argument, see Jean-Baptiste Vuillerod, Theodor W. Adorno. *La domination de la nature*, Paris, Amsterdam, 2021.

10. See *The Economist*, "The Future of Shopping", Special Report, 13-19 March 2021.

11. See Thierry Pech, *Le Parlement des citoyens. La Convention citoyenne pour le climat*, Paris, Seuil/La République des idées, 2021.

12. Carl Schmitt, *Théorie de la Constitution*, Paris, PUF, 2013 (1928), p. 517-518.

**TABLE A. MEASURES TAKEN BY EUROPEAN GOVERNMENTS
IN RESPONSE TO RISING ENERGY PRICES**

Country	Reduced energy tax / VAT	Retail price regulation	Transfers to vulnerable groups	Business support
Germany	X	—	X	—
Austria	X	—	X	X
Belgium	X	X	X	—
Bulgaria	—	X	—	X
Cyprus	X	—	X	—
Croatia	X	—	X	—
Denmark	—	—	X	—
Spain	X	X	X	X
Estonia	X	X	X	X
Finland	X	—	X	X
France	X	X	X	—
Greece	—	—	X	X
Hungary	—	X	—	—
Ireland	X	—	X	—
Italy	X	—	X	—
Latvia	X	—	X	—
Lithuania	—	—	X	—
Luxembourg	—	—	X	—
Malta	—	—	—	—
Netherlands	X	—	X	X
Poland	X	X	X	—
Portugal	X	—	X	—
Czech Rep.	X	—	X	—
Romania	X	X	X	—
Slovenia	X	—	X	X
Sweden	X	—	X	—

Table a • Groupe d'études géopolitiques, Source: Bruegel.



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Perspectives on The Economy of War And Ecological Planning

56

The following remarks are an attempt to answer to the questions raised during the colloquium hosted by le Grand Continent, “Après l’invasion de l’Ukraine, l’Europe dans l’inter-règne” which I had the honor of participating in by being a part of the panel devoted to the economy. The questions raised are the following: “For nearly three months, the war waged by Russia and Putin against Ukraine has changed everything. How can we understand this unprecedented crisis? Between inflation, debt, and planning, what will be its economic consequences? What place will France and Europe have in this new geopolitical contest? In 2022, what does it mean thinking the war?”

This new situation “changes everything”. It could be said that we have passed a point of no return, and that we are experiencing new global tectonics where concrete relationships between continents are at stake, but where we also risk sliding towards a clash of civilizations, certainly not due to a lack of values but due to the failure of realism in the mediation of these very values. But perhaps it is a good thing that we have reached this point of no return because, to be frank, there is nothing glorious about the thirty years that now lie behind us. They were without doubt adventurous years, though we may have sometimes moved through them as mere adventurers.

Why? Because, following the bipolarity of the post-war era, we ventured into the unexplored territory of the globalized technological world while believing that we already knew how this adventure should unfold. It is this hubris that poisoned the adventure. And which, even as the westernization of the world was promoted as being a process as beneficial as it was necessary, prevented us from asking ourselves above all, as Westerners and Europeans, this simple question: which West and which Europe are we talking about?

We thought we already knew everything. Today we are rediscovering this fundamental uncertainty that we thought we had freed ourselves from. Paradoxically, this is even more true for Europe than for the United States because of the way in which the process of European integration was handled. After having been lulled by the idea of an inevitable integration, we are now facing the risk of disintegration – which is not inevitable, as well – but which hints to us that, if we want to preserve “a certain idea of Europe”, we must fight. Against ourselves first and foremost. And since we face a point of no return, we must once again relearn how to forge ahead and how to do so differently than in past decades. What we must know how to think about and achieve are transitions.

In this new situation of war and uncertainty many transitions are at stake. I will focus here on the most pressing. All these are effective, material, and technological transitions, which at the same time require a transition in our way to approach transitions. Indeed, it is not so much a question of planning, but of learning how to govern them, both economically and politically. I will identify three of these transitions, all of which are at the heart of le Grand Continent’s research – I am thinking above all of the articles by Olivier Blanchard and Jean-Pisani-Ferry¹, as well as Pierre Charbonnier² – and which have, in my opinion, crucial reciprocal implications. These are the ecological transition, the geo-energetic transition, and the budgetary and financial transition.

They are concrete transitions, whose aim is to lead us not to an ideal world outside of the technical/technocratic/technological one, but within it, while at the same time relying on the thing that once made Europe “the pearl of the globe”: its ability to reflect on the challenge that modern technology represents. This change represents a challenge to the traditional conceptions of politics and freedom which, despite being noble, are perhaps no longer up to the task of governing the world that technology promises, and sometimes imposes, on us. Especially when we do not make the effort to think it.

We already know how to wage hyper-technological wars, we already know how to militarize the economy, to “weaponize” finance, and even ecology. But are we capable of working towards a peace that is not only dreamed of, but real? This is not just a matter of Europe participating in global competition as a protagonist instead of simply following the herd, but of doing so in such a way that it contributes to civilizing this very competition. This is what a true “European geopolitical awakening” would do, to borrow Luuk van Middelaar’s³ term. We are all –

1. Olivier Blanchard and Jean Pisani-Ferry, “Une politique économique de guerre”, le Grand Continent, April 28, 2022.
2. Pierre Charbonnier, “La naissance de l’écologie de guerre,” Le Grand Continent, March 18, 2022.
3. Luuk van Middelaar, “Le réveil géopolitique de l’Europe,” Le Grand Continent, April 15, 2021.

Europeans, Americans, Asians, Africans – embedded in a technicized/technologized civilization. It is through this perspective that our thinking should be guided.

The ecological transition

The task of decarbonization, which is at the core of the Green Deal, pushes Europe towards a radical redefinition of its energy mix, by giving a central, if not a predominant role, to renewable energies. The problem with these renewable energies, as we know, lies in their intermittent nature; they are generated periodically and not necessarily when needed. Here, technology collides with nature, since we cannot command the sun and the wind. Moreover, the electrical power and the grid only stores this flow to the extent that it maintains voltage. Any surplus relative to usage must therefore be stored somewhere, waiting to be used at some other time. This is a "banking" or, better, a "buffer stock" model, which has been effectively used in traditional renewable energies, such as hydroelectricity, but which needs to be revisited in order to be adapted to wind and photovoltaic power. The solution here is clearly batteries. This is why, where the electrical grid is concerned, the transition to renewable energies implies a dual infrastructure goal at the European level. First is its integration, which would involve ending the segmentation of the European electric market and the efficiency losses it entails, but which will also require massive investments in the grid (estimated at around €375 to €425 billion by 2030). Second, its stabilization, given the structurally intermittent nature of renewable energies, which implies a significant increase in storage capacity. However, here lies the primary problem: a massive shift to renewable energies would mean such an increase in demand for storage equipment in Europe that it could easily cause a supply crisis.

Even if we begin with fairly conservative assumptions about the pace of the transition and consider only the demand for batteries for renewable energy production (i.e., not counting the need for batteries for electric cars), an exercise in approximation for Italy alone (which I carried out with one of my teams, assuming an increase in electricity needs of less than 30% over ten years) gives Italy a cumulative storage need equivalent to the world's battery production in 2021. The same exercise applied to just the Eurozone would result in an increase in potential storage demand equivalent to about eight times current global production. It is therefore obvious that the transition to renewable energies requires investments not only in production but also in the search for more efficient solutions in the storage sector. If this was true before the war, it has now become even more crucial.

The geo-energetic transition

The first transition may seem purely technological,

but the war has revealed another facet which shows its direct impact on very hot geostrategic issues, as Pierre Charbonnier⁴ has illustrated. He quotes the German Minister of Finance, Christian Lindner, defining "renewable energies – which are the silver lining of independence from Russian gas – as the foundation of future freedom". It is up to us to see if and how true this is. Before the war, we counted on natural gas to navigate the transition to decarbonization and renewable energies, without much reliance on nuclear energy. Technically speaking, natural gas would have allowed us to manage periods of peak demand.

Not only is natural gas no longer the solution, it has even become the problem. Olivier Blanchard and Jean Pisani-Ferry⁵ correctly noted that while the petroleum market is global, the natural gas market is regional. In the present tectonics, this dependence not only becomes an obstacle to overcome, but also something which is almost insurmountable in the short-term, a phase we risk being stuck in for as long as we lack a long-term vision. To paraphrase both Keynes and Woody Allen, if the short-term lasts too long, it is in the short-term that "we are all dead".

What is clear is that this new situation is pushing us towards even greater European integration. Without it, no real European positioning vis-à-vis major global actors is imaginable. Energy independence would seem to be a precondition for this greater integration. The International Energy Agency's ten-point plan was a first step, but the only long-term solution – which must begin to be planned now – is a change in the energy mix which will structurally reduce the share of natural gas, and therefore increase the share of renewable energies. The Commission's document, prepared by the Directorate General for Energy and published on 18 May⁶, looks in this direction with the intention of providing a strategic solution at European level.

This solution poses however another problem because, given the state of battery production technology, it risks pushing Europe towards a new geopolitical dependence, this time on China. Far from being the foundation of future freedom, the shift to renewable energies risks becoming a new form of dependence – even a dual dependence. The first is due to the Chinese quasi-monopoly, not so much of lithium, but of rare earth elements; the second is due to its quasi-monopoly of production, based on economies of scale and with a technological advantage that is difficult to breach or even to attain. Given existing supply constraints, an acceleration towards renewable energies at the expense of natural gas would risk putting

4. Pierre Charbonnier, "La naissance de l'écologie de guerre," *Le Grand Continent*, March 18, 2022.

5. Olivier Blanchard and Jean Pisani-Ferry, "Une politique économique de guerre", *le Grand Continent*, April 28, 2022.

6. REPowerEU Plan. See "The RePowerEU Plan," *le Grand Continent*, May 18, 2022.

Europe in double jeopardy. Overcoming this risk makes a common – or at least highly coordinated – industrial policy based on massive investment in research and production even more necessary. This brings me to the third transition.

The budgetary and financial transition

What I have just exposed necessarily involves public industrial policies, public investment, and, finally, coordination. How, then, do we have to plan the transition? Perhaps it is not a question of planning in the traditional sense of the word⁷, which refers to a form of statecraft that is not without risk, both economic and political, but of finding appropriate forms of coordination.

The socialization of investment that Keynes advocated in the 1930s does not necessarily coincide with its nationalization. With this wording, Keynes rather names the political project of placing investment, both public and private, as well as its financing, in a time horizon that tends to structurally exceed the private logic, and thus the self-regulating markets. Indeed, the socialization that Keynes was thinking of is also, and perhaps above all, a socialization of the relationship to time implied by investment and its financing. It is indeed this kind of socialization that we need today because what the “ecological transition” must bring about in a time of war, though with peace in mind, is the whole of society, and without increasing inequalities but rather reducing them.

This is why, in Europe, the question of planning is becoming not only that of reviving the logic that underpins the NextGenerationEU or REPowerEU plans, but also the question of financing these plans, and more generally the financing of public debts, which the new tectonics will only increase. The debate in Europe is therefore open on how to finance the new budgetary expansions, which will be as much national as European.

Let me put it in a way that takes into account both our starting point and our end goal: it is a matter of shifting from a mindset of competition between states to gain access to financial markets, based on the assumption that the efficiency of these markets imposes “discipline” on fiscal policies, to a mindset of cooperation between states in their relationship with markets, one that takes into account the potential irrationality of markets, which can lead to multiple equilibria, dominated by self-fulfilling prophecies. This is indeed the idea behind a European debt agency which was introduced in December 2021 by Mario Draghi and Emmanuel Macron in a letter published in the Financial Times⁸. In this letter they call for new European rules that are more favorable to investments

and mention the proposal of an agency for managing Covid-related debt.

But in an extraordinary situation like the one we find ourselves in, the distinction between normal debt and extraordinary debt may begin to lose its meaning. Since 2019 I have been working with my colleagues on the proposal for a European Debt Agency which would be 1) as non-mutual as it is cooperative, 2) capable of absorbing all the debt of the Eurozone, and 3) able to help the Union's transition to a central fiscal capacity.

I outlined this proposal on the pages of *le Grand Continent*⁹. I will not go into all the details because what is important for me here is to highlight an aspect which is crucial to our discussion: the ability of such an agency to issue a eurobond that can work as a truly European and safe asset. In the present tectonic that we will have to learn to navigate, a European safe asset is a political priority that can hardly be bypassed, both externally, as far as the Union's global standing in the international monetary context is concerned; and internally, if we wish to move away from home biases and build a true European banking union capable of supporting private investment. What is at stake is at once increased political unity and economic efficiency, both conditions which are indispensable if we wish to usher in a new and sustainable era of investment for the transition.

Referring to the ecological transition in a time of war, Pierre Charbonnier wrote that it is a matter of “creating a collective mobilization and a community of interests in European society”. He even suggested “behind the ecology of war, ecological patriotism”¹⁰. I believe rather that the homeland we are all called upon to learn to inhabit is, as contradictory as it may seem, a technological homeland.

We have mentioned several times the anachronism of a 20th century – or even a 19th century – style war in the midst of the 21st century. Of course, we must learn to “rethink war”¹¹. All the more so as there is a risk that this anachronism will extend to the notions of peace and order for which we are “fighting”.

If Europe has a say in escaping this dual anachronism, it is because it also has a say about this contradiction I mentioned: the way in which we in Europe can think about the transition can help everyone to come to a more precise, more accurate and more truthful understanding of the technological world in which we live. That is to say, one in which we must learn to take the risks that are ours.

7. Louis de Catheu and Ruggero Gambacurta-Scopello, “Un État pour la planification écologique”, *le Grand Continent*, May 5, 2022.

8. Mario Draghi and Emmanuel Macron, “The EU's fiscal rules must be reformed”, *The Financial Times*, 23 December 2021.

9. Massimo Amato, “Pour une agence européenne de la dette”, *le Grand Continent*, 21 February 2022.

10. Pierre Charbonnier, “La naissance de l'écologie de guerre”, *le Grand Continent*, March 18, 2022.

11. Etienne Balibar, Anne-Claire Coudray, Elisabeth Roudinesco, Marc Semo, Georges-Henri Soutou, “Penser la guerre dans l'interrègne”, *le Grand Continent*, 26 May 2022.



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Sufficiency in The Time of War Ecology: Individual behaviors and collective dimensions of the transition

In an article published on 18 March 18 2022, which has since been widely cited and commented on, Pierre Charbonnier coined the notion of "war ecology", which "in the context of a military aggression led by an oil state against one of its neighbors for the purpose of imperial consolidation, [consists] in seeing in the turn towards energy sufficiency a peaceful weapon of resilience and autonomy". This "war ecology" is presented as a "new strategic and political matrix", which transforms the reduction of fossil fuel energy consumption – an action that favors the decrease of greenhouse gas emissions (GHG) – into an economic weapon to weaken the military potential of the enemy¹.

In his text, Pierre Charbonnier suggests a continuum between traditional war economics and "war ecology". The former makes economic sanctions an instrument for coercing and weakening the enemy's military potential. The latter constructs a new narrative where geostrategic control of resources and climate policies converge towards sufficiency.

It is then possible to imagine that, in rather unexpected ways, the war could lead to what scientific warnings, diplomatic negotiations, and growing public concern about a changing climate have not managed to achieve: to commit European states to an energy transition that fully integrates a sustainable reduction in consumption, meaning, in fine, sufficiency. If economic sanctions aim to undermine the adversary's "war machine", in the case of Russia's invasion of Ukraine, they also imply a hasty

end to dependence on Russian gas and oil and therefore require Europeans to reorient their energy policies. In the absence of immediate alternatives, this means reducing demand in order to respond to the risks of shortages.

The forced conversion to sufficiency was asked of the French people by encouraging "small gestures" with the goal of "economic and social resilience" in a context of rising energy, fuel, and wheat prices which directly threaten their purchasing power². This has been taken up at the highest level of the state. Consequently, on March 7, 2022, on the morning show of a 24-hour news channel, the Minister of the Economy, Bruno Le Maire, asked the French³ to reduce their energy consumption. The same day, the former president of the Republic, François Hollande, wrote in the newspaper *Le Monde*,

"It will be unavoidable to ask the French to reduce their heating next winter. (...) I am convinced that our compatriots, aware of the threat that Russia poses to peace, and anxious to extend a gesture of friendship to the Ukrainian people whose suffering is heartbreaking, would be ready to make this sacrifice⁴."

These words confirm the shift from the transformation of collective lifestyles to the change of individual behavior. This shift towards the individual, which takes place through rhetoric that employs moral arguments, is neutral neither from the point of view of energy transition policies – and beyond that, climate policies – nor of the equitable distribution of the efforts and costs of transition.

This "war ecology" is certainly not limited to individual action. It nevertheless raises questions about the interaction between the individual and collective dimensions of climate action and the political nature of the moral argument.

Energy transition, the move away from fossil fuels, and sufficiency

Current trajectories to mitigate human-induced climate change are too slow to reach "net zero" by 2050 and contain warming to within 1.5°C or even 2°C. Despite progress, reductions in GHG emissions are on a path that takes us well beyond Paris Agreement targets. Even nationally determined contributions before COP26 will not limit warming to 1.5°C. In order to avoid exceeding 2°C, global emissions would have to decrease immediately and be reduced by a quarter by 2030, whereas they have continued to increase – albeit at a slower pace – over the past decade.

1. Pierre Charbonnier, *La naissance de l'écologie de guerre*, le Grand Continent, March 2022.

2. See the speech by the Prime Minister, Jean Castex, on 16 May 2022.

3. "We will all have to make an effort to build our total energy independence and be much less dependent on fossil fuels".

4. François Hollande, "Pour arrêter Vladimir Poutine, arrêtons de lui acheter du gaz", *le Monde*, March 2022.

The energy sector accounts for about one third of GHG emissions, particularly for private electricity and heating needs. In addition to the extraction/production of raw materials and their transformation, all sectors that emit GHGs (agriculture and land use, industry, buildings, transport) consume energy. The energy transition – meaning the transition from high-carbon energy to zero or low-carbon energy – is therefore a major lever for reducing emissions.

This transition cannot be achieved without a substantial reduction in the use of fossil fuels. All scenarios consistent with achieving climate goals involve "phasing out fossil fuels" for climate reasons. For example, the IPCC indicates that emissions from current fossil fuel infrastructure alone would hit the residual carbon budget for 1.5°C, if used throughout their normal lifetimes. This will therefore require a complete halt to coal use as well as reducing oil use by 60% and natural gas use by 70% by 2050 compared to 2019 levels. Electricity will also have to be almost entirely decarbonized.

At the same time, among the possible mitigation measures, the IPCC has examined the "demand" (consumption) of goods and services that emit GHGs. A "low" demand makes it possible to consider emissions reductions of 40% to 70% in 2050 without reducing human well-being or a decent standard of living⁵. This idea is summarized in the definition of "sufficiency" that the IPCC included in the 3rd part of its 6th assessment report and its summary for decision-makers, despite reluctance⁶.

"Sufficiency policies are a set of measures and daily practices that avoid demand for energy, materials, land and water while delivering human wellbeing for all within planetary boundaries."

While efficiency allows for the reduction of emissions through improvements in technology and equipment, is about long-term actions driven by non technological solutions, which consume less energy in absolute terms.

From the collective to the individual: politicizing "war ecology"

Whether the "voluntary regulation of industrial and domestic consumption patterns" for the purpose of energy sufficiency is done in the name of mitigation (climatic reason), sovereignty (economic reason) or war (geostrategic reason) is of little importance if we consider that the result outweighs the grounds for justification. The narrative conveyed by "war ecology" is nevertheless remarkable in that it immediately shifts from collective – and beyond that, political and international – action to the individual

imperative, or, more precisely, to the individual gesture as an instrument of collective resilience.

The call for sufficiency through "small individual gestures" is certainly not new. In December 1973, in response to the oil crisis, Georges Pompidou was already declaring:

"I and we appeal above all to that virtue, which is said to be a fundamental one in the French people, which is the spirit of thrift. Let us conserve gasoline, let us conserve electricity, let us conserve heating."

In 2022, sufficiency is based on geostrategic (and not simply economic) reasons. Above all, it is not a question of a temporary or isolated reduction in consumption. This "war ecology" requires a rapid revision of European energy policies in which sufficiency is structural and sustainable and no longer merely situational and reversible. Low demand is all the more necessary as it coincides with a structural increase in fossil fuel prices and the upward revision of the European Union's climate objectives.

Moreover, the shift from the collective to the individual for the purposes of social (and economic) resilience is not specific to the energy issue either. We have been seeing this shift for nearly three decades in the field of so-called "natural" disaster risk reduction and in development and adaptation to climate change, coinciding with the progressive adoption of the "resilience" paradigm.

Resilience was first introduced in the social sciences to explain the necessity of reinforcing the power (empowerment) of individuals and local communities considered "vulnerable" in order to increase their ability to cope. However, the consensus around the need for empowerment was thrown into disarray when it came to defining its operational levers. M.-H. Bacqué and C. Biewener⁷ have identified several socio-political uses of empowerment, which today intersect with the different interpretations (and therefore implementation) of resilience. They can be classified with reference to "ideal types"⁸, i.e. abstract and inevitably simplifying categories, which are not always perfectly in line with what we observe, but which give a sufficiently satisfactory account of it: the so-called radical, (socio-)liberal and neo-liberal uses, with regard to the political and ideological references mobilized.

The radical approach situates the individual within collective dimensions and situates agency (meaning the ability to act, influence, transform) and empowerment on the side of reducing inequalities. This approach makes power asymmetries the root of stigmatization and exclusion, which deprive the dominated individuals of resources, rights of access and use, power, and voice, and

5. IPCC, Climate Change 2022: Mitigation of Climate Change, 4 April 2022.

6. Cyril Smit, Interview with Yamina Saheb (GIEC) : "Il y a eu quelques réticences pour mettre le terme de sobriété dans le dernier rapport", Agir pour le climat, May 2022.

7. Bacqué, M. & Biewener, C. (2013). L'empowerment, un nouveau vocabulaire pour parler de participation ? Idées économiques et sociales, 173, 25-32.

8. "Idéaltypes" in French, methodological tool defined by Max Weber.

therefore prevent them from exercising their freedom and their capacity for choice and action. This approach connects – to the point of equating them – power, inequality, redistribution, and justice. It situates the root causes of vulnerability and, beyond that, of limited capacity for action, adaptation, and resilience in the inherited and current social, economic, and political structures. Insecurity, poverty, underdevelopment, inequalities of all kinds, which impede freedom of choice and limit the potential for action, can only be reduced through a plan for "radical" transformation of the established order, which can go as far as challenging the capitalist system.

In contrast, the liberal⁹ approach focuses on individual freedoms, considering them to be the means of increasing well-being, development, reducing vulnerability and/or increasing resilience. For socio-liberals, the defense of these freedoms is linked to collective dimensions. Empowerment is therefore positioned at the community (and not individual) level. Contrary to the radical approach, it is not about changing social structures, but about accompanying individuals and groups so that they can negotiate with the dominant powers as well as possible, in order to increase their access to resources. While the role of socio-economic and political conditions of power is not denied, there is no structural questioning of social inequalities. For neo-liberals (in the French sense of this word), on the other hand, empowerment is purely individual. Resilience is rooted in the development of personal skills, through commitment, self-determination (freedom of choice), taking responsibility and self-organization of individuals. Inequalities are only taken into account when they limit access to opportunities. It is not a question of emancipation or justice as such, but of "managing inequalities" to allow everyone to fully exercise their freedom of choice and action.

The balance between individual and collective actions, freedom, and equality consequently reveals ideological substrates. Sufficiency viewed through the lens of the "small gesture" seems here to be yet another incarnation of "liberal environmentalism" which makes the individual responsible for the resilience of the collective and for better social adaptation.

From collective constraint to individual moral obligation

This ideological substrate is masked in part by the register of legitimization used. Assimilating individual acts of sufficiency with civic acts, solidarity, and patriotism represents, in a more or less conscious way, a moral injunction. By placing the suffering and sacrifice of the Ukrainian people on the same level as lowering the heating "just one degree", the political discourse, adopted by the media, creates an implicitly guilt-inducing narrative

which shifts the focus from constraint (I am doing this because I have no choice) to obligation (I am acting freely and by conviction). This shift is a response to the need to increase "acceptability".

Indeed, the end of fossil fuels entails significant transition costs. Energy savings will have systemic impacts on the energy economy, and beyond that on all stakeholders, with vulnerability proportional to dependence on these raw materials. The possible regressive consequences will be all the more pronounced as households, socio-economic actors, productive sectors, and territories are already weakened by past and current crises, regardless of the transition's many benefits in terms of health, quality of life, pollution reduction, biodiversity, etc. The question then arises of the fair distribution of efforts and support.

If collective constraint gives rise to resistance, moral obligation compels individuals to internalize this constraint so that they voluntarily adhere to it and accept its costs. The problem is that this injunction masks the unequal distribution of emissions, the current and inherited responsibilities of climate inaction, and the structural levers of transition, which go well beyond individual action. In particular, it makes invisible situations of energy insecurity, i.e., situations of forced sufficiency.

According to the French Environment and Energy Management Agency (ADEME), "a person is in a situation of energy insecurity when he or she has particular difficulties in obtaining the energy supply necessary to satisfy his or her basic needs due to the inadequacy of his or her resources or housing conditions". 20% of French households say they suffered from cold for at least 24 hours during the winter of 2020-2021 and 10.5% of French people, or three million households, spent more than 8% of their income on their home's energy bill, even though they are among the most modest incomes¹⁰. Added to this are other indicators (summertime discomfort, mobility expenses, health, etc.) which confirm that energy precariousness is likely to increase as energy costs rise.

At the same time, the inequality of emissions within a country is very high. According to the IPCC, in 2019, consumption by the 50% of households with the lowest incomes accounted for only 13-15% of global GHG emissions, while the 40% with middle incomes accounted for 40-53%, and the top 10% for 34-45%. Nearly half of all emissions are due to 1/10th of the world's population, and only 1/100th of the population (77 million people) are responsible for 50% more emissions than the bottom half of the population (3.8 billion people). In France, the poorest 50% would have to reduce their carbon footprint by 4% compared to 81% for the richest 10%^{11,12}.

10. Energy Poverty monitored by ONPE within ADEME, 29 March 2022.

11. See Lucas Chancel, Qui pollue vraiment ? 10 points sur les inégalités et la politique climatique, le Grand Continent, 8 June 2022.

12. Sustainability! Coordinate and plan public action, France Stratégie, June

9. In the French sense of this word.

In other words, those with the highest incomes have, on average, the highest levels of emissions – and therefore the greatest potential for reduction, as investors, consumers, influencers or professionals. At the same time, economic constraint (higher cost of heating and electricity for households) has little impact on their purchasing power, and thus, little effect on curbing their demand.

It is important to remember that above all, it is the energy planning choices of the last thirty years in France and Europe that have created dependence on Russian hydrocarbons. The cumulative delays in phasing out fossil fuels have sustained a non-decarbonized mix, which today poses a major risk to energy supply and thus to meeting demand. The IPCC points out that currently, worldwide, subsidies for fossil fuels are about twice as high as subsidies for renewable energies. Valerie Masson-Delmotte, co-chair of Working Group 1 of the IPCC, points out the "lack of responsibility for emissions from international maritime and air transport, with a lack of targets and implementation mechanisms".

Consequently, the injunction towards sufficiency, which redefines the desirable in the name of morality in order to make sufficiency acceptable, is nothing more than a transfer of the costs of climate inaction and past socio-technical choices to individuals, without taking into account the equitable distribution of efforts, and thus the fairness of the transition. To paraphrase R. Felli¹³, in the name of collective resilience, embodied in the ideals of the nation, of Europe, of the democratic camp, individuals are called upon to accept the effort to be made and to "re-internalize the responsibility for their own situation", rather than placing it on "the world around them and the social relationships in which they are caught", in other words, on the structural causes of climate inaction and of the accumulated delay in energy transition policies.

Overcoming collective opposition vs. individual: a reading through the lens of capabilities

If individual behavioral changes are an essential lever for mitigation, they must be agreed to by individuals and each individual must have the resources (internal and external), means, and opportunities to go from the desire to change to real change. This link between individual action and collective structures to make change possible and effective was developed, in particular by A. Sen¹⁴ and M. Nussbaum¹⁵, and is known as the "capability" approach.

The term "capability" is used in the social sciences to describe the conditions and mechanisms that allow an individual to choose, to be, and to accomplish what he or she considers desirable. In engineering science, the term refers to the ability of a machine or process to produce a desired performance; it describes the gap between desired and actual performance. Likewise, the capability of an individual allows us to understand the difference between what the individual wishes to be or to accomplish, and his actual possibilities of being or acting. An individual's capability is not just his capacity to act, but his capacity to convert his skills, his resources, what he is endowed with, into the freedom to choose and to do. To put it simply, it is his capacity to be capable.

"Capability" is at times descriptive (for example, according to Éric Monnet¹⁶ "poverty is a deprivation of basic capabilities"), and at times normative, when, according to A. Sen, the equality of basic capabilities becomes the "new foundation for principles of equality and justice". In any case, it allows individual action to be reintegrated into its collective dimensions, without denying the individual's freedom of self-determination and commitment.

The capability approach begins with an empirical observation. Individuals do not have the same degree of freedom when it comes to determining the life they want to lead and actually fulfilling who they want to be and what they want to do. The same act, the same behavior, the same decision, can be chosen or imposed, because individuals do not have equal freedom to decide, to act and to realize their wishes. The true possibilities for action – and a fortiori for choice – result from the singular combination of resources that can be mobilized, both internal (qualities, skills) and external (means, capital), and the favorable conditions (social, legal, economic, political) for achieving them.

The freedom and capacity to convert what we want into real action depends on who we are (individual characteristics, such as age, gender, health status), the resources we have at our disposal (e.g., economic, social, family and cultural capital) and the socio-political contexts in which we develop. While it has been established that the inequalities that arise from who we are restrict the range of possibilities (options and opportunities), equality of means is not enough for everyone to be free to be and to act according to his or her desires. Two people may have equal access to similar resources (economic, familial, socio-cultural) that will allow them to compensate for the disparities linked to their individual characteristics. But even so, they will not have the same capabilities depending on the society in which they live. For example, their aspirations will be shaped by social interactions that will influence their values, i.e. what they consider desirable

2022 p. 53.

13. Felli, R. (2014). Adaptation et résilience: critique de la nouvelle éthique de la politique environnementale internationale. *Éthique publique. Revue internationale d'éthique sociétale et gouvernementale*, 16(1).

14. Development as Freedom, Amartya Sen, 1999.

15. Creating Capabilities The Human Development Approach, Martha C. Nussbaum.

16. Éric Monnet, "La théorie des « capacités » d'Amartya Sen face au problème du relativisme", *Tracés. Revue de Sciences humaines*, 2007.

and feasible. Social organizations will guarantee (or not) their right to access and use certain resources which may (or may not) give them the opportunity to do so. The absence of economic opportunities, the shortcomings of the authorities or of public services in health, education and transport, discrimination and corruption are all collective dimensions that reduce the capabilities of people.

Applied to wartime ecology, the capability approach brings to light the conditions of implementation, of acceptability, as well as of obstacles to sufficiency. The difference between precariousness, forced reduction of consumption and freely consented "low demand" corresponds to unequal capabilities. In the first two cases, sufficiency is imposed, in the third, it is chosen and effectively implemented.

To avoid the French "yellow vest" effect, it is necessary to identify the factors that will make sufficiency not only "desirable" but convert it into action. In the case of the "yellow vests", the uniform application of the carbon tax did not take into account the unequal capabilities of households. Beyond individual dimensions (values, level of trust in institutions, sense of economic decline), place of residence played a fundamental role. Increased travel speed has allowed for the disconnect between places of residence and work which has created dependency on the private car. This dependency has been compounded by the absence of policies to expand public transport and to invest in railways and low-carbon alternatives to gasoline and diesel. The cost of property in the cities, combined with the ideal of the single-family home, has fueled urban and suburban sprawl which further increases dependence on private cars because of the distances involved in accessing jobs and services, even as access to public services, shops, and leisure and social spaces has been reduced in some areas. With no alternatives to the private car, households in suburban and rural areas had no choice but to bear the increase in fuel prices caused by the carbon tax.

The shift away from fossil fuels and the control of energy demand can only be accepted if all dimensions, both individual and collective, which allow the need to reduce consumption to be converted into desirable and effective sufficiency, and therefore to increase capabilities, are taken into account. Sufficiency must be chosen and not imposed, or even simply "accepted", otherwise there is a risk of a massive rebound effect if constraints are relaxed. In order to achieve this we must propose a new narrative that makes sufficiency desirable (action on values), by moving away from the moral injunction and no longer associating it with a "punitive ecology". The decrease in individual consumption must be supported by structural changes in all emitting sectors, with simultaneous actions to increase efficiency and the availability of low or zero-carbon alternatives. Equitable socio-economic assis-

tance to stakeholders, particularly in terms of support for purchasing power, employment and displaced workers, is essential. As the IPCC reminds us, "all low demand scenarios combine socio-cultural, infrastructural and technological changes". Sufficiency is always combined with other emission reduction levers (rapid deployment of renewables, capture, electrification, reuse and recycling, etc.), which will increase individual capabilities, and thus the shift from willingness to change to real change.

Conclusion

It is scientifically established that the further we go from +1.5°C of warming, the further ecosystems will be pushed to the limit of their adaptive capacities, with retroactive negative effects on human beings. It is also scientifically established that the level of warming is a "hard limit" to the adaptation of human societies with societal tipping points, at least at local levels. Putting the 1.5° threshold on the climate agenda is "to acknowledge the fact that the collective objective is not only to avoid an ungovernable climate, but to avoid impacts on the most vulnerable ecosystems and populations"¹⁷, or, to put it another way, to refuse to allow certain territories to become uninhabitable and their populations to be, at best, displaced, at worst, sacrificed. Morality and ethics are thus inseparable from geopolitical and scientific considerations. It is not, however, in this perspective that the moral register is invoked by "wartime ecology".

The last point is not just an opportunistic narrative of energy sufficiency, which makes climate action dependent on the war effort to make it more acceptable. Moderation of demand is a reactive adjustment to rising prices as well as the risks of shortages and their ensuing consequences – i.e., in fine, to the probable increase in fuel poverty among households. It is also a reactive adjustment to the major disruptions for economic sectors (agriculture, industry, construction) already weakened by the Covid crisis with, once again, multiple, retroactive adverse effects. If there is a moral responsibility, it must be looked for not so much in the refusal of the "ecological gesture of solidarity" as in the incapacity of Europeans to engage in a truly transformational adaptation to the phasing out of fossil fuels. Forced sufficiency is first and foremost the result of collective political choices which, despite scientific – but also economic and geopolitical – warnings, have had as a consequence the weakening of the geopolitical, energetic, and economic sovereignty of European democracies by locking in GHG emissions on a long-term basis.

By untangling the complexities of the individual, social, and macro-structural dimensions of the climate transition, the filter of capability allows us to move beyond

17. Christophe Buffet, "1,5 °C, un objectif irréaliste ?", *The Conversation*, december 2015.

sterile opposition between the individual and the collective. Whether for geostrategic or climatic reasons, the end of dependence on fossil fuels requires international, European, and national policies as well as corporate strategies that go well beyond everyday behavior.

The climate transition and the inevitable transition away from fossil fuels would therefore benefit from being based on extending capabilities which would make sufficiency a choice, and therefore acceptable, regardless of the individual effort that inaction necessarily increases. The latest report by France Stratégie stresses the fact that "basing a narrative of sustainability on the idea that 'there is no possible alternative' would be detrimental", because it would feed "the feeling of disenchantment, of democratic impotence" and "citizen disengagement".

Without anticipation and preparation, our governments are doomed to be in constant retreat from crises, which only highlight existing vulnerabilities, while at the same time aggravating them. Climate inaction structurally and sustainably reduces capabilities.

The impacts of a changing climate and the delay in implementing mitigation – and now adaptation – policies are continually reducing collective room for maneuver and with it, the room for individual freedom, and therefore their capabilities, at the risk of permanently undermining our democracies and the fulfillment of climate objectives.

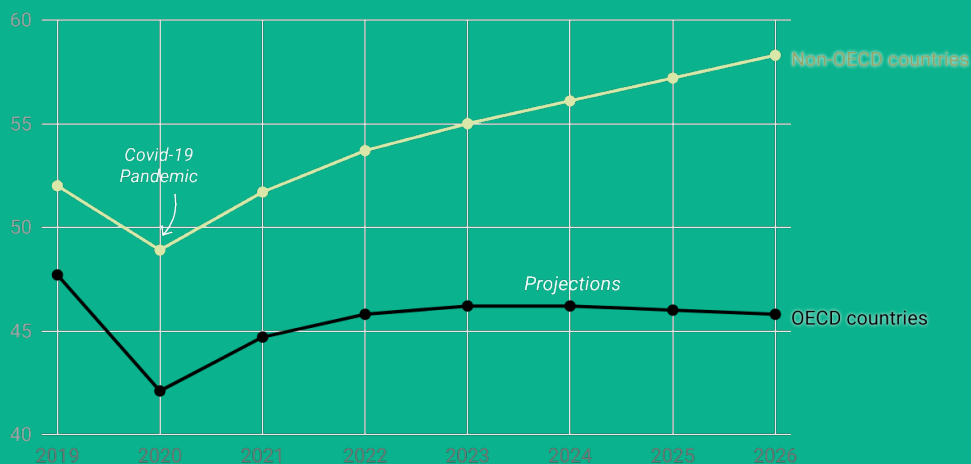
TABLE B. MEASURES ANNOUNCED BY THE MEMBER STATES' GOVERNMENTS TO ENCOURAGE THE REDUCTION OF ENERGY CONSUMPTION OF BUSINESSES AND HOUSEHOLDS

Country	Public awareness campaigns for energy sufficiency	Measures to limit the use of cooling and heating in businesses and commercial facilities	Measures to limit the use of street lighting	Implementation of an energy audit system to limit the energy consumption of enterprises
Germany	X	X	X	X
Austria	X	—	X	X
Belgium	X	—	—	—
Bulgaria	—	—	—	—
Cyprus	—	—	—	—
Croatia	X	—	—	—
Denmark	X	—	—	—
Spain	X	X	X	—
Estonia	—	—	—	—
Finland	X	—	—	—
France	X	X	X	X
Greece	X	X	—	—
Hungary	—	—	—	—
Ireland	X	—	—	—
Italy	X	X	X	—
Latvia	—	—	—	—
Lithuania	—	—	—	—
Luxembourg	X	X	—	—
Malta	X	X	X	—
Netherlands	X	—	X	—
Poland	—	—	—	—
Portugal	X	X	—	—
Czech Rep.	X	—	—	—
Romania	X	—	—	—
Slovenia	X	X	—	—

Table b • Groupe d'études géopolitiques

The New Energy Order

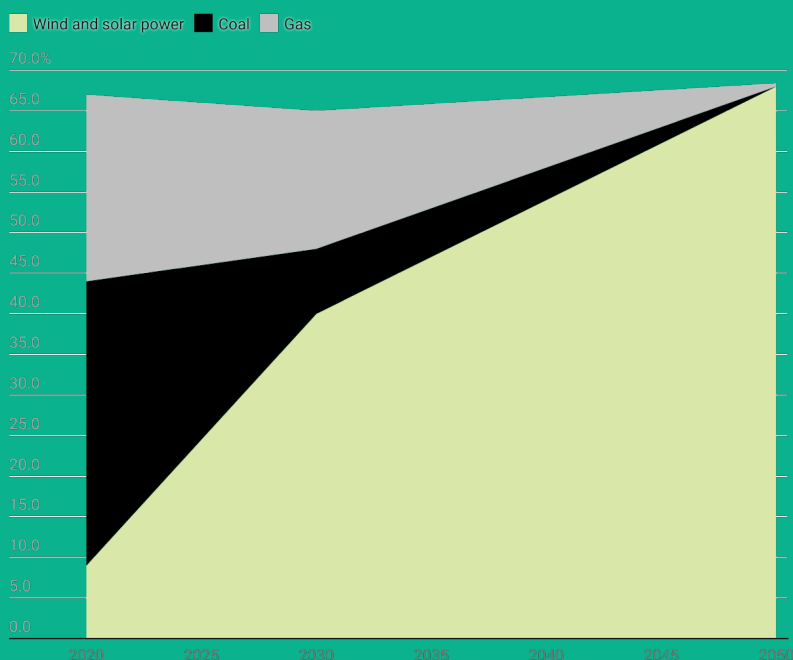
Projections of global oil demand in millions of barrels per day



j • Groupe d'études géopolitiques, Source: International Energy Agency

k • Groupe d'études géopolitiques, Source: International Energy Agency. Figures are expressed as a percentage.

Main components of the energy mix in the International Energy Agency's Net Zero by 2050 Scenario



The war in Ukraine is accelerating the energy transition from a system based on fossil fuels to one centred on electricity, with implications at global level. In the new energy order, power lies in the control of rare metals and minerals and the mastery of technologies.

k.

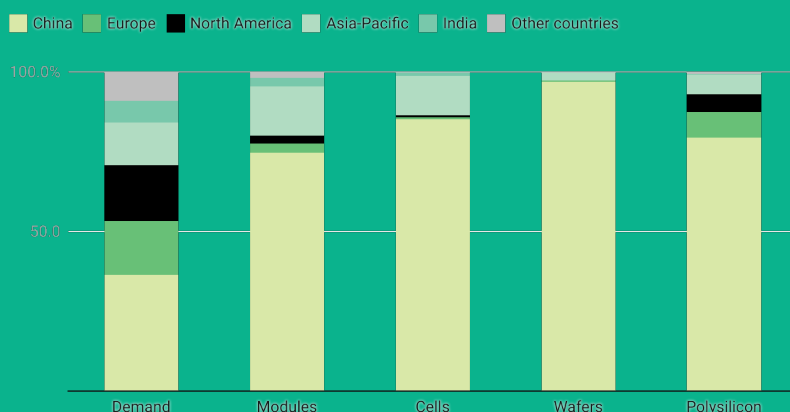
Comparison of the operating cost for fossil fuels versus the operating cost of PV commissioned projects (2022)



According to the United Nations, 70 countries have set a net zero emissions target. The European Union aims to be climate neutral by 2050 and to reduce net greenhouse gas emissions by at least 55% by 2030.

67

Solar PV manufacturing capacity by country and region, 2021

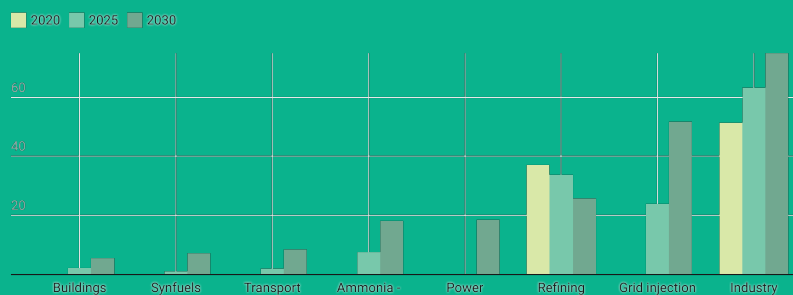


m • Figure: Groupe d'études géopolitiques, Source: International Energy Agency. China's share in all stages of solar panel manufacturing now exceeds 80%.

Projected global hydrogen demand by sector, in million tonnes per year

l • Groupe d'études géopolitiques, Source: International Renewable Energy Agency, data expressed in dollars / MWh

n • Groupe d'études géopolitiques, Source: International Energy Agency, data expressed in million tonnes per year



n.

An aerial photograph showing the wreckage of a tank, likely a Soviet T-72, lying in a dense forest. The tank's turret is visible in the upper right, and its main gun barrel extends towards the bottom left. The surrounding area is covered with green foliage, fallen branches, and various pieces of debris, including several green plastic crates scattered around the wreckage. A large, white, stylized number '03' is superimposed over the center of the image.

03

Political Configurations in the Age of Fossil Wars

Thinking the new
strategic matrix
of the 2020s

◀ A destroyed Russian tank on a tree line, used to attack traffic on a nearby highway, in Malaya Rohan, Ukraine, Wednesday, May 18, 2022.

© Ken Cedeno/UPI Photo via Newscom



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Po Paris.

The Birth of War Ecology

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The shock of the first few days has, as always, given way to the ordinary horror of bombardments and refugees of war. The furious pace of the first attacks will be followed by the slower and less spectacular pace of negotiations and compromises. As many predict, peace will be bitter for Ukraine, given that the conditions laid out by the Russian regime for a cease-fire and accord are so severe and the military commitment of Europe and the United States unlikely.

Amidst the uncertainties that war brings, Vladimir Putin's launching of an open conflict on Russia's western front has nonetheless exposed an obvious fault line.

In response to Russia's military and territorial aggression – which seems rather backwards to Western minds shaped by Kantian pacifism and the idea of war's historical obsolescence – Europe and the United States have responded with economic sanctions. Initially selective in nature and targeting the famous Russian “oligarchs” and the Kremlin's power structures, the sanctions soon were expanded to Russia's entire economic and financial structure at the risk of weakening the population rather than its government. In a context where nuclear deterrence is once again relevant and prevents the deployment of troops, we are witnessing an asymmetric war in which the means invested by the opposing sides are completely unequal. In response to the shelling and the deployment of troops, to military strategy and the direct occupation of territory in areas adjacent to the direct battle, there is a coordinated effort to disconnect Russia from the international trade and financial system.

As Nicholas Mulder demonstrated in a recent and timely book¹, the invention of economic sanctions dates

from the interwar period and pacifist institutions like the League of Nations and grew directly out of the desire to avoid the use of force in resolving international conflicts. If international law was intended to guarantee peace by making wars of aggression illegal, it was accompanied by the possibility of adapting business law and access to financial institutions to penalize states demonstrating warmongering tendencies. This mechanism can be viewed as a way of replacing direct confrontation with a less violent form of coercion, based on the liberal and internationalist ideal of eliminating violence, but also as an insidious means of geopolitically exploiting the rules of international capitalism. Moreover, economic sanctions can inflict very real violence, particularly against civilian populations exposed to the deterioration of their material conditions of existence, which can go so far as to cause famine. The economic weapon thus deserves its name and, in a subversion of Clausewitz's famous maxim, it is indeed an extension of war by other means, though within the framework of a desire to humanize conflict that is specific to liberal democracies and their contradictions².

Ecology, a weapon of war

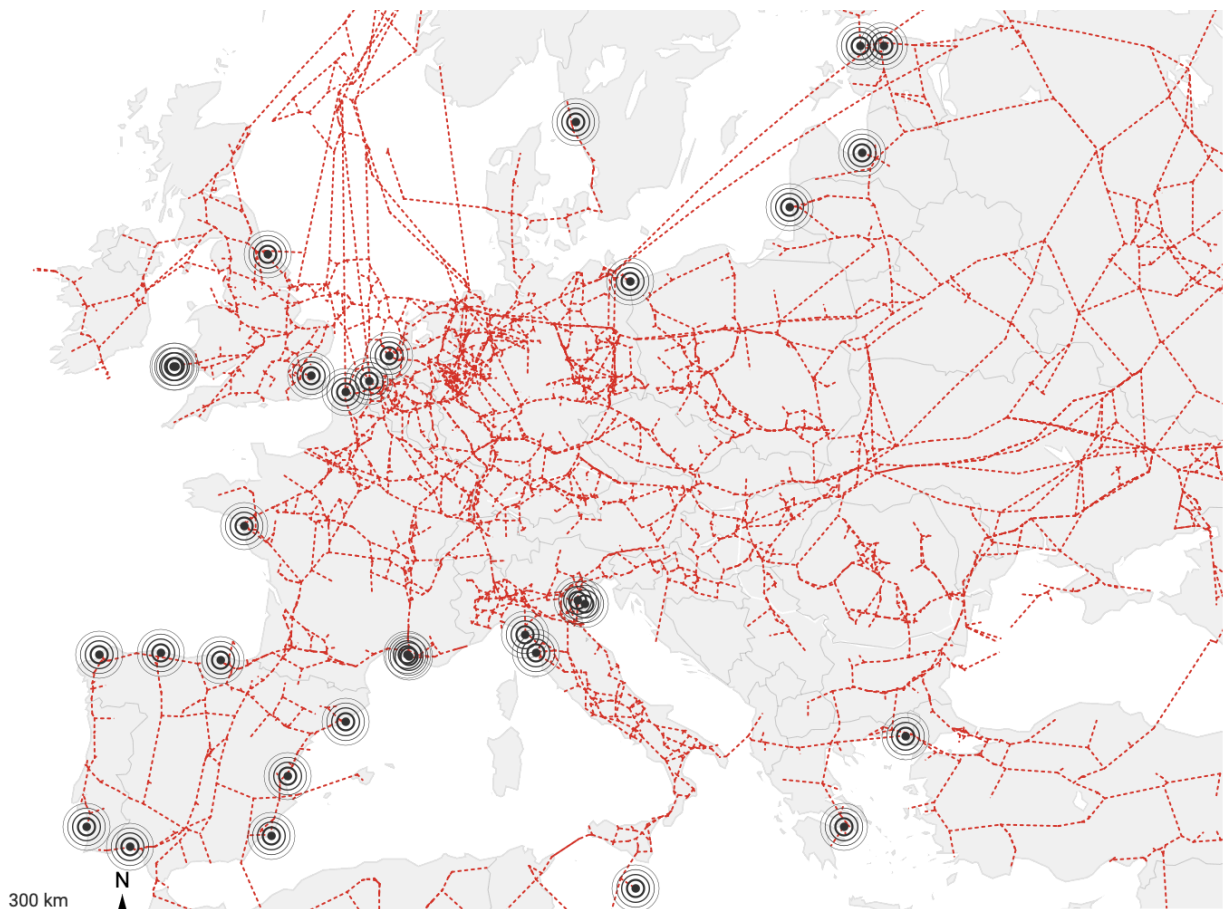
It is still impossible to predict the consequences of the economic sanctions imposed on Russia. Above all, it is impossible to predict their indirect effects on the energy and food supplies of countries that purchase from them, as Russia is a key extractive player in the raw material economy. But this asymmetrical confrontation has already opened up space for a new discourse of ideological and economic mobilization among European nations and the United States, which can be called war ecology.

War ecology, in the context of military aggression carried out by a petrostate against one of its neighbors for the purpose of imperial consolidation, consists of seeing the turn towards energy sufficiency as “a peaceful weapon of resilience and autonomy”³. The underlying principle is simple: Europe's energy dependence on Russia, particularly in terms of oil and gas supplies, implies indirectly financing the military effort led by Vladimir Putin, and is therefore involuntarily complicit in the war. Yet if the economic sanctions imposed on Russia were intended to immediately strangle the regime and provoke its downfall – with a very uncertain success –, the transition to energy sufficiency makes more sense in an intermediate time frame. It means a complete break with this toxic dependence, both in terms of geostrategy and climate policy. Within the context of Europe's emerging war ecology, sufficiency makes it possible to kill two birds with one stone by aligning the need to coerce the Russian regime with the need to reduce greenhouse gas emissions.

1. Nicholas Mulder, *The Economic Weapon. The Rise of Sanctions as a Tool of Modern War*, Yale University Press, 2022, 448p.

2. Samuel Moyn, *Humane: How the United States Abandoned Peace and Reinvented War*, Farrar, Straus and Giroux, 2021, 416p.

3. I am borrowing this expression from Thierry Salomon, an engineer specialized in energy policies.



• European gas transport network. The dots represent LNG terminals. Source: SciGRID_gas IGGIELGNC-2.

In other words, the “economic weapon” can be broken down into a first phase – meant to affect the immediate financing of Russia’s war machine – and a second, more structural phase – meant to target the very basis of this oil and gas state’s political economy – while at the same time giving new momentum to Europe’s energy reorientation plans. In this second phase, the principles of political ecology are not simply adjusted to wartime, they are redefined and made subordinate to the imperative of carrying out war and integrated into a strategy of confrontation in which the enemy is at once the source of geopolitical destabilization and the holder of the toxic resource. War ecology therefore emerges as the historical heir and ideological successor of the war economy.

From a theoretical point of view, the birth of war ecology reflects a deeper shift of the discourse on sovereignty in the nations and regions which, historically, have received a significant portion of their subsistence from imports. Indeed, Europe has long dealt with being energy dependent, whether on the United States, the Middle East, or Russia, so long as it was compatible with a focus on higher value-added activities, and so long as the prospect of peace and geopolitical stability mitigated so-called “strategic” imperatives. As the Covid crisis has already suggested, sovereignty in the 21st century can no longer

continue in the essentially abstract form it has taken in recent decades; in a context where Europe increasingly sees itself as a fortress under siege, the need to control resources is more and more pressing. In claiming the status of a world power, Europe is coming up against the material conditions of power – known to all but whose consequences have generally been deferred.

The war ecology mechanism is a resounding success. In France it has been championed by the Minister for Economy and Finance, Bruno Le Maire, in a call for households to exercise restraint, as well as in an op-ed published by former President François Hollande⁴. Also in France, Yannick Jadot, the Green Party candidate for the presidential elections, continues to repeat that current circumstances only confirm the platform his party has always promoted. The former British Secretary of State for Energy and Industrial Strategy, Kwasi Kwarteng, frames war ecology differently, stating that the “net zero” strategy and climate policies are now integrated into the broader framework of national security principles. American President Joe Biden has adopted similar rhetoric, while German Finance Minister Christian Lindner describes renewable energies – the upside of independence from Russian gas – as the foundation of future freedom⁵.

4. François Hollande, « Pour arrêter Vladimir Poutine, arrêtons de lui acheter du gaz », *Le Monde*, 7 March 2022.

5. <https://twitter.com/ZiaWeise/status/1497896784378671106?s=20&t=jY-4vkyPVd6DauvL8oumiTA>.

In the first days of March, the International Energy Agency – whose founding mission is not at all to create the material conditions of perpetual peace – published a ten-point plan aimed at reducing the Union's dependence on Russian gas⁶. Beyond the market mechanisms that contribute to increasing the price of energy in general – at the pump and in electrical outlets – we are moving towards the voluntary regulation of industrial and domestic consumption patterns, which is a legitimate regulation in the context of civic mobilization in the name of peace, stability, and autonomy.

The era of fossil fuel wars

The timing was apt when Ukrainian representative to the IPCC, Svitlana Krakovska stated, "this is a fossil fuel war"⁷, directly linking the military aggression against her country and the long-term, systemic threats that climate change poses to human society. In the context of a scientific and diplomatic institution created under the authority of the United Nations to represent the universal mission of science and the trans-ideological value of preserving the planet, this statement thrusts the climate issue into a new space of questioning.

To all these institutional plans and statements is added a flood of cultural messages that, under the guise of supporting the Ukrainian people, recommend turning down the heat, putting on a sweater, and riding a bike instead of taking the car⁸.

We know to what extent the history of ecological policy is linked to that of pacifism, the fight against the race for power, for arms, and the desire to undermine the foundational dynamics of material excess of all kinds. In 1977, Amory Lovins was already envisioning that what he called the "soft energy path" would be a guarantee of international stability. Yet this counterculture itself seems to be swept up in the rationale of war ecology at a time when the fight against Putin's regime appears to be a just and justifiable war – especially if it is carried out through peaceful and co-beneficial means.

In the maelstrom of immediate reactions to the war in Ukraine, we also find the counter expression of these benevolent feelings of solidarity. From the earliest days of the war, some international finance actors demanded that arms investments be recognized as part of social and environmental "impact" finance. The underlying logic is both unforgiving and cynical: if the common objective of liberal democracies is to guarantee the security of populations against Russian military aggression, then arms are

a vector of democratic stability on par with the decarbonization of the economy⁹. Kenneth Rogoff, Professor of Economics at Harvard, explains that the peace dividend – the idea that the world economy and prosperity benefit from peace – risks becoming obsolete if the famous "liberal values" are not protected by a robust system in which sustainable growth and the defense industry are seen as two complementary pillars¹⁰. This argument has the merit of pushing the logic of war ecology to its limits: if defending democracy relies on total mobilization against Putin's Russia, and if this mobilization is backed by energy sufficiency and the ability to not yield in a showdown, then the spheres of influence linked to renewable energies and arms have shared interests and values. This lends a whole new dimension to the English expression "climate hawk".

The examples of adherence to war ecology are endless. For the most part, they come from the liberal establishment and ecologists; it brings together former political rivals and harnesses the expertise of energy economists and engineers in charge of planning the reorganization of supply chains. In this sense, it is a structural phenomenon which reshapes the landscape of national and international political alliances, making it possible to express pre-existing concerns with new language – for the proponents of sufficiency – or, conversely, to understand the social value of environmental aspirations in a new strategic realism. These matters were discussed at the European summit in Versailles on March 10th and 11th, 2022, and there is an understanding that engineering a coordinated break from dependence on Russia will be an extremely powerful rallying point for various national interests within the European space and will activate aid mechanisms and the transfer of funds to countries most affected by this dependence, such as Bulgaria, which is 100% dependent on Russian gas.

As several commentators have noted, we are perhaps witnessing "Europe's geopolitical awakening" and an acceleration of the European construction process driven by the shocks of war. And even if we view this kind of statement from a distance, or even with skepticism, it is true that Europe is rediscovering the historical and political context that laid its foundations: the ordeal of war spurs economic and ideological compromise that places the quest for peace at its core through new production and distribution mechanisms.

One of the images circulating today to popularize war ecology explicitly references the fight against totalitarianism and fascism¹¹.

6. IEA, A 10-Point Plan to Reduce the European Union's Reliance on Russian Natural Gas, March 2022.

7. Olivier Milman, 'This is a fossil fuel war': Ukraine's top climate scientist speaks out, The Guardian, 9 March 2022.

8. See for example: <https://twitter.com/createstreets/status/1500012971317157889?s=20&t=jY4vkyPVd6DauVL8oumITa>.

9. Jeff Sommer, Russia's War Prompts a Pitch for 'Socially Responsible' Military Stocks, The New York Times, 4 March 2022.

10. Kenneth Rogoff, Is the Peace Dividend Over?, Project Syndicate, 2 March 2022.

11. See for example: https://twitter.com/no_face/status/1497023409926156292?s=20&t=jY4vkyPVd6DauVL8oumITa.

This reinterpretation of a propaganda image from the Second World War, promoting the limiting fuel consumption to benefit the liberating army against Nazism, leads back to the historical link between energy policies and war. One of the undeniable structural elements of the modern world order is the equating of political power with control over resources¹². The thirst for territory that traditionally drove military rivalries between nations has gradually been redefined; it is now the direct or indirect conquest of energy – through markets and infrastructure – that is the common thread that runs through the confrontations of geopolitical powers since the second half of the 19th century. This historical thread has not been completely cut, as is evidenced by the desire to quash the Russian war effort by depriving it of its fossil fuel backing. But the historical link between war and energy has undergone a fundamental change in recent days; wars are no longer fought solely for resources in the hope of conquering a territorial or geological *lebensraum*, but through energy policies. Energy is no longer simply a power source that feeds armies and the productive effort, it is also a risk factor that must be overcome. In this interplay between energy-power and energy-disaster, war ecology is a political concept whose future holds great potential.

Obviously, the control of resources is a frequently used coercive instrument. In the case of the economic sanctions against Iran, for example, the diplomatic isolation and economic weakening of a rival country already involves mechanisms that affect energy. During the 1977 oil crisis, massive energy conservation measures were taken, and President Carter poked fun at William James when he announced that energy conservation was ... the moral equivalent of war¹³. But in the present situation, an additional element makes all the difference: the United States, to a very limited extent, and above all Europe, are voluntarily agreeing to an immediate economic sacrifice in the name of a higher good, which is stability, democracy, and ultimately, universal harmony on the Earth we share. It is this element that truly allows us to discuss war ecology, by accepting its parallel with the war economy; an effort is required of civil society in the context of a strategic rivalry, an effort that aims to integrate private behavior and individual choices into a direct contribution to the dynamics of confrontation. Carrying out the war through ecology, in this case through rapid energy sufficiency, makes each one of us a potential actor in the mobilization and involves the responsibility of each of us in the course of events.

The strategic matrix of the 2020s

12. See Timothy Mitchell, *Carbon Democracy*, and more recently Helen Thompson, *Disorder*. For a discussion of recent developments in the energy-power equation, also see our article on "Le tournant réaliste de l'écologie politique" on le Grand Continent.

13. Miller Center, April 18, 1977: Address to the Nation on Energy.

The question is no longer simply to use energy as a means and an end to the confrontation, but to integrate climate policies into a new and grand historical narrative. While the sacrifices called for by environmentalists from both industry and consumers to mitigate the climate shock were usually framed as burdensome, uncertain, and inconvenient, this same effort, now repackaged as a matter of international security, subversion of tyranny, and in some ways patriotism, has suddenly become not only acceptable, but actively sought after.

The decarbonization of the economy has become an opportunity to eliminate the contemporary incarnation of totalitarianism and, by a curious historical reversal, it is no longer energy intensification that makes victory possible, but abstinence that is called upon as a weapon of war.

There are a growing number of studies which cast doubt on the ability of economic sanctions to apply sufficient pressure on the Russian regime to obtain a withdrawal of troops from Ukraine or to trigger an overthrow of Putin¹⁴. It is possible that whatever Russia suffers may fuel a sense of victimization and fan the flames of nationalism, that sanctions may spill over to civilian populations through the disruption of food markets, and even do more harm to Europe itself than the intended target. At the same time, clear thinking is needed to critically examine war ecology at a moment when it seems to be imposing itself as the European Union's geostrategic matrix.

On the one hand, it is obvious that ecological and security interests are now converging, and that we finally have an argument that will mobilize spheres of influence and investment that were previously resistant to the energy transition. If the debate on the security dimension of the climate crisis has been ongoing for several years, the Russia-Ukraine war is a point where these considerations crystallize, and it seems impossible to turn back.

Once again, historical analogies can be made. The creation of the modern welfare state is largely a product of the post-war environment, and if the reinvention of the "warfare state" as a "welfare state" puts the true ambitions behind social protection measures in a somewhat harsh light, we must come to terms with the fact that ideal ends must be achieved through realistic means. The shift towards a decarbonized energy base, or even towards a certain civic culture of energy conservation, could have been achieved through the sheer force of socio-ecological arguments, but history is filled with irony, and perhaps a war will finally give birth to this transition.

On the other hand, it is clear that this is a risky gamble – the wager as great as the reward. If it turns out that the

14. Dominik A. Leusder, *Strangling Russia's Economy Won't End Putin's War — But Could Be Disastrous for Civilians*, Jacobin Mag, 2 March 2022.

culture of self-restraint does not have the intended geopolitical effects, this could diminish the potential for mobilizing climate issues in the future. And if the organization of energy sufficiency in Europe turns out to be chaotic, inefficient, unjust and socially perceived as a burden, war ecology would quickly be considered a new episode in the disastrous history of the European project. For the time being, it is mainly individual responsibility – turning off the lights, riding a bicycle, etc. – and resilience in the face of crises that have been mobilized. There have been no concrete investment plans for new energies and efficiency and no planning strategy has been prepared, meaning that the systemic aspect of these challenges is lagging. If the European energy transition leaves some of the more economically vulnerable parties behind (in particular certain Eastern European countries), it could create new fault lines within the continent. Finally, if this transition is imposed at the international level in the form of structural adjustments and exogenous constraints, as was the case with fiscal austerity, then these fractures could take on a global dimension.

In addition to all this, war ecology must contend with the opposite strategy, promoted by representatives of the fossil fuel coalition. This strategy argues that fossil fuel extraction should be intensified in all parts of the world outside Russia to compensate for the losses caused by a possible boycott and reiterates the fact that it is only by mobilizing energy that the enemy can be defeated. For example, we saw American diplomacy move to restore partnerships with Venezuela, and the European Union's attempt to increase its supply of liquefied natural gas (LNG). To a lesser extent, we are also seeing the erosion of some environmental standards in Europe to make more room for extractive and agricultural activities, again to make sure there is enough regulatory space to compensate for import losses. And in the absence of a true socio-economic strategy for energy conservation, the principle of supply substitution is bound to predominate.

In other words, war ecology's success largely lies in the way that geostrategic and distributive dimensions are structured. As ever, and as Helen Thompson brilliantly reminds in her latest book, geopolitics and class relations cannot be separated.

The energy economy, and in particular fossil fuels, is one of the most powerful intermediaries between these two poles of human justice, which are the regulation of international power relations and the creation of redistributive institutions.

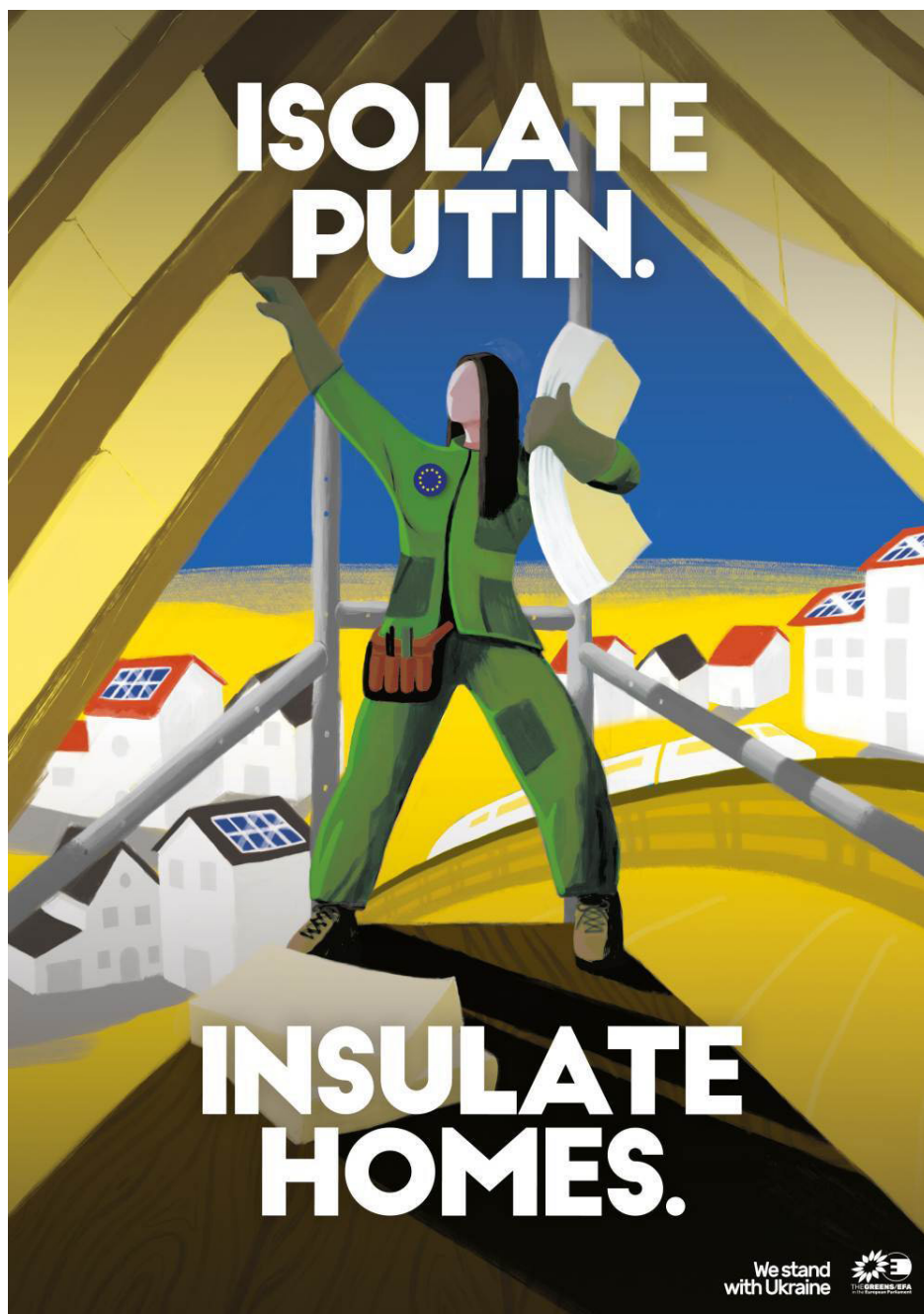
In fact, energy drives both the quest for power and employment opportunities in industrial societies; the price of fossil resources is a defining historical driver of commercial and social relations on a planetary scale. The idea that the climate challenge is shuffling the cards in this arrangement between geopolitics and social justice is already present in people's minds, often in a latent state, often in a purely declarative form, looking to a somewhat abstract future. This connection is now absolutely present. The war is helping to redraw the space of political possibilities. But it is not a blind and impersonal mechanism: for the moment, war ecology is a disparate set of measures and ambitions of circumstances, and whether or not it can be cemented as the backbone of the Europe of the 2020s, depends entirely on our ability to translate it into social policy. This is especially true given that this mechanism is not just about reducing our overall consumption of fossil fuels, but also about creating a collective mobilization and a community of interest in European society around the principles of ecology. This is because behind war ecology, ecological patriotism is taking shape.

It is clearly too early to definitively declare what the consequences of this historic moment will be, but we cannot overstate the importance of the political movements that are coalescing around war ecology. With a bit more distance, it is very clear that the success of this strategy goes hand in hand with the internal threat that Putin's regime poses to Europe. Indeed, Putin seems to be the global champion of an ideology focused on decline, nationalism, and militarization which is entirely uninterested in the climate problem. Putin is only awaiting for Europe's reinvention to fail so as to devour its remains. Stated otherwise, the invention of a development, cooperation and civic construction model that incorporates the planetary imperative into the game of geopolitical rivalries depends on Europe's ability to not fall entirely under the influence of Putin's totalitarian model¹⁵.

15. My thanks go to Magali Reghezza and Stefan Aykut, whose critical review was very beneficial to the text.



▲
Two posters of the campaign "Stand with Ukraine: Let's stop fuelling war!" of the Greens/EFA group in the European Parliament inspired by Pierre Charbonnier's article ("La naissance de l'écologie de guerre", le Grand Continent, 18 March 2022).





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Armed Forces and Climate Change in a Time of High-Intensity: Reflections on Engagement in “Environmental” Operations

Introduction

Russia's invasion of Ukraine has turned a page on confrontation in the 21st century by putting high-intensity conflict between two modern armies back on the table. This prospect of high-intensity conflict is the target of the latest French military programming laws¹ and the operational preparation of armed forces². Beyond combat aspects and their effects on military personnel and civilian populations, the matter of logistics – both material and energy – is also central to this conflict. It is especially on the Russian side in an international context of growing energy consumption by military equipment³, but also because Russian GDP is dependent on its energy exports⁴. At the same time that supply chains and their weaknesses are being widely discussed, European Union states are attempting to extend their economic sanctions to the energy sphere. Environmental discourse with strategic aims has also emerged in the political and media spheres, most notably in the form of arguments favoring energy sufficiency that rest on moral values of solidarity with the state and the Ukrainian population.

1. Law No. 2018-607 of July 13, 2018 on military programming for the years 2019 to 2025.
2. Hearing with General Lecointre before the deputies of the Foreign Affairs Commission, January 19, 2020.
3. This trend can be explained by the race for operational superiority of equipment, and particularly by the increasing use of digital equipment that needs to be supplied, and in some cases the reinforcement of armor. The French military estimates that the new SCORPION armament program will increase military equipment energy consumption by 30%.
4. Russia's energy exports to the European Union represent about 8.5% of its GDP.

This intersection of the ecology and military fields is happening within a double context of evolving use of armed forces by governments in the face of climate change's initial effects and global environmental change⁵ more broadly. On an international scale, this evolution is especially visible in the response by public authorities to environmental disasters which more and more often includes a military response. In 2019, in the largest mobilization since the Second World War, Australia deployed three thousand reservists to help fight dry season wildfires and evacuate civilians⁶. That same year, Russia also mobilized its armed forces to fight wildfires in Siberia⁷ while two thousand troops in the Canadian military were deployed to respond to significant flooding⁸. These environmental disaster response missions are in addition to armed forces increasing their “humanitarian” interventions since the 2000s⁹. Recent military deployments by nearly all NATO and EU states to help manage the Covid-19 health crisis¹⁰ are also part of this dynamic. With interactions between humans and certain animal species facilitated by the extension of human activities and living spaces into areas which have traditionally been ecological niches for wild species, the emergence of new diseases with pandemic potential is considered to be one of the effects of these global environmental changes¹¹. If the response to certain environmental disasters has traditionally been among the missions of armed forces, the increasing number of these environmental missions raises questions about these forces' future role and missions as well as the strategic trade-offs they will make between the various demands made by political powers.

For example, an analysis of French military involvement in missions related to extreme environmental events shows that, although these missions have been a regular occurrence for the past 10 years, their scale has

5. The notion of global change refers to all the effects of human activities on the environment on a global scale, beyond the simple question of climate (they include, for example, the question of biodiversity).
6. Albeck-Ripka, L., I. Kwai, T. Fuller & J. Tarabay (2020), 'It's an Atomic Bomb': Australia Deploys Military as Fires Spread. New York Times.
7. Nechepurenko, I. (2019), Russia Sends Military Planes to Fight Wildfires in Siberia. New York Times.
8. CBC News (2019), 2,000 Military Personnel Supporting Volunteers in Ontario, Quebec, N.B. flood zones. The Canadian Press.
9. Michael VanRooyen, Vincenzo Bollettino, Birthe Anders, The Military in Humanitarian Relief: Towards a New Normal?, Seminar, September 2018, Radcliffe Institute for Advanced Studies, Harvard University; Roland Marchal, "La militarisation de l'humanitaire : l'exemple somalien", Cultures & Conflits [Online], 11, Fall 1993.
10. Florian Opillard, Angélique Palle, and Léa Michelis, "Discourse and Strategic Use of the Military in France and Europe in the COVID-19 Crisis", Tijdschrift Voor Economische En Sociale Geografie 111, no 3 (2020): 239-59.
11. Fabrice Courtin, Philippe Msellati, and Pascal Handschumacher, "La dynamique spatio-temporelle du virus Ebola dans l'espace CEDEAO: Les leçons géographiques d'une catastrophe épidémiologique," Dynamiques environnementales, no. 36 (July 1, 2015): 28-57; Frédéric Keck, "Une sentinelle sanitaire aux frontières du vivant*: Les experts de la grippe aviaire à Hong Kong," Terrain, no. 54 (March 15, 2010): 26-41.; Daniela Curseu et al., "Potential Impact of Climate Change on Pandemic Influenza Risk," in Global Warming: Engineering Solutions, ed. by Ibrahim Dincer et al, Green Energy and Technology (Boston, MA: Springer US, 2010), 643-57.

changed according to political priorities. Small-scale intervention (mobilizing fewer than 400 personnel) therefore has tended to receive fewer resources since 2015 and the launch of Operation Sentinelle, that was developed to counter the terrorist threat and which has around 10,000 personnel permanently mobilized (this number varies according to the periods considered).

The intersection of the ecology and military fields is therefore distinguished by the simultaneous influence of high-intensity logistical needs for accessing resources as well as a political need for intervention in responding to extreme events stemming from climate change. Will it be necessary in the medium-term to balance combat missions – which are currently the primary focus of armed forces – and an increase in missions supporting public authorities in the context of environmental disasters? Armed forces with international projection capabilities are already warning governments about the incompatibility of certain combinations of engagements. This article explores the conditions and consequences of this military involvement in the environmental field by proposing three levels of analysis. The first part examines the international dimension of this engagement and the way in which discourse and military approaches toward climate and environmental security are constructed in international arenas. The second part, focused on a national perspective, addresses the use of armed forces within the national territory in the French case and considers both its practical aspects and the political use made by governments. Finally, the article's third part explores the perception that the population and the military personnel have of these environmental missions.

Discourse And Military Approaches Toward Climate And Environmental Security In International Arenas

If the war in Ukraine has affirmed the interest of armed forces in energy and climate challenges, it is important to remember that environmental and climate conditions are age-old elements of military strategy. Topography, access to vital resources, and even the role of meteorological circumstances in the way battles play out demonstrate the historical links between military actions and environment. Likewise, scientific and military research has been conducted on the use of nature as a weapon, thereby contributing to the development of a catastrophist discourse on the environment. Nevertheless, if military concern about the environment and climate is not new, we can see renewed interest starting with the end of the Cold War in a context that was marked by major organizational reforms of the defense sector and new ecological transition needs. Beginning in the 1980s, and increasing throughout the 1990s, military staff and central administrations gave more thought to environmental matters, particularly in the United States and United Kingdom.

More recently, national military strategies for sustainable development, the development of environmental geostrategy, and attempts to anticipate climate risks attest to increasing awareness of the environment and climate by the defense community.

While the elimination of weapons of mass destruction produced during the Cold War has put the issue of the defense sector's environmental footprint on the table, energy efficiency issues have also contributed to greater military investment in the environmental field. Besides the economic interests for reducing energy costs are added strategic challenges, as heavy losses when transporting and delivering fuel to theaters of operation are prompting military staff to find other resources, particularly through projects focusing on the use of solar energy and insulation¹². We can therefore observe a progressive greening of armed forces as they attempt to reduce their ecological footprint for these economic and strategic reasons – but also to show their commitment to the fight against the ecological and climate crisis. Initial concerns about protecting the environment in the event of armed conflict have therefore transformed into economic, strategic, and symbolic challenges that armed forces can no longer escape.

At the international level, this military approach towards the environment competes with other ways of thinking about climate security. In keeping with Matt McDonald¹³, we can identify three discourses. The first, which we are outlining in this contribution, is based on a national understanding of security and focuses on the impacts of climate change on the sovereignty and territorial integrity of states. This discourse justifies unilateral and military solutions to the climate problem to the detriment of more global, negotiated solutions and gives priority to the protection of national populations to the detriment of global ecosystems. The second discourse views climate security as international and focuses on the effects of climate disruption on the international system as a whole. It justifies negotiated international solutions for increasing efforts to reduce emissions and adapt to the impacts of climate change, with international organizations presented as the most legitimate institutions to coordinate these policies. The third discourse focuses on the notion of human security and the effects of climate change on the well-being of populations. It justifies implementing programs which involve a number of diverse actors (international organizations, states, civil society representatives, businesses) with the goal of reducing the climate vulnerability of certain regions.

12. As an example, the U.S. Army lost 3,246 military personnel in Iraq between 2003 and 2007 in logistical operations consisting mostly of supplying oil (Robert Bateman, Green Machine, *Earth Island Journal*, Vol. 28, No. 3 (Autumn 2013), pp. 23-26).

13. Matt McDonald, *Ecological Security: Climate Change and the Construction of Security*, Cambridge, Cambridge University Press, 2021.

If, for a time, the human security discourse may have dominated international environment and security policies (notably with the concept of environmental security in the 1990s), since the early 2020s we have seen the rise of a national/territorial approach to climate security in international relations. On 13 December 2021, the United Nations Security Council, which since 2007 has organized several debates, both open and closed, on climate and security, tried for the first time to pass a resolution on the need to put in place strategies to prevent conflicts resulting from climate change. Regional security organizations such as NATO or the European Union have also produced strategies whose aim is to anticipate the operational and strategic implications of climate change. In November 2020, the External Action Service of the European Union published its first “Climate Change and Defense” roadmap, which states that “missions and operations will increasingly have to operate in an environment affected or influenced by climate change”. In 2021, in its “Climate Change and Security Action Plan”, NATO asserts that “Climate change is one of the defining challenges of our times. It is a threat multiplier that impacts Allied security, both in the Euro-Atlantic area and in the Alliance’s broader neighbourhood.”

Environmental Missions Within National Territory: Practical Implementation, Policy Implementation

In France, military intervention within the national territory remains strictly regulated by law. Aside from a state of siege or a state of war, which are two extraordinary legal circumstances, the armed forces can only be used for law enforcement missions under very specific conditions, classified as a “state of necessity”, including in the context of the state of health emergency. This state of necessity occurs “when resources available to civil authorities are deemed non-existent, insufficient, unsuitable or unavailable”¹⁴. It is therefore systematically in support of civil resources that those of the military are made available to public authorities, who must also make the request. The decision to declare that the Ministry of the Interior’s resources are non-existent, insufficient, unsuitable, or unavailable results from a dialogue between civil authorities and the armed forces, in what the law describes as “civil-military cooperation”. In fact, the French armed forces are regularly called upon to provide both human and material resources to civil authorities, particularly in the event of natural disasters.

The French armed forces’ action is permanent within the national territory through Operation Héphaïstos (for fighting against forest fires), as well as regular in its assistance to populations affected by natural disasters (such as

Cyclone Xynthia in 2010 and periodically for Cévenol episodes of heavy rainfall). Even if the amount of human and material resources has been decreasing – especially since 2015 due to the transfer of troops to Operation Sentinelle – the majority of these engagements remain multi-year. One is particularly interesting to analyze, specifically the handling of the crisis related to Hurricane Irma in the Antilles in 2017 on the island of Saint-Martin. According to one of the managing officers, the military response to this crisis was “structured as an external operation”¹⁵. Human and material military reinforcements were sent from mainland France, 7,000 soldiers were mobilized, and the armed forces were tasked with “ensuring the continuity of the state” in conditions that were unprecedented within the national territory for a climate event. This military contribution to the fight against extreme climate events is changing the way the armed forces views the environmental issue, if for no other reason than because it is beginning to affect operational capabilities. The American armed forces have even published an analysis of their bases’ exposure to environmental risks related to climate change (US Department of Defense 2019)¹⁶. This document also includes information on disaster support opportunities and associated military training. Since 2016, the French armed forces have carried out the same types of analysis as part of a “Climate Defense” observatory entrusted to the Institute for International and Strategic Relations (IRIS).

This evolution of military approaches to the environmental issue includes a health aspect¹⁷. Keeping in line with one part of the research field on global environmental change¹⁸, the armed forces are beginning to connect these two areas. The French military presence in Africa has further reinforced this connection, and the French Defence Health Service (SSA) is increasingly vigilant about the risk of epidemics among troops serving overseas, for which it is developing specific tools¹⁹. The SSA has played an active role in managing these epidemics on the ground, particularly in 2015 during the Ebola outbreak²⁰. These missions expand the armed forces’ societal role in France. To the armed forces’ combat-specific capabilities – “overseas operations” and protecting the national territory against terrorism – must also be added protecting the population against other types of threats, including environmental threats, which generally takes the form of logistical assistance to civil services. In this context, mili-

14. Secretary General of Defense and National Security, Interministerial Inquiry on the Engagement of the Armed Forces on National Territory when Responding to Requisition from Civil Authority, No. 10100/SGDSN/PSE/PSN/NP, November 14, 2017.

15. Interview with Lieutenant Colonel, Army, 2019.

16. US Department of Defense, Report on Effects of a Changing Climate to the Department of Defense, Janvier 2019.

17. Courtin, F., P. Msellati, & P. Handschumacher (2015) “La dynamique spatio-temporelle du virus Ebola dans l’espace ECOEAO”. *Dynamiques environnementales*, pp. 28-57. <http://dx.doi.org/10.4000/dynenviron.946>.

18. Keck, F. (2010), “Une Sentinelle Sanitaire aux Frontières du Vivant”. *Terrain* 54, 1 January 2014. Available at <https://doi.org/10.4000/terra.in.13928>. Accessed April 7, 2020.

19. Meynard, J.-B. (2008), “Surveillance Épidémiologique en Temps Réel dans les Armées: Concepts, Réalités et Perspectives en France”. *Revue d’Épidémiologie et de Santé Publique* 56, pp. 11-20.

20. Denux, V., et al. (2016), “Le Service de Santé des Armées: Des Savoir-faire Militaires au Service de la Gestion des Crises Sanitaires”. *Médecine* 12, pp. 44-45.

tary intervention within the national territory shows the presence of the state while rebuilding the symbolic and concrete conditions of normality following a disaster, as evidenced by Operation Irma. For its part, Operation Resilience, which was launched on 25 March 2020 to confront the Covid crisis, relied on the dual capital of, on the one hand, the armed forces' regular interventions within the national territory as well as abroad during environmental disasters (Figure 2), and, on the other hand, its technical and medical expertise, which had already been proven, mainly outside the national territory, within a context of epidemiological crisis.

Military Missions With An Environmental Dimension: Perception Of Military Personnel, Perception Of Populations

In the medium-term, will it be necessary to choose between combat missions – which are currently the armed forces' core activity – and an increase in missions to support public authorities in cases of environmental disaster? International armed forces are already warning governments about the incompatible nature of certain combinations of engagement. In the United States, the Military Advisory Board of the Center for Naval Analyses, which brings together senior officials from the American armed forces, anticipates an increase in military engagement within the national territory in response to extreme events stemming from climate change²¹. In 2005, during Hurricane Katrina, contingents from the American armed forces were sent to New Orleans to support the National Guard. These senior American officials nevertheless caution U.S. decision-makers that although they believe that the use of the National Guard and Army Corps of Engineers could occur within national territory without jeopardizing U.S. operations and pre-positioning abroad, a significant mobilization of other Army forces would have consequences for U.S. projection capability.

The French armed forces are anticipating these issues and decisions. Certain situations already suggest this, such as the Irma operation, which was launched at the same time as a unit rotation of Barkhane and rose questions of equipment allocation²². In the words of one army colonel, "In 2017, if there had been no major exterior intervention (which was not the case, as France was engaged in Operation Barkhane in the Sahel), there would have been no capacity problem. Conversely, with many more external interventions during the same period, the contribution would have been even smaller"²³. More recently, the substantial involvement of the Defense Health Service (SSA) in managing the Covid-19 crisis within the national territory to support the civilian health service, while also maintain-

ing support to operational forces, has taken a particularly heavy toll on personnel against a backdrop of troop reductions implemented several years ago by military programming laws²⁴. This over-investment of SSA personnel in the Covid crisis contributed to increased vigilance on leadership's part concerning the state of its personnel, and in particular regarding health care workers' perception of their responsibilities in managing the health crisis. Concerns over eroding "militarism" of personnel, reinforced by increasing difficulties in recruiting health care workers for the public hospital system, have highlighted the potential challenges posed by a growing reliance on the military within the national territory for environmental or health reasons, particularly in the event of parallel involvement in a high-intensity conflict.

The increased presence of armed forces in public spaces since the beginning of Operation Sentinelle in 2015 was reinforced by Operation Résilience in 2020 and a revision towards high-intensity operational readiness. If this continuous mobilization of armed forces has largely contributed to putting the military at the center of the public debate, how does the French population perceive the evolution of military missions? Recent data indicates that, compared to other sovereign bodies, armed forces do not suffer from the lack of institutional trust that affects the French population's relationship to traditional political mediation organizations and the workings of representative democracy, which has become more generalized over the last thirty years²⁵. For instance, the annual political trust survey conducted by CEVIPOF shows that three quarters of the French population (75%) express trust in the military²⁶. In parallel with this data, we can see that environmental concerns are becoming increasingly important among the youngest generations, as they foresee having to face crises in the coming decades²⁷. If only 28% of those aged 65 or older are concerned by the consequences of climate change, that figure stands at 41% of 18-24-year-olds and 44% of 25-34-year-olds. Finally, those surveyed in this study consider environmental reasons as a legitimate reason for military intervention within the national territory. While 84% of the French population supports military intervention for security reasons, the figure is 71% for an environmental crisis, 67% for a health

21. CNA Military Advisory Board, "National Security and the Accelerating Risks of climate change", CNA military advisory board, May 2014.

22. Interview, senior officer, Joint Chiefs of Staff, February 2020. Interview, senior officer, EMSOME, February 2019.

23. Interview, Colonel, Army, 2021.

24. Follow-up on the action of the Armed Forces Health Service during the health crisis Information Report No. 501 (2019-2020) by Mr. Jean-Marie BOCKEL and Ms. Christine PRUNAUD, on behalf of the Committee on Foreign Affairs, Defense, and Armed Forces, filed on June 10, 2020; Interviews, SSA, February to June 2021. This reduction in personnel was halted by the last military programming law, but its effects will be visible for several years.

25. The ANR ARMY project analyzes the military's role in responding to the covid-19 crisis and the public's reaction to it from a comparative perspective (France, Italy, United States, Germany, Switzerland). It conducted a qualitative survey with a panel of 3,000 people who were representative of the French population, which aimed to examine the perception of military intervention by the French during the covid crisis.

26. CEVIPOF Baromètre de Confiance Politique, vague 13, December 2021 - January 2022.

27. Muxel Anne, Opillard Florian and Palle Angélique, "L'armée, les Français et la crise sanitaire. Une enquête inédite", IRSEM study, June 2022, p. 19.

crisis, and only 50% for a social crisis²⁸. With environmental disasters ranking second among legitimate reasons for intervention, they are therefore central to representations of armed forces that are equipped and mandated to assist and rescue populations.

Conclusion. From Responding To Environmental Crises To High-Intensity: Anticipating And Choosing Battles

The Russia-Ukraine conflict has turned a new page on the climate issue by bringing together two major trends for 21st century militaries: the return of high intensity armed conflicts and the integration of armed forces in climate security policies currently being developed on an international scale. These two trends raise questions of political and strategic choices.

Armed forces involvement in responding to climate crises, and the positive perception of populations, position them as important actors in the way societies adapt to climate change. At the same time, faced with disasters where the military is increasingly used as a last resort, and even as the allocated resources to this type of mission have been reduced²⁹, government responses must anticipate prioritizing missions in the event of a high-intensity engagement.

This anticipation has effects on the operational preparedness of forces in terms of training, acquisition and use of equipment, and pre-positioning.

Meanwhile, the threefold imperative to reduce the military's ecological footprint, contribute to environmental crisis management to support civilian authorities, and maintain operational effectiveness against an enemy that may be "on the same level" requires political choices within a very short timeframe that will have long-term effects on a strategic environment that is difficult to anticipate. In fact, weapons programs, which determine the equipment that will be available to armed forces, have a time lag of about 40 years. Recruitment policies, for their part, have a time lag of about fifteen years for certain specialties (e.g., the Defense Health Service). This intersection between the military and ecological spheres makes it particularly difficult to make decisions, since this requires making trade-offs in a highly uncertain context.

28. Ibid., p. 47.

29. Information report No. 501 (2019-2020) by Mr. Jean-Marie BOCKEL and Ms. Christine PRUNAUD, on behalf of the Committee on Foreign Affairs, Defense and Armed Forces, filed on June 10, 2020; Information report No. 702 (2014/2015) on behalf of the Finance Committee on civil security resources, the example of the civil security training and intervention unit No. 7 (UIISC7).



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The Ukrainian War of Independence and the World's borders

82

This text attempts to tie together categories of the imaginary, the real, and the symbolic. This is not easy to do in so little time. The truth is that this is not easy in and of itself, as this would require imagining several points of view that will never be aligned.

Let us begin with the Ukraine war's characteristics as an outbreak of extreme violence. We often hear that the current war has brought back something we believed to be banished, a brutality that had vanished from Europe's horizon since the end of the Second World War. In certain respects this is true, the most significant being the phenomenon of mass population displacement, which is impossible to separate from the fact that, day after day, crimes against humanity are being committed on a massive scale. This is not necessarily the case from the point of view of the nature of violence committed. We have already seen the same, or worse, in the Yugoslav Wars of the 1990s, which our collective consciousness had caged like an imaginary beast, then hurried to forget. On the other hand, it is a way to isolate Europe and Europeans from the world history that they never stopped interfering in, including by being a bringer of war or waging it by proxy. We do not even need to look back to the previous century to see that such violent attacks and massacres have never ceased to occur – occasionally at our doorstep.

The legitimate suspicion towards Eurocentrism cannot obscure the fact that this time, this is about us: Europeans in the historic sense of the word, which obviously includes not only Ukrainians, but also Russians. For the first time since the end of Nazism, we are in a state of general war within our “grand” continent. We are here due to an aggression which absolutely runs against international law, which opens the door to full-scale war and inherently carries the risk of nuclear escalation. It will permanently disrupt the lives and worldview of all

Europeans. We therefore bear full responsibility, both for choosing the categories of analysis as well as for the subsequent conclusions.

The war that President Putin – acting as both autocrat and rogue – has unleashed against the Ukrainian nation by claiming an imminent threat and arguing that Ukraine is a part of a “Russian world” that his nation would be at once the leader and master of, is now a war of complete destruction. It is the destruction of cities and countryside, of resources, monuments, and of course men, women, and children who are abandoned to bombardment and the abuses of soldiers. The resistance that this war has aroused and the heroic commitment of the population and its leaders are containing the invader, even causing him to retreat. Above all, they are giving rise to a nation of true citizens that had still only existed as a potential in an ancient but contradictory historical tradition and in more recent experiences of a chaotic democratization.

If we consider the way the Russian president hammered home his hypothesis that the Ukrainian nation does not exist, and the inconsistency of the Ukrainian people themselves, we could say that for the Ukrainians, this war is their War of Independence. In winning – and they must win – they will emerge from it forever a state. A French person of my generation cannot but think of what happened to the Algerians, all differences duly taken into account. And because this war has as its moral foundation the transcendence of antagonisms the former master thought he could rely on, this independence carries within it the transformation of a simply ethnic or cultural nation into a civic nation. This is consistent with the principles upon which the European Union is built and justifies, on either side, the desire to proceed as quickly as possible with the accession that was previously deemed impossible.

But at this point we must shift our focus and consider the relationship of Ukraine and Europe as it is being reshaped by the war, from a more global, cosmopolitical point of view by progressively lifting our gaze from a local to a more global scale. It seems to me that a common thread that allows us to untangle the complexity of contradictions and power relations can be found in the overlapping of levels and types of borders that intersect in war, or in which war participates. Borders crystalize oppositions and antagonisms; they structure the world. Although we should not make too much of the linguistic fact that the name “Ukraine” originally means “outskirts” or “borderland”, the fact remains that over the centuries the region that bears this name has continuously been a field of confrontation, of divisions of varying violence and of encounters between cultures. Today it is once again the object of confrontation between much larger entities than itself. Yet what strikes me when I attempt to pinpoint their shape and the nature of their boundaries, is that all these

spaces are not only in conflict but deeply asymmetrical.

This is true on a first level, that of “national” borders. They have been continuously challenged by conquest, annexation, partitioning and reunification, not to mention through extermination and deportation, going from the beginning of the modern era to the reconstruction of European nations in the aftermath of the world wars and the fall of communism. What has been playing out in the Donbas since 2014 – and even before then – is a result of social history, of state antagonisms, of cultural and generational affiliations that the war is dramatically altering, but whose future remains uncertain. Depending on which way the front will shift, and whether the country remains relatively habitable and able to be reconstructed, the border will have an entirely different shape and function, though it will nevertheless be completely different from that of France and Germany, for example, because on one side will be a fledgling nation and, on the other, a totalitarian empire in fairly deep crisis. This asymmetry extends to the geopolitical “groups” which the warring parties are part of – or which they form by themselves – and the antagonism which Ukraine also embodies, i.e., at the second level of border lines.

But here we see that things become deeply complicated, not only from the point of view of what we call war as the point of view of what we call border. We must not fool ourselves. The European Union is well and truly at war with Russia: moral and diplomatic war, economic and financial war, military war which is still limited to supplying arms and intelligence and which could spill beyond Ukraine’s borders if Russia seeks to counterattack in other territories. But the EU is not alone, and indeed is less and less independent since the community structure to which initiatives belong, and which the states that feel threatened by Russian imperialism want to join first, is the military alliance dominated by the United States. The longer the war goes on, the more means committed to it increase, the more the United States gives the impression of wanting to move forward the “rollback” program previously theorized by Zbigniew Brzezinski and others by redrawing the dividing line between the “Atlantic” world – whose hegemony the United States ensures – and the “Eurasian” world – made up of the remnants of the USSR. Paradoxically, this mirrors the Russian regime’s rhetoric – which is very Schmittian or Huntingtonian in inspiration – on the confrontation of two worlds, the East and West, whose values are incompatible. Yet here again a deep asymmetry can be observed. The United States is said to be “back” in Europe. The U.S. clearly is not a threat to Europe’s independence or political values, but they will push Europe’s militarization as well as its economic and technological dependence. By contrast, on the Eurasian side, the relationships between Russia and its far-east “back country” seems extraordinarily unstable, regardless of whatever interest the Chinese regime may

have seen in supporting the enemy of its enemy. This is because historically, China has not aimed to establish itself in Europe (except for specifically installing its “Silk Road” terminals there), but above all to build in the “South” – in Africa and Latin America – to create a hegemony to rival that of the United States. In other words, while itself being a *Grossraum* (in the sense of Carl Schmitt), or perhaps for this very reason, China is not looking to share the world. This is why, if for the moment we have an increasingly united bloc consisting of Europe and the United States within the framework of NATO, we do not see on the other side a Chinese-Russian bloc that would engage as such in combat, including its “hybrid” forms of economic and ideological war.

Yet this level is not the final one, and indeed isn’t even the determining factor “*en dernière instance*”. By evoking the North-South division we move to a level which is truly planetary. The argument that I am making here is two-fold, perhaps even very simplistic. First of all, at the planetary level, political spaces are less and less separated or disconnected from each other. This is why, furthermore, the Russia-Ukraine war cannot be considered as a local war. In an age of advanced globalization, all territories, all populations, all technologies are interdependent, and these interdependencies translate into flows which cut cross borders, including borders between friends and enemies. Russian gas and oil continue to flow into Western Europe, and even to Ukraine, in exchange for dollars and euros, despite considerable talk of trying to halt them. We are not there yet. And if Russian and Ukrainian wheat no longer reaches Egypt, Tunisia, or Morocco, it could lead not only to crises or famines in these countries, but also to uprisings and exodus. These countries are not “at war”, but they are “in the war”.

Conversely, the economic sanctions directed towards Russia are indirectly affecting many countries around the world. Besides the fact that these countries do not all have the same historical experience of facing America, European, Russian, or ex-Soviet imperialism, one does not have to search hard for the reason behind the reluctance of public opinion in a large number of countries in the “South” to embark upon a war that is perceived as Western. But I would especially like to stress the following point: once we think in planetary terms, we cannot isolate economic and geopolitical matters from the problem that another kind of border poses. Climate borders are currently being destabilized and displaced due to global temperature rise with great consequence. What good does it do to talk about gas supplies and the reversal of their flow into Europe, or shifting from Nordstream I and II to Mediterranean and Atlantic liquefaction and regasification terminals, if we establish no correlation with the environmental policies that are currently making us lose the battle for 2 degrees of warming by the end of the century? One of the largest climate borders in the

world, which separates regions once occupied by tundra, taiga, and permafrost from the temperate steppes and desert regions, crosses Russia from east to west, and not just along its edges. This border is shifting dramatically. When, each summer, wildfires once again begin to burn in Siberia, the question inevitably arises as to what kind of international aid should be offered to Russia to confront them and, above all, what kind of negotiation is needed with Russia to restart the global energy transition. Which interests should have priority: that of the Ukrainians' freedom – which is non-negotiable –, the ecological interests of Europeans, or that of Earthlings who are increasingly under imminent threat?

Today, once again, although in an unexpected form, the typology of borders, of nations, of war and politics, prove to be intertwined. The nation fighting for its independence and its democratic constitution is facing the strategic dilemma that Raymond Aron, in the conclusion of *Paix et Guerre entre les Nations*, described as the choice between incorporation into the federation or into the empire. But this choice is over-determined by the global clash of imperialisms and the asymmetry of their interests and means.

All these power relations are put into perspective and encompassed in another dynamic structure, a geo-ecological one, which together represent the inequalities of development, the territories of extraction or consumption of carbon energies, and the zones experiencing accelerated collapse of environmental equilibrium.

The longer the war goes on, the more difficult it will be to address it at only the first level, however dramatic it may be, and to ignore the pressure coming from the higher levels. In other words, this is a new kind of local-global war. I believe in the ability of Ukrainian citizens – supported by the commitment and supplies of their Western allies, and morale buoyed by the welcome we have given to their women and children – to contain this aggression and drive back the Russian tanks.

But, perhaps out of methodological pessimism, I also believe that the war, if it does not escalate to extremes and set off a process of mutual destruction, will be long lasting and will be as destructive as it will be barbaric. Yet with time and brutality also comes inexplicable hatred, not only towards governments and regimes, but between peoples, that last generations. Pacifism, as I said as early as March, “is not an option” (interview with *Mediapart*, 7 March 2022). I do not disavow this. But peace is a necessity for the planet, a “perpetual” peace, as Kant called it, meaning a peace whose very nature does not contain the premise of renewed war. Such was, theoretically, the goal of institutions of international law such as the United Nations and the disarmament conventions that have lost all legitimacy and credibility since the end of the Cold War under the pressure of various powers, Vladimir Putin's Russia being the latest. When and how will we take up the matter, consolidating or crossing which borders, forging which alliances and with whom? I cannot say¹.

1. This text is the unedited transcript of Etienne Balibar's keynote speech at the colloquium organized by le Grand Continent at the Sorbonne University on May 17, 2022, “After the invasion of Ukraine, Europe in the interregnum”.



Bruno Latour • Sociologist, anthropologist
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Is Europe's soil changing beneath our feet?

For Déborah

I will begin with a text which will seem unusual: Jean Bollack's translation from the beginning of *Oedipus Rex* when the priest is addressing Oedipus. This translation says:

*"For our city, as you yourself can see,
is badly shaken—she cannot raise her head
above the depths of so much surging death!"*

In re-reading this text I found that it resonated perhaps too well with the distressing situation we are witnessing, in this collection of wars we find ourselves dealing with, and which is reflected in Sophocles' play by the dreadful figure of the plague. Here, the priest is in the position of beggar; but we know right away that very quickly the king, the master, the authority which the priest implores will soon become himself the beggar, chased from the city of Thebes – blind, exiled, and begging for his bread.

In Péguy's outstanding text, "Les Suppliants paralèles", this invocation is repeated by juxtaposing it with the complaint – the plea – the Russian people made to the Tzar after the horrible riots of 1905². Péguy showed that the beggar is not in a position of weakness but, on the contrary, always the master of the one whom he pleads with and whose authority he undermines. It was true of the Tzar as well as Oedipus, who was carried away by the ordeal: "He had entered as a king. He left as a beggar", Péguy wrote. The difficulty is that we have no clear authority or body to implore in order to "raise [our] head above the depths of so much surging death". We must turn to each other, with neither king nor Tzar to plead with. This

is what I understand in today's theme, "*Following the Invasion of Ukraine, Europe in the Interregnum*". There is no authority we can appeal to. We are waiting.

One's situation on a given soil is always linked to an ordeal; it is when there is an ordeal that one is situated somewhere. We often forget that the word 'situation' is related to a form of territorial rootedness because of an ordeal which we undergo, one that surprises and allows us to define differently where we are.

I will give a simple example: For those who were in Rouen in 2019 when the fire at Lubrizol's chemical plant took place, they felt – very suddenly – that they were situated differently in the city, either close to the toxic gasses or not. They anxiously monitored the spread of the gasses to know "where they were". They believed they lived in a city and found themselves transported somewhere else – right in the middle of a high-risk industrial zone. For several weeks, the people of Rouen lived on soil defined in part by the ordeal of this fire. This is very easy to understand.

Today, Indians and Pakistanis, who are dealing with temperatures of nearly 50°C, are tragically situated on soil that they risk having to abandon because of temperatures which are unsurvivable for the human bodies that we are – or at least the bodies of the poor. What happened when tanks marked with the letter 'Z' invaded the Ukrainian border, and what we Europeans came to understand, behind the frontlines, is a *situational ordeal*, an ordeal which defines in different ways the place we find ourselves and what people we form with those who worry and suffer around us. Suddenly, we were no longer in the same space, and this is the rule for any situation as the beginning of *Oedipus Rex* expresses so well. The place where we are and the people that we form are never an abstraction, they are always the result of a shock. Therefore, my argument is simple enough to understand: because of the ordeal imposed on us by the multiple conflicts we are currently experiencing and which is striking the Ukrainians with full force, on what soil do Europeans now stand? Can the present accumulation of crises allow Europe to finally find the soil that suits this great institutional invention and which continues to be presented as being suspended outside of any soil and with no people which belong to it?

I will consider this question from two slightly different points of view, as I am neither a specialist in geopolitics nor in military affairs.

The first difference is that I am interested in Europe not only as an institution, but also as Europe as a territory, as a soil, as a turf, as a land, or, to borrow the German expression, as *Heimat*, with all the difficulties of that term. In other words, when it comes to France, for example, I am always surprised that we easily distinguish between

1. This quote comes from the translation of *Oedipus Rex* done by Ian Johnston of Malaspina University-College, Nanaimo, BC.

2. Charles Péguy *Œuvres complètes en prose*, volume 2, La Pléiade.

criticizing the government – God knows that we don't deny ourselves this! – without this threatening the rather visceral attachment to France as a country. Anyone can criticize the government and nevertheless feel connected to and attached to something which is a space, a territory, a history, a situation that defines for him or her what it is to be French. I am always surprised that this is not the case for Europe. Unfortunately, when we talk about Europe, we only think of Brussels even though Europe is also a soil, a place of belonging, a multitude of connections due to wars, memory, the ordeals of exile and migration, of the various catastrophes that all Europeans have known. And so, I am always interested in this essential connection between these two aspects of the same situation. If I use the word "soil" it is because it allows me to expand upon the connotations that stem from a term sometimes used in rather reactionary literature – soil as in identity – to innumerable scientific works on soil as humus, geology, climate, ecosystem – soil as in *rematerialized* – and which, as you all know, is threatened terribly. Thus the question: on what soil can Europeans land?

The second difference, which will not be a surprise, is that I find it necessary to closely link the territorial war being waged by the Russians in Ukraine and this other, equally territorial war being waged by the climate crisis in its broadest sense, for this is also a territorial war. Right now, in Pakistan as well as India, this temperature of 50°C is linked to an invasion by Europeans, particularly anglophones, who have for two centuries have changed the planet's temperature; this amounts to an invasion of the Indian territory just as surely as in the period of colonial conquests and the creation of the Raj. In other words, we are not dealing with a territorial war in the "classical" sense and with additional "environmental concerns", as we still so strangely say, but rather with *two conflicts* which are both territorial conflicts over the occupation of soils by other States as well as the violence exercised by States on other territories. If it is correct to characterize the conflict in Ukraine as a colonial war, then this is even more so the case with climate wars.

And yet, in both cases, the word "war" does not at all have the same connotation. From the beginning of the war in Ukraine, the extraordinary contrast between the speed with which we were able to mobilize energy, emotions, and knowledge to respond to the request for support in a way that stunned the Russians is striking. Sadly, we Europeans have long had the appropriate repertoire of action when it comes to wars! The "great continent" has clearly been created, fashioned, and stitched together by territorial wars. However, when it comes to the matter of ecology, to the great despair of those who work on the climate, our attitudes seem more like immobilization – and an embarrassment – rather than a mobilization. As quick as we are to align emotions that reflect territorial war *number one* and are able to instantly create an extraordinary

welcome for Ukrainian exiles, send weapons, and impose sanctions, we are still left hanging, uncertain, paralyzed, and skeptical in practice, if not in thought, about the other, *territorial conflict number two*.

One exception is a point made by Naomi Klein in a fascinating article for The Intercept, which was translated and published by AOC magazine. Pierre Charbonnier in a powerful contribution to Le Grand Continent on the "ecology of war", also clearly emphasized the same point: Russian oil and gas have suddenly become both a strategic weapon and a major issue for the ecological transition³. Here, at least, the two territorial conflicts converge, because everyone finds it scandalous to pay billions of euros to the Russians to attack the Ukrainians, whom we claim to support. Suddenly, this issue that was ultimately associated with conflict number two with its usual inability to act – "how to change our carbon-based energy sources" – is tied to territorial conflict number one and has become a strategic military issue. At once we observed a profusion of initiatives to associate the issue of Russian energy, gas, and oil with emotions, attitudes, and administrative decisions that combine the typical energy of territorial conflict number one with the fundamental questions raised by all environmentalists about territorial conflict number two. So much so that suddenly the question of border demarcation has become at once how to avoid invasion by tanks marked with the letter Z and, what is new and unexpected, how to wean ourselves off of Russian gas and oil as quickly as possible.

This would still allow, in principle, as Charbonnier's article clearly shows, to imagine sacrifices in the name of conflict number one in order to support Ukraine. This is a sacrifice that has so far been impossible to achieve in the name of territorial conflict number two, meaning the one that concerns what I call the New Climate Regime⁴. Nothing is certain, of course. The Guardian has published terrible predictions about what they call "carbon bombs" – those rights to explore new sources of oil, rights granted by states that are still a part of the Paris Agreement – the sheer number of which is enough to negate any efforts to control the climate⁵. The American slogan "Drill, baby, drill!" is spreading like wildfire. In France, to take an unfortunate but well-known example, the FNSEA is chomping at the bit to get rid of all environmental rules on account of the war in Ukraine. But there is nevertheless an incredible opportunity to be seized, which is redefining the territorial situation in the dual form of border defense and energy autonomy.

3. Naomi Klein, « Guerre et climat, le péril de la nostalgie toxique », AOC, 14 mars 2022 ; Pierre Charbonnier « La naissance de l'écologie de guerre », le Grand Continent.

4. Latour, Bruno. Face à Gaïa. Huit conférences sur le Nouveau Régime Climatique. Paris: La découverte, 2015.

5. Damian Carrington & Matthew Taylor "Revealed: the 'carbon bombs' set to trigger catastrophic climate breakdown" Guardian, 11th may 2022.

This was obviously the plan of many ecologists, but it certainly has not coincided with the decisions that have been made regarding globalization over the past 50 years, which, through the "gentle bonds of trade", would tie us to both Russia and freedom. Consequently, there is a historical moment, or, as it is called, a *kairos*, an opportunity to be seized that awaits its heads of state, a situation of generalized war that would give Europe a soil loaded with the energy question that has become doubly strategic, both militarily and ecologically, in a way that it was not before the war in Ukraine. Hence the term "ecology of war".

It is obvious, however, that we have to handle this term "war" with care, since it is not used by any of the conflict's parties in the same way. Russian citizens are not allowed to use this word and they can go to jail if they do not use the alternative of "special operations". The word "war" is regarded as spreading fake news – *fejk nius* in Russian-English. The situation is all the more curious since the Russians are not even allowed to question the history of the Great Patriotic War, as shown in a fascinating article by Florent Georgesco⁶. Even the dates are written into the Constitution and cannot be changed under penalty of prison. Their World War began in 1941 and not in 1940, or worse in 1939, the year of the German-Soviet pact. It is significant to note that the Russians, though they do not have the right to pronounce the word "war" regarding Ukraine, have the right – as I learned from a colleague of the University of St. Petersburg – to use it to talk about the war that Westerners are, according to them, waging against Russia! The irony must be acknowledged: if the West does not use the word war with Russia, it is in order to avoid being at war with it... All the military authorities, especially NATO, are making every effort *to not use* this taboo word in their relations with Russia, this time in order not to give it a pretext for engaging in a nuclear conflict. This would not result in a "war", despite all the efforts to tame its use, but in mutual annihilation hidden behind the rather innocent term of strategy.

Consequently, this is a very asymmetrical conflict, since the only ones who have the right and the will to use the word war are the unfortunate Ukrainians who find themselves facing an enemy who claims that this is not a war but "a simple police operation", and who have behind them States that claim that "this is a war *for you* Ukrainians, but certainly not *for us* Westerners"! We are therefore dealing with a very uneasy situation with nuclear threat looming on the horizon, which obviously cancels out any notion of conflict. Without being a disciple of Carl Schmitt, we can still ask ourselves how a people can situate itself in history if it is forbidden to recognize the existential threat to the values it holds dear in the conflict it is carrying out. A police operation is not conducted against enemies, but against criminals. One cannot make

peace with criminals, though perhaps with enemies.

This impossibility of naming territorial conflicts number one is found in territorial conflict number two, because we do not know how to name the controversies that are, for reasons of modesty, called ecological, and which are in fact conflicts of territorial invasion by another power. Here, if the word war is forbidden, it is because if we were to utter it, we would have to take measures which would obviously force us to recognize real enemies within the borders of our "allies" as well as at home. In order to convince ourselves of this, we only have to identify those we would have to learn to fight if we were serious about getting rid of Putin's gas and oil. Perhaps they reside on our street, fill the tank of our car, or increase our stock portfolio... Conflicts would draw terribly close, and we would then be in the same situation as Oedipus who realizes, little by little, that he who is outraged by the crime is the one who committed it – and who continues to commit it...

In these areas, the word war is taboo because it hits too close to home. If we speak of "world change" or "interregnum" regarding the war in Ukraine, it is because of the convergence between these two types of territorial or colonial conflicts. As scandalous as it may be, the war in Ukraine alone would not be enough to give us this impression of radical change. It is because we feel that the territorial conflicts that began long ago with extractivism are finally resounding violently with the most classical forms of war and exchanging their properties in a terrifying way. Sophocles chose the figure of the plague; today we recognize it more clearly in that other curse – gas and oil.

The uncertainty about the word "war" is compounded by an uncertainty about the word "peace". As many commentators have pointed out, if Europeans feel that peace has been broken, it is because they have been living in a bubble away from the countless conflicts that others have been waging on their behalf. We have lived "in peace" but only if we forget about the United States' atomic umbrella, the globalization of trade, and extractivism's ruthless battle over natural resources. We were therefore in a kind of suspended or simply deferred peace which we have now emerged from, which is not necessarily a bad thing. In a text published in *New Statesman* and analyzed by Adam Tooze, Jürgen Habermas clearly demonstrates that each country – Germany, France, England, and of course Ukraine – has its own trajectory of this relationship between peace and war which makes it impossible to rush to unify them all in a single schema⁷. What is true of States is also true of individuals; it would be strange for people of my generation who have gone from the atomic threat to climatic devastation to speak as if "peace" had suddenly come to an end in February 2022, when they have never

6. Florent Georgesco Le mythe russe de la grande guerre patriotique et ses manipulations, *Le Monde*, 29-05-22.

7. Adam Tooze After the Zeitenwende: Jürgen Habermas and Germany's new identity crisis, *New Statesman*, 12th May 2022.

really known it. Being a child of the baby boom, I spent my life feeling the threat of nuclear holocaust and without any transition, I have moved on to the threat of ecological collapse. I will therefore not analyze the arrival of war in Ukraine as a breakdown of peace, but as the realization by Europeans of the now unbreakable link between the two types of conflict in which they are now engaged.

The question I would like to ask, then, is this: what do these struggles on both sides – territorial and colonial conflict number one and territorial and colonial conflict number two – add to the classical definitions of European existence? And always with this third conflict of nuclear annihilation hanging over our heads. The earth virtually devastated by nuclear power, the earth actually devastated by ecological change, and the Ukrainian territory devastated by the blood Red Army. This is where we risk being "badly shaken" and unable to "raise [our] head above the depths of so much surging death". In this interregnum, what can we hold on to?

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In the last part of these remarks I will refer to what will seem a rather unusual document: the famous Renan conference entitled "What is a Nation?" presented in this very room in 1882⁸⁹. You will say that this is completely outdated, that we no longer use such reasoning in such serious moments. However, I must confess that I found myself quite intrigued during this recent presidential campaign by the emergence of the expression "ecological nation". This is perhaps only an invented communications term, but I wondered about the significance of juxtaposing the old idea of "nation" with the adjective "ecological". Is this not a profound idea that would make it possible to give meaning to the expression of a "European ecological nation"?

To define the French nation, Renan challenges racial, geographic, and religious determinism. After eliminating all the other definitions, he ends his famous lecture with the conditions that make the French nation and writes, "No, geography makes a nation no more than race does. Geography provides the substratum, the field of battle and of work but man provides the soul". Clearly no politician today will talk about the soul, but this idea was typical of the 19th and 20th centuries: the land and nature provide the passive setting where human history unfolds, which is the only thing that really matters. At that time, the earth was merely the stage, the substrate of history. Renan continued, "Man is *everything* in the formation of this sacred thing that one calls a people. *Nothing material suffices*. A nation is a spiritual principle resulting from the profound complexities of history – it is a spiritual family, not a group determined by *the lay of the land*" (my emphasis). It is this well-known phrase that reveals an enormous

distance from the present situation.

Today, it is instead the "lay of the land", or to use the language of scientists, the incredible rapidity of the earth system's reactions to human actions that take part in the "profound complexities of history". What amazes us now is not the stability of earth's substrate but, on the contrary, that it acts like any other actor and with a tempo, rhythm, and power that Renan could not foresee. In speaking of the soul of a people deciding to live together, he could not have anticipated the dynamics of a soil gripped by industrial history. This does not necessarily mean that his idea is outdated, but that it needs to be profoundly modified to take the current situation into account. A nation is certainly not *defined* by geography, but it can *define itself* according to the type of land it has decided to inhabit. This is why I use the word "soil" because its connotations are not necessarily those often associated with the extreme right, with the notion of defending soil, or to keep with the style of the time, with the Barrésian version of "the earth and the dead". The soil, for those interested in earth sciences, is a crowded, occupied, populated soil whose resources and components are attacked or destroyed one after the other, whether it be water, humus, insects, the atmosphere or viruses¹⁰. In other words, soil has two very different definitions. There is the one that Renan rightly rejects of geographical or identity-based determinism, but there is another meaning that seems much more interesting to me, namely the soil burdened by ecological transformation, by this rematerialization, the most striking example of which is the link between Russian gas and oil and military and ecological strategy.

But the soil is also repopulated in another sense. When Renan defined the nation as a collective "of those who have suffered together", he was not thinking of all those whom a people *causes to suffer*. To make a territory green is to modify its borders, since it makes immediately visible all the connections that allow Europe to ensure prosperity, abundance, and freedom¹¹. As we are learning from the proliferation of decolonial studies, what environmental historians used to call "phantom hectares" to designate the extension of a European country that delegates to the outside world and to other peoples the extraction of resources essential to its prosperity, is no longer phantom. These are now perfectly concrete territories that require modifying the very borders of Europe¹². The world *in which* we live and the world *off which* we live yearn to overlap. In other words, the territorial question is not simply raised because the soil is populated by all the beings that now participate in our understanding of a habitable planet, but also because Europe finally understands that

8. Ernest Renan « Qu'est-ce qu'une nation », conférence faite en Sorbonne le 11 mars 1882, Paris Calmann-Lévy. Disponible sur Wikisource.

9. Translator's note: All English citations from Renan's text come from the translation by Ethan Rundell, Paris, Presses-Pocket, 1992.

10. Latour, Bruno, and Peter Weibel (sous la direction de) Critical Zones - The Science and Politics of Landing on Earth. Cambridge, Mass: MIT Press, 2020.

11. Charbonnier, Pierre. Abondance et liberté. Une histoire environnementale des idées politiques. Paris: La Découverte, 2020.

12. Ferdinand, Malcolm, (sous la direction de) Ecologies politiques depuis les outre-mer. Lormont: Bord de l'eau, 2021.

it can only survive and define itself through the peoples from which it lives. Like Péguy's beggars, they are the ones who undermine all authorities and deepen the interregnum.

In Renan's version of the nation, it is a voluntary decision to live together after shared catastrophes, what he calls "the profound complexities of history". You will therefore understand my question: *can Europe form a nation by deciding to depend on the material conditions that it pretended to ignore during the period of false peace in which it believed itself to be?* That a "self-determined" collective does not mean that it undergoes a geographical determinism, but that it finally becomes capable of determining the place, the location, the country, the soil, the geography, and the territory in which it finds itself because of the sudden appearance of the many territorial conflicts and peoples it claims to get along with in order to live

This is my hypothesis – and I readily admit that it is a simple hypothesis: just as the territorial war *adds* Ukraine to Europe in all possible forms, including perhaps one day in the form of joining the Union, so too does the war within the new climatic regime *add* the sources, the places, the situations, and the countries of extraction that allow the definition of its borders to be redefined as well as the composition of the nation that it decides to form. In other words, it is a matter of combining the superb but perhaps somewhat dated argument of Renan concerning the soul and the "spiritual" dimension of the nation with the redefinition of territory made concrete by ecological changes.

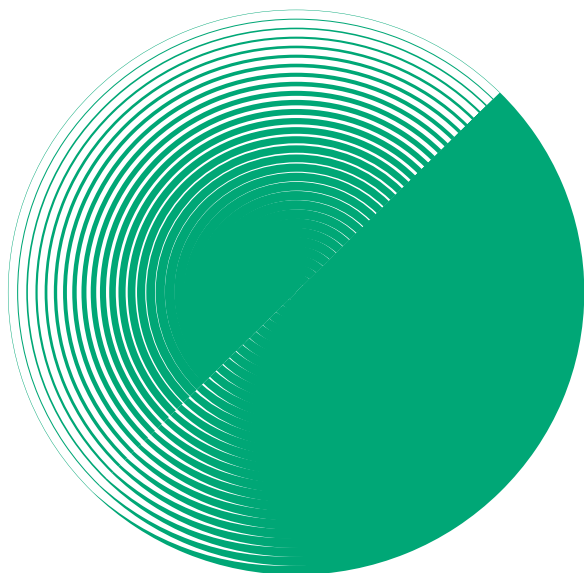
In closing, I would like to come back to the term "interregnum", which signifies a transition or suspension between two different forms of authority. I think we should be somewhat wary of using the term "free world" to characterize the current conflict as viewed from the "Western" side, particularly the United States. If the term "free world" is problematic, and even more so for Europe as a power, it is because they refer to the previous *regime*, which is now said to be at an end. Indeed, at that time, the expression represented the project of planetary modernization that was supposed to bring all other countries along with it. But what the dual ecological and military crisis actually represents is the end or the suspension of this modernization project, which is in total contradiction to the New Climate Regime.

Resurrecting this concept, which dates from the post-war period, is surely stepping outside of history and into the wrong era, since it belongs to the new interwar period, which has now come to an end. Furthermore, it is quite striking to note that with regard to supporting Ukraine, the "free world" only includes the former colonial powers, which have not managed to get the most populous nations on their side. This is the most striking symbol of the interregnum. No power has emerged that can replace the old one. As in the play by Sophocles which I chose to introduce these reflections, faced with mounting pleas, all powers shudder at discovering that they are the authors of the crimes they seek to punish.

This is why it is important to find a more inclusive term than "free world" and especially one that is less contradictory or hypocritical. We need a term, an invocation rather, that designates the state of dependence rather than emancipation and the plan to repair conditions of habitability that have been devastated. But it would then be necessary to be able to define the new sovereign, the new sovereignty, that would put an end to this interregnum.

In the absence of such a term, I will conclude with a phrase that will speak directly to our friends at Le Grand Continent, whom I thank for inviting me. In this remarkable text, Renan wrote, "Nations are not eternal. They have a beginning, and they will have an end. A European confederation will probably replace them. *But, if so, such is not the law of the century in which we live*" (my emphasis). In this presentation, I claim that the law of the century in which we live is the moment when Europe, on the contrary, not Europe conceived only as a Union, but Europe as a soil, finally finds its people and the people finally finds its soil. This is precisely because Europe feels much more acutely than other nations the extent to which it is living in an interregnum and is looking for "the law of the century", which is not, in fact, the law of the two previous centuries.

Europe can finally undertake the task, in the midst of perils and because of them, of voluntarily forming a nation.



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