

Climate displacement is also a health crisis



By disrupting care services, climate displacement deprives affected communities of access to doctors, hospitals, and pharmacies.

Every year, 21.5mn people are forcibly displaced by floods, droughts, wildfires, and storms. This number is set to rise dramatically over the coming decades, with up to 1.2bn people expected to be driven from their homes by 2050. The unfolding climate crisis is not just a humanitarian disaster but also a global health emergency.

Climate displacement poses both direct and indirect threats to public health. By disrupting care services, it deprives affected communities of access to doctors, hospitals, and pharmacies. Climate-induced migration also exacerbates poverty, overcrowding, and social instability. Food production is often severely affected, while unsanitary living conditions

fuel the spread of infectious diseases.

As the climate crisis threatens to derail global efforts to achieve the UN Sustainable Development Goals, the health and well-being of hundreds of millions of people across the developing world are at risk. High-income countries are not immune: in the US, 3.2mn adults were displaced or evacuated due to natural disasters in 2022 alone.

Pharmaceutical companies must play a pivotal role in bolstering global health resilience. Their involvement is particularly critical in conflict zones at the forefront of the climate-displacement crisis, where life-saving medicines and vaccines are often in short supply.

While the pharmaceutical industry has made strides in reducing carbon dioxide emissions and adopting more sustainable practices, its efforts fall far short of mitigating climate-related disruptions to supply chains.

Some pharmaceutical companies, such as Novartis and Novo Nordisk, have launched targeted programmes to aid populations displaced by extreme weather events, while others have donated cash or supplies in response to natural disasters. The demand for these donations has risen with increasing climate and humanitarian needs. Hikma, a generic medicine manufacturer founded in Jordan, reported \$4mn in donations in 2020, and \$4.9mn in 2023, mostly serving the needs in the surrounding region.

No company has developed a comprehensive strategy to ensure that displaced communities have sustained access to health products. A more holistic approach is needed. Amid the ongoing climate-displacement crisis, pharmaceutical companies should adopt a four-pronged strategy to strengthen healthcare systems. For starters, they could help deliver medicines to vulnerable communities in remote areas by revamping their supply-chains, from building redundancy into shipping networks to redesigning products to be more stable in hot climates where refrigeration may be unavailable.

Second, pharmaceutical companies must invest in research and development to create vaccines, diagnostics, and therapeutics

targeting climate-sensitive diseases. Rising global temperatures are accelerating the spread of mosquito-borne illnesses such as dengue, malaria, and Zika, as well as waterborne diseases like cholera and shigella, putting displaced populations at even greater risk.

Third, pharmaceutical companies should forge long-term partnerships with humanitarian organisations focused on climate displacement. Public-private collaborations have also proven effective in strengthening health resilience. Since 2010, for example, leading vaccine manufacturers like GSK and Pfizer have supplied Gavi, the Vaccine Alliance, with billions of vaccine doses, protecting vulnerable populations in some of the world's most resource-constrained countries.

Lastly, pharmaceutical companies must boost efforts to cut greenhouse-gas emissions across their value chains. While the climate impact of pharmaceuticals may get less attention than that of traditional manufacturing industries, the sector emits more CO₂ per \$1mn of revenue than the automotive industry.

The active support and engagement of shareholders, employees, and other stakeholders is crucial. Investors, in particular, must encourage companies to align their business practices with global health and climate goals.

Climate displacement is not a distant or hypothetical threat; it is a rapidly escalating health emergency. The pharmaceutical industry has a moral responsibility to act. To do so effectively, companies must get ahead of the curve and provide vital, life-saving treatments to those on the front lines of the climate crisis.

Ensuring Europe's supply of

critical minerals



The European Union's plan to achieve net-zero emissions by 2050 has an Achilles' heel: the EU relies on external sources – particularly Chinese companies – for 70-90% of the massive amount of critical raw materials needed to manufacture wind turbines, solar cells, batteries, and other green technologies. This dependency poses a serious risk: China's recent ban on exports of gallium, germanium, antimony, and other dual-use materials to the US suggests that it could take similar action against Europe, especially in light of EU tariffs on Chinese electric vehicles.

The new European Commission has rightly put critical raw materials at the top of its agenda. Fortunately, it will not be starting from scratch. Last year, the EU adopted the Critical Raw Materials Act, which calls for the bloc to extract 10%, process 40%, and recycle 25% of what it consumes annually by 2030, and limits the share of any external supplier to 65%. To meet the CRMA's targets, the Commission

must focus on co-ordinating funding, engaging in resource diplomacy with Africa, and establishing secondary material partnerships.

Mining is a capital-intensive industry, and overseas upstream activities require public support in terms of both equity and debt. The CRMA anticipates mobilising finance from various sources, including the EU's Global Gateway initiative and the European Investment Bank. Some member states have also established their own national funds. Germany launched a €1bn (\$1.04bn) raw-materials fund, while Italy introduced a €1bn "Made in Italy" fund for critical minerals, and France dedicated €500mn under its 2030 investment plan to enhance domestic industry's resilience to disruptions of the metal supply chain.

But while several public-finance streams are available, the funding landscape is scattered and not well aligned, creating confusion. Moreover, there are no explicit rules governing how the Critical Raw Materials Board, which was established to support the CRMA's implementation, designates projects as "strategic" and thus eligible to receive EU funds. The European Commission can address these issues by streamlining existing funding lines, which would ensure that national and EU finance work in tandem to achieve the best results and scale, and by establishing timelines for decision-making, which would provide clarity for corporate investment in upstream, midstream, and downstream assets.

The CRMA must also establish partnerships with resource-rich countries that deliver quick and tangible results. Bolstering ties with African countries, which hold some 30% of the world's mineral resources, will be especially important. But, compared to other regions, investment in mineral exploration on the continent remains low, and China funds most of it. The EU's resource diplomacy should focus on lowering investment barriers while helping African partners move into higher-value-added activities, such as downstream processing, and

invest in industrial upgrading.

AfricaMaVal, an EU-funded project promoting sustainable partnerships and responsible mining on the continent, should become a vehicle for linking European and African firms and addressing extraction needs. Building on comprehensive assessments of mining prospects across Africa, and taking into account the STEM (science, technology, engineering, and mathematics) skills of local workforces, AfricaMaVal can identify new business opportunities along the value chain. This could evolve into a joint investment platform for the sustainable production of critical raw materials. The European Commission would thus be doing what it does best: catalysing private investment toward its policy goals, which, in this case, is building the infrastructure and clean-energy systems required for future mining projects.

Lastly, the Commission should address the CRMA's major blind spot: the lack of domestic feedstock to meet its recycling targets. Global competition for secondary materials is already stiff, as evidenced by businesses' increasing efforts to secure enough steel scrap. Recycling input rates – the share of total demand – are just 3% for light rare-earth elements and zero for battery-grade lithium.

Establishing secondary-materials partnerships with emerging economies, which have rapidly growing markets for cell phones, laptops, and other appliances, would boost the EU's supply of recycled critical raw materials, particularly rare-earth elements. The focus should be on optimising the recycling value chain by providing financing and capacity-building assistance for waste-sorting and collection systems in partner countries, creating mutually beneficial economic and environmental outcomes.

The EU is facing an uphill battle to source and produce the critical raw materials that will define its future. And while the CRMA hardly represents an easy fix for the bloc's import dependency, it can strengthen supply-chain resilience,

contribute to EU sovereignty, and bolster Europe's economic security – in other words, boost the bloc's industrial competitiveness against a worsening geopolitical backdrop. But to realise the CRMA's full potential, the Commission must make it fit for purpose. – Project Syndicate

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Clean energy progress hinges on policy, science and action



It is tough to be optimistic about the climate these days. While the costs of extreme weather events like the Los Angeles wildfires pile up, the US federal policy pendulum is swinging away from facts, reason, and basic human decency. Nonetheless, even as the US government moves in the wrong direction, trends in science, economics, and increasingly local politics indicate that the pendulum will swing back in due course.

After all, no-one can argue with the physics of today's clean energy technologies. Heat pumps, induction stoves, and electric vehicles (EVs) – to name just three – are fundamentally better technologies than what came before. The best gas furnaces might reach 95% efficiency, meaning they are converting 95% of the energy they use into heat; but most heat pumps easily top 200%, with some reaching 400% or more. Similar comparisons can be made between induction and gas stoves, and between EVs and gasoline- or diesel-powered vehicles. By and large, we know what technologies we should be using to eliminate greenhouse-gas emissions; and in cases where we don't, we know what kinds of things to try.

This knowledge extends well beyond EVs and heat pumps to entire industrial sectors like cement or iron and steel. Here, outgoing US President Joe Biden's administration has made an important contribution with the Department of Energy's Liftoff Reports, which chart pathways to commercialisation for a broad selection of low-carbon technologies.

Consider cement, which accounts for some 8% of annual global greenhouse-gas emissions. Ordinary Portland cement, patented 200 years ago, has dominated the sector for decades. While measures like clinker substitution and efficiency improvements can abate up to 40% of emissions, getting to zero will require additional steps. These generally fall into two categories: cutting emissions from producing Portland cement or switching away from it altogether. Promising US start-ups like Brimstone and Sublime Systems are racing to demonstrate that either path is commercially viable.

One key ingredient is public subsidies to help firms climb the learning curve and slide down the cost curve toward faster

commercialisation. Both Brimstone and Sublime Systems received early research and development funding from the US Advanced Research Projects Agency-Energy (ARPA-E) and have now advanced to the deployment stage, receiving up to \$190mn and \$90mn, respectively, to build their first commercial plants. All told, the Bipartisan Infrastructure Law and the Inflation Reduction Act allocated around \$100bn for such purposes, with public funding contingent on matching private investments.

Moreover, these sums are dwarfed by the Department of Energy's loan programme. With just \$17bn in taxpayer funds, the IRA authorises the department's Loan Programs Office to lend \$350bn for investments in clean energy and domestic EV manufacturing. And those public funds then catalyse multiples more in private investments. While some Republicans and members of Donald Trump's incoming administration want to cut this programme, doing so would only hurt US competitiveness.

Can we restore sanity to our national policies? It might be trite to say that change begins at home, but what is trite is often true. A good place to look is New York. While the city has many problems, its climate policies are not among them. Around 70% of New York's direct emissions come from heating and cooling buildings, while the other 30% comes from cars and trucks. Fortunately, Local Law 97 is already addressing the former. The law is one of the most ambitious decarbonisation measures for buildings anywhere, requiring most to reduce their emissions by 40% this decade, and by 100% by 2050. And while New York can do only so much about vehicle emissions, its long-delayed congestion pricing programme is finally being implemented. That is a good start.

Given that New York used to be the world's most congested city, the quality-of-life improvement from less traffic can already be felt. The same goes for another measure that took an absurdly long time to address: the lack of trash bins. Over the past year, the city has finally issued official trash, recycling, and compost bins, with enforcement for residential buildings beginning this month. Cleaning up our own act – including with mandatory composting and other policies – will

not save the planet. But effective government just might. Physics alone will not push the pendulum all the way back to where it was before. That will require policies based on sound economics. As long as Trump does not break the fulcrum and bring the entire pendulum crashing down, policies pioneered by his predecessor and by local communities will continue to be a force applying pressure in the right direction. – Project Syndicate

Germany's costly LNG terminals aren't paying off as imports dip

Germany spent big on liquefied natural gas (LNG) terminals to ensure energy security, but the high cost of using them means they're bringing in a tiny fraction of its gas needs.

Only about 8% of Germany's total gas imports last year came via its shipping terminals in Wilhelmshaven, Brunsbüttel, Lubmin and Mukran, according to energy regulator Bundesnetzagentur.

"German terminals are more expensive to deliver to than the rest of northwest Europe," said Qasim Afghan, a commercial analyst at Spark Commodities Pte Ltd. On average, variable regasification costs in Germany for cargo delivery in February are 86% higher than other such facilities in the region, he said.

That's because it's more expensive to operate floating import terminals, especially in the winter. Also, fuel gas losses, associated with power consumption needed for the process of

turning LNG back to gas, are higher in Germany than elsewhere, Afghan said.

As a result, Germany has the most regasification prompt slots available for purchase in Europe, "highlighting unused capacity that is likely not economically viable."

When the nation accelerated the construction of these floating facilities in 2022, to help wean off Russian gas, the ambition was to be able to keep energy costs in check. However, the expensive terminals are now adding to the already high gas prices and compounding the pain for Germany's energy-intensive economy. This has led some environmental groups to demand that the expansion of such infrastructure be halted.

Ship-tracking data compiled by Bloomberg show that Europe's biggest economy imported 4.8mn tons of the super-chilled fossil fuel last year. That's a marginal decline year-on-year and far less than what neighbouring nations are importing.

The Economy Ministry says it primarily views the terminals as a way to ensure a sufficient safety buffer.

"Of course, this can mean that there may be lower capacity utilization if demand is not so high, but this cannot be the benchmark for a federal government that has to guarantee security of supply," a ministry spokesperson said.

The total cost estimate for the nation's state-run LNG terminals – including those in the pipeline – is now likely to be around €5bn. That's half of what it was initially pegged at, she added.

State operator Deutsche Energy Terminal said imports via its units in Wilhelmshaven and Brunsbüttel remained steady at 59 terawatt-hours. It also successfully marketed all three slots in December for the two units and aims for a new capacity auction at the end of the month, a spokesperson said.

Deutsche Regas, the operator of the Mukran terminal on the island of Rügen – also Germany's only privately operated one – didn't respond to a request for comment.

More facilities are set to open later this year, including Stade near Hamburg and Wilhelmshaven II.

Planning more units despite the low utilization is "absurd," Sascha Müller-Kraenner, managing director of German Environment Action, said in a statement, calling for an end to the infrastructure expansion.

Supertanker Rates on China Routes Double Since Sanctions



The cost to hire an oil supertanker on key routes to China has

doubled since the US imposed sanctions on Russia, showing the extent to which the move has upended the global shipping market.

The sanctions have jolted a freight market that was, until recently, dealing with softer demand due to supply curbs, a tepid Chinese economy, and an easing of Middle East tensions. The number of confirmed journeys hasn't changed much, but the pool of available ships has shrunk rapidly, and there's intense competition on certain routes.

Daily rates for very-large crude carriers on the Middle East-to-China route surged 112% to \$57,589 in the week through Friday, according to Baltic Exchange data, after Washington sanctioned nearly 160 tankers hauling Russian crude on Jan. 10. Those on the US Gulf-to-China journey jumped 102%, while West Africa-to-China saw an increase of 90%.

Major Chinese refiners have been rushing to buy crude from the Middle East, Africa and the Americas in recent days to make up for the loss of Russian oil. A VLCC from the US Gulf to China was hired for \$9.5 million last week, compared to a low-\$7 million range over the last couple of months, shipping fixtures show. Indian Oil Corp. is also snapping up Middle Eastern barrels, adding to the pressure.

There's concern that tanker rates could remain elevated if President-elect Donald Trump, set to be sworn in later on Monday, takes a tougher line against Tehran.

"Rates could hold at these levels if Trump dials up the pressure on Iranian oil shipments, which is more likely than not," said Junjie Ting, a Singapore-based shipping analyst at Oil Brokerage Ltd.

The rising demand for VLCCs, which can carry around 2 million barrels of oil, is also feeding through to costs for smaller vessels, which tend to be viewed as less cost-efficient on longer routes. Rates for Suezmaxes, that hold about 1 million

barrels, have climbed on increased demand and tight supply, shipbroker SSY said in a report.

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Climate change forged a new reality in 2024: 'This is life now'



Intolerable heat. Unsurvivable storms. Inescapable floods.

In 2024, billions of people across the world faced climatic conditions that broke record after record: logging ever more highs for heat, floods, storms, fire and drought.

As the year drew to a close, the conclusion was both blatant and bleak: 2024 was the hottest year since records began, according to European climate scientists.

But it may not hold this dubious honor for long.

“This is life now and it’s not going to get easier. It’s only going to get harder. That’s what climate change means,” said Andrew Pershing, chief programs officer at Climate Central, a US-based non-profit climate advocacy group.

“Because we continue to pollute the atmosphere, we’re going to get, year after year, warmer and warmer oceans, warmer and warmer lands, bigger and badder storms.”

Others use still bolder language.

“We are on the brink of an irreversible climate disaster,” said the 2024 State of the Climate report.

Here's how that looked this year, what 2025 holds, and why there are still reasons to be hopeful.

SOS

This was the first year when the planet was more than 1.5 degrees Celsius hotter than it was in the 1850-1900 pre-industrial period, a time when humans did not burn fossil fuels on a mass scale, according to the European Union's Copernicus Climate Change Service.

The sheer number of days of extreme heat endured by billions of people – from the desert town of Phoenix, Arizona to the desert town of Phalodi in India's Rajasthan – was startling.

Sunday, July 21, was the hottest day ever.

Until Monday, July 22.

The day after dipped a smidgen cooler.

These consecutive records came during Earth's hottest season on record – June to August – according to Climate Central.

Those three months exposed billions of people to extreme heat, heavy rain, deadly floods, storms and wildfires.

Friederike Otto of World Weather Attribution, a global team that examines the role of climate change in extreme weather, said heatwaves were a "game changer."

The world has not caught up: many deaths go unrecorded while some African countries lack an official definition for a heatwave, meaning heat action plans don't kick in, she said.

"There is a huge amount of awareness that needs to be had to even adapt to today's heat extremes but, of course, we will see worse," Otto told the Thomson Reuters Foundation.

Between June 16-24, more than 60 percent of the world's population suffered from climate change-driven extreme heat.

This included 619 million in India, where more than 40,000 people suffered heatstroke and 100+ died over the summer.

Birds fell from the sky as temperatures neared 50 C (122 F).

Millions were affected: from China to Nigeria, Bangladesh to Brazil, Ethiopia to Egypt, Americans and Europeans, too.

Climate Central said one in four people had no break from exceptional heat from June to August, the highs made at least three times more likely by climate change.

During those months, 180 cities in the Northern Hemisphere had at least one dangerous extreme heatwave – a phenomenon made 21 times more likely by human action, Climate Central said.

TOO HOT TO WORK

“The number of days where you are starting to push the physiological limits of human survival (are rising),” said Pershing, citing Pakistan and the Arabian Gulf as two areas that neared breaking point this year.

Hundreds died during the Hajj pilgrimage to Makkah as Saudi Arabia topped 50 C (122 F).

In the US Midwest and Northeast, Americans broiled under a heat dome when high pressure trapped hot air overhead.

NASA’s Earth Observatory said extreme heat was often exacerbated by hot nights, a dearth of green space or air con, or a surfeit of concrete, which absorbs heat.

Heat and drought fueled wildfires this year, with blazes in the Mediterranean, United States and Latin America. Fires burned from the Siberian Arctic to Brazil’s Pantanal wetlands.

“(The Pantanal) is a wet area that is not supposed to burn for months on end so that is probably something I would look out for next year where we see wildfires in ecosystems that are

not traditionally burning ecosystems,” said Otto.

THE MOST VULNERABLE

The “new normal” hits the vulnerable hardest.

“The people who are succumbing to heat-related deaths are not the millionaires and billionaires,” said Pershing.

“If you are a reasonably well-to-do person you can afford air conditioning, you have a vehicle that can get you where you need to go, you have ways to keep yourself cool. If you don’t have access to these things or you lose them because of a power outage or another storm, that creates these additional vulnerabilities.”

In Africa, nearly 93 percent of the workforce faces extreme heat.

On the Arabian Peninsula, it is more than 83 percent of workers.

European and Central Asian workers could be next in line.

For Otto, the answer to this fast-spreading risk lies in empathy, putting the poor and vulnerable – “the vast majority of the global population” – at the center of climate action.

“In Bangladesh, when you put the survival of the poorest in the center of the action, you actually have a society that is really well-equipped to deal with tropical cyclones,” she said.

“People know what to do and there are drills and practices.”

Silver linings, though, are rare.

“Empathy is in short supply,” said Otto.

BOILING SEAS

Ocean temperatures also hit alarming levels in 2024, wreaking havoc on land and sea.

Hurricane Milton came barely two weeks after Hurricane Helene, with abnormally warm waters in the Gulf of Mexico turbocharging the twin storms that lashed the US Southeast.

"In that some places in the Gulf of Mexico ... temperatures were 400 times more likely because of climate change," Pershing said.

Climate Central found a similar link between October's floods in Spain and unusually warm waters in the Tropical Atlantic.

Human-driven climate change made these elevated sea surface temperatures up to 300 times more likely, Climate Central said.

"WE NEED DRILLS"

Otto said this year's extremes, notably Europe's floods, illustrated a "failure of imagination" and a refusal to adapt.

"We don't just need the weather forecast or warnings. We need drills. We have to practice survival wherever heavy floods can happen and they can happen everywhere," she said.

Infrastructure also failed.

"The way that we have canalized rivers and sealed all the surfaces ... will mean disastrous damages every time there is a flood ... There is always this short-termism that it's expensive to fix it now but of course it will save lots of money and livelihoods later," she said.

For Pershing, adaptation is "an exercise in imagination because we haven't seen these kinds of events before ... That is the challenge of climate change: we're going to be confronted year after year with conditions we've never experienced."

SO WHAT NEXT?

Nobody expects a quick end to extreme weather but Otto is hopeful that humans may change their polluting ways.

“That is a reason for optimism ...clinging to fossil fuels (is) increasing inequality and destroying livelihoods but it increasingly makes less sense ...for national economies.”

In another upbeat note, Otto said better preparations in Europe meant fewer deaths in this year’s floods than previously.

But ocean temperatures are a key concern for 2025.

“The amount of heat stored in the ocean ... really has my attention because we are not quite sure if there is something different going on in the climate system,” said Pershing.

Another risk – complacency.

“People do have a way of getting used to conditions and you can kinda get numb to it,” Pershing said.

And complacency can breed paralysis.

“This was the hottest year, last year was the hottest year – probably next year will be the hottest year again,” said Otto.

Brazil’s Climate Push Must Start at Home



As the current G20 president and host of next year's United Nations Climate Change Conference, Brazil has sought to establish itself as a global climate leader. But to have the biggest impact, Luiz Inácio Lula da Silva's government must lead by example, which means committing to ambitious emissions targets and energy policies.

AMSTERDAM – Ever since Brazilian President Luiz Inácio Lula da Silva returned to office in 2023 and told the world that Brazil is “back on the world stage,” the government has endeavored to establish itself as a global climate leader. As the current G20 president, Brazil is pushing for a sustainable bioeconomy and scaled-up climate finance – goals that it will surely continue to pursue as the host of next year's United Nations Climate Change Conference (COP30). Moreover, the country recently formed a troika with the hosts of COP28 (the United Arab Emirates) and COP29 (Azerbaijan) to preserve the Paris climate agreement's goal of limiting global warming to 1.5° Celsius.

The Brazilian government has not been afraid to challenge rich countries and individuals as part of its efforts to halt the rise in global temperatures. But to have the biggest impact, Brazil must lead by example. As the saying goes, charity begins at home. The timing could not be better:

countries must submit more ambitious 2035 emissions-reduction targets, known as nationally determined contributions (NDCs), by February 2025.

The need to cut greenhouse-gas (GHG) emissions has never been more urgent for Brazil, which was recently hit by record flooding and has been fighting devastating forest fires for weeks. To be sure, investing in adaptation and resilience requires increased financial flows from the wealthy countries responsible for the bulk of historic pollution to vulnerable countries suffering the worst effects of global warming. But reducing fossil-fuel emissions and extraction, which has harmed traditional and indigenous communities' health, destroyed their land, and diminished their capacity to provide for their families, is also a matter of economic and social development. Brazil must devise an energy policy that works for these communities.

The share of electricity generated from wind and solar power is expanding rapidly, and these renewable-energy sources are becoming cheaper by the day. Brazil has abundant sun and wind and the tools to operate these technologies successfully. But, equally important, local communities are already expanding clean-energy infrastructure and have created innovative and effective solutions to participate in the decarbonization decision-making process.

Various community-led and decentralized clean-energy projects, often developed in partnership with NGOs, are being launched across Brazil, from isolated villages in the Amazon to densely populated *favelas* (informal settlements) in Rio de Janeiro. At the same time, the country's indigenous peoples have developed robust consultation protocols for the design and implementation of public and private renewable-energy projects on their land.

Last year, COP28 closed with an agreement to "transition away from fossil fuels" – the first time such a call has been made

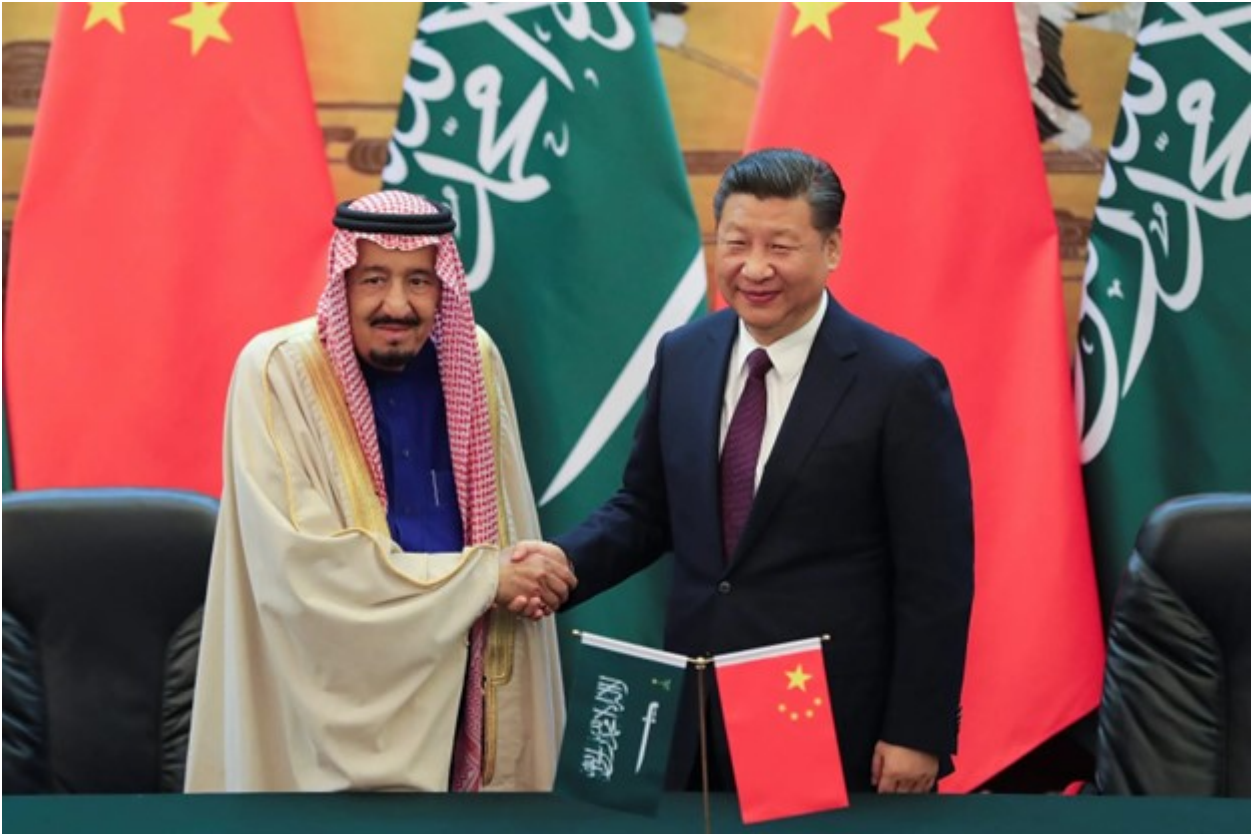
at the climate summit – and to triple renewable energy and double energy efficiency by 2030. To honor that agreement, Lula's government must challenge the false notion that fossil fuels are necessary for development and can complement efforts to scale up and provide equitable access to community-centered renewable energy.

To show the world that Brazil can lead the global renewable-energy transition by example, its updated NDC must commit to bold action, such as stopping new fossil-fuel projects and shutting down existing ones, and deploying the resources required to meet the global goal of tripling renewable-energy generation. Moreover, to advance the goal of energy justice, the government should implement policies aimed at ensuring that solar and wind power reaches vulnerable communities.

If the Brazilian government creates a national platform that provides operational support to these clean-energy solutions, the country can show the world that it is possible to decarbonize while putting people first. In fact, this is not only possible but essential.

A few years ago, the world came together to combat the COVID-19 pandemic. Governments quickly poured resources into vaccine development and production, successfully creating the tools to solve a novel problem in record time. In this case, the world has everything it needs to accelerate the energy transition and limit global warming; all that it is missing is the political will to commit to – and follow through on – ambitious targets and policies. Brazil can and should be one of the first countries to demonstrate it.

AS AMERICA “PIVOTS TO ASIA”, SAUDI ARABIA IS ALREADY THERE – BY ROUDI BAROUDI



The biggest news in the energy industry last week was that a state-owned Chinese company had completed a massive offshore oil and gas platform for Saudi Aramco. Breathless media reports shared impressive details about the facility's record-setting size, weight, and output capacity, with some describing it as a massive bet on continuing strong demand for fossil fuels despite the meteoric rise of renewables.

The real significance of this news, though, is not to be found at the Qingdao shipyard where it was made, at the headquarters of the China Offshore Oil Engineering Company that built it, or at the Marjan field off Saudi Arabia's east coast where it will be installed and operated.

In fact, in order to truly appreciate the implications

involved, one needs to travel back in time a little more than 50 years. For on 8 June 1974, the United States and Saudi Arabia reached a historic agreement that has bound the two countries ever since.

Signed by then-US Secretary of State Henry Kissinger and then-Minister of Interior Prince Fahd bin Abdulaziz, the pact established two joint commissions tasked, respectively, with increasing bilateral economic cooperation and with determining the kingdom's military needs. It also created several joint working groups responsible for specific elements to support growth and development, including efforts to: a) expand and diversify Saudi Arabia's industrial base, beginning with the manufacture of fertilizers and other aspects of the petrochemical sector; b) increase the number of qualified scientists and technicians available to make the most of technology transfers; c) explore partnerships in areas like solar energy and desalination; and d) find ways to cooperate in agriculture, especially in the desert.



Henry Kissinger with Prince Fahd of Saudi Arabia, 1974

Contrary to widespread misperceptions, the agreement did not say anything about Saudi crude being priced and/or transacted exclusively in US dollars. In a side-deal that remained secret until 2016, however, the United States pledged full military support in virtually all circumstances and the Kingdom of Saudi Arabia committed to investing a massive share of its oil revenues in US Treasury bills. While there was no public quid pro quo, therefore, this was to some extent a distinction without a difference: the world's biggest oil exporter ended up spending hundreds of billions of dollars on American debt and American-made weapons, making it only sensible that the vast majority of its crude sales would be in greenbacks. By extension, the sheer weight of Saudi oil in world markets – and especially within the Organization of Petroleum Exporting Countries – virtually guaranteed that the dollar would become

the de facto default currency of those markets, Petrodollars.

These arrangements suited both sides at the time, which featured a very particular set of circumstances. The previous year, as Egypt and Syria attempted to regain territories occupied by Israeli forces since the 1967 war, US President Richard Nixon authorized an unprecedented airlift of weaponry – everything from tanks, artillery, and ammunition to helicopters, radars, and air-to-air missiles – to Israel. Arab oil producers responded by playing their strongest card, announcing an oil embargo against states that supported the Israeli war effort. That led directly to supply shortages, soaring prices, and long lines at filling stations across the United States and many other countries, too, and indirectly to several years of higher inflation. Although the embargo had been lifted in March 1974, Washington was keen to prevent similar shocks in the future.

The American economy was particularly vulnerable to longer-term repercussions because of several factors, including a general slowdown caused by its long, expensive, and ultimately unsuccessful war in Vietnam. The real problem, though, stemmed from another issue: in 1971, as the dollar continued to lose ground against major European currencies, Nixon had taken the United States off the gold standard, gutting the Bretton Woods arrangements put in place after World War II and throwing foreign exchange markets into disarray. With the Cold War as backdrop, America appeared to be losing ground in its strategic competition with the Soviet Union.

The so-called “side-deal”, then, was actually far more important than the public agreement because it would restore the dollar’s primacy in international markets, making it once again the world’s favorite reserve currency, while simultaneously reducing the likelihood of future Arab oil embargos. The new system worked very well for a very long time: the US economy regained its stability, and Saudi Arabia embarked on a long program of socioeconomic development that

continues to this day. Even as the Americans have sought further protection by reducing their reliance on Saudi and other OPEC crude, their bilateral partnership and the dollar's general prevalence in the oil business have likewise persisted despite all manner of diplomatic spats, crises, and other obstacles.

Back in the present-day, the Soviet Union is no more, and although the United States has an even more formidable strategic rival in China, this competition carries neither the day-to-day intensity nor the seeming inevitability of nuclear Armageddon that the Cold War engendered. In addition, the United States is now producing more crude oil than any country ever has, further insulating its economy against exogenous shocks, while China's rapid expansion has made it the world's most prolific energy importer. In fact, Washington is years into a "pivot to Asia" that will see it focus less attention on the Middle East.

Meanwhile, Saudi Arabia is now led by Crown Prince, Mohammed bin Salman (MBS), a young and highly ambitious ruler who has shown himself more than willing to act independently of American desires or even demands. Accordingly, it should not surprise anyone that the behemoth facility now being transported to Marjan is just the most visible tip of the Sino-Saudi iceberg. There is a burgeoning relationship driven by complementary needs, with both parties investing in one another's economies and cooperating on large-scale energy and industrial projects.

Given all of the foregoing, it is much too early to declare the end of an era. Even if rumors that the Saudis will soon start selling oil futures contracts in yuan or other currencies turn out to be true and the results include an erosion of the dollar's value, the US-Saudi economic relationship remains very much in place, as do defense ties ranging from procurement and maintenance to joint exercises and training. This is not to mention the approximately 60,000

Saudi students who study at American universities every year, or the countless other business and/or personal ties nurtured over decades.



Then, US President, Jimmy Carter receiving the Crown Prince Fahd of Saudi Arabia at the White House in Washington, 1977. Seeing the continuation of the Petrodollar Agreement.

All the same, a new era has definitely begun: just as the Americans have opened up other avenues to secure their energy needs, the Saudis are now moving decisively to diversify their foreign partnerships and have been doing so for many years. Inevitably, the global oil and gas economy's center of gravity will shift eastward, but how could it be otherwise when China and several other Asian economies have become such powerhouses? The diversification path will almost certainly include occasional stretches where Riyadh will have to make difficult decisions, but this, too, reflects the confidence

that MBS has in his country's ability to determine its own destiny.

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السعودية – الصين: شراكة نفطية ترسم معالم عصر جديد في الطاقة

يمثل #التعاون النفطي بين السعودية والصين أحد أهم الشراكات الاستراتيجية في العصر الحديث، إذ يجمع بين أكبر مصدر للنفط في العالم وأكبر مستورد له. إلا أن هذا التعاون لا يقتصر على تجارة النفط وحدها، بل يشمل استثمارات مشتركة تهدف إلى تعزيز العلاقات الاقتصادية الثنائية، خصوصاً مع توسع “#أرامكو السعودية” في السوق الصينية.

! “منصة” مرجان

بلغت #الاستثمارات الصينية في السعودية 16,8 مليار دولار في عام 2023، في مقابل 1,5 مليار دولار في عام 2022، استناداً إلى بيانات بنك الإمارات دبي الوطني. في هذا الإطار، يوضح الدكتور خالد رمضان، الخبير النفطي ورئيس المركز الدولي للدراسات الاستراتيجية بالقاهرة، لـ “النهار” أن هذا #لتعاون النفطي السعودي – الصيني يؤثر إيجاباً في #أسواق الطاقة العالمية، “وما منصة

'مرجان' النفطية البحرية التابعة لأرامكو في الصين إلا ترجمة فعلية لهذا التعاون"، وستستخدم لزيادة الإنتاج السنوي لحقل المرجان النفطي إلى 24 مليون طن.

وتعد منصة "مرجان" أثقل منصة نفط وغاز بحرية في الصين مخصصة للأسواق الخارجية، وواحدة من أكبر المنصات في العالم، فهي أطول من مبنى مكون من 24 طابقًا، وتعادل مساحة سطحها 15 ملعب كرة سلة، ويمكنها جمع ونقل 24 مليون طن من النفط و7,4 مليارات متر مكعب من الغاز سنويًا.

شراكة في التنمية

يضيف رمضان: " أبرمت أرامكو السعودية في عام 2023 صفقات بقيمة 8 مليارات دولار مع شركاء صينيين في قطاعي المنبع أي الاستكشاف والإنتاج، والمصب أي التكرير والتوزيع". إلى ذلك، توظف نظرتها المتفائلة إلى إمكانات النمو في الصين على المدى الطويل، والفرص عالية الجودة، "من أجل توسيع عملياتها المتكاملة في قطاع الصناعات التحويلية الصينية، والتي يمثل الاستثمار فيها أهمية". "استراتيجية لنمو أعمال أرامكو في آسيا

يلفت رمضان إلى أن دور أرامكو يتجاوز الاستثمار، "لأنها تريد أن تكون شريكًا رئيسيًا في التنمية الاقتصادية في الصين، والاستفادة من الفرص الجديدة التي تلوح في الأفق، من خلال شراكات استراتيجية تعزز وجودها في قطاع الصناعات التحويلية في الصين، بما فيها المواد الكيميائية والمواد المركبة المتقدمة والمواد غير المعدنية".

وهكذا، تظل الصين محورية في استراتيجية أرامكو لتنويع محفظتها، لتشمل منتجات كيميائية أكثر تخصصًا وعالية القيمة، خصوصًا أن الصين تمثل 40 في المئة من مبيعات المنتجات الكيميائية العالمية.

تعزيز سلاسل التوريد

الصين ثاني أكبر اقتصاد في العالم، لذا تعد أكبر مستورد للنفط الخام، إذ تستهلك 14 مليون برميل يوميًا، تليها أوروبا بنحو 12,8 مليون برميل يوميًا. من ناحية أخرى، تعد السعودية أكبر مصدر للنفط الخام في العالم، تليها روسيا وكندا والنرويج ونيجيريا وانطلاقاً من هذا الواقع، "سهل أن نرى كيف يمنح توسيع التعاون النفطي بين الصين والسعودية الأسواق استقراراً أكبر، ويعزز أمان سلاسل الإمداد النفطية، ويزيد فرص المنافسة في الأسواق العالمية"، بحسب ما يقول الخبير النفطي الدولي رودي بارودي.

ويضيف لـ "النهار": "بالنسبة إلى السعوديين، سيضمنون شريكاً استراتيجياً طويلاً الأمد، لن يشتري النفط الخام فحسب، بل يستثمر أيضاً في سلسلة النفط اللاحقة، من المصافي إلى مصانع البتروكيماويات". فأرامكو السعودية، أكبر شركة نفط في العالم، مستثمر كبير في مشروع "رونغشينغ سينوبيك فوجيان" للتكرير (Rongsheng Sinopec Fujian Refining & البتروكيماويات

وفي شركتين كبيرتين للبتروكيماويات هما (Petrochemical venture)، (Rongsheng Petrochemical) و"رونغشينغ (Hengli Petrochemical) "هينغلي وتفاوض أرامكو لشراء 10 في المئة في "هينغلي"، (Hengli Petrochemical). وتسعى لإبرام صفقات مماثلة مع شركتين صينيتين أخريين، بعدما أبرمت صفقة منفصلة قيمتها 3,4 مليارات دولار لشراء حصة في شركة "رونغشينغ" في العام الماضي.

تحالف مؤثر

في الضفة الأخرى، استثمرت الصين مليارات الدولارات في السعودية، "حيث دخلت الشركات الصينية على خط مشاريع سعودية واسعة النطاق تركّزت في معظمها في التكرير والبنية الأساسية للغاز"، بحسب بارودي، الذي يضيف: "من شأن التعاون الطويل الأجل بين البلدين أن يعيد تشكيل أجزاء من المشهد النفطي والبتروكيماوي العالمي ويؤكد الخبر النفطي الدولي أن أرامكو السعودية مستثمر كبير في صناعة الهيدروكربون في الصين، "والجانبان يركزان جهودهما على توسيع مصانع إنتاج السوائل وتحويلها إلى كيماويات في مصفاة الجبيل بالسعودية، وفي وحدة البتروكيماويات في نينغبو تشونجين بالصين".

ويرى بارودي أن هذا التطوّر في العلاقة التصنيعية والتحويلية هو "نتاج علاقة استراتيجية دبلوماسية سعودية - صينية، بدأت تحاك قبل أكثر من ثلاثة عقود، لا تقتصر على التجارة والاستثمارات المتبادلة، بل تتعداها إلى تحالف تنعكس آثاره على الاقتصاد العالمي، ما من شأنه أن يقلل من تأثير أي تباطؤ اقتصادي في المستقبل، وأن يحمي "أسواق الهيدروكربون والبتروكيماويات".

إلى جانب ذلك، يعزز التعاون بين السعوديين والصينيين التحول العالمي في مجال الطاقة، بفضل التوافق في الرؤى التنموية بين البلدين. رؤية "السعودية 2030" ومبادرة "الحزام والطريق" الصينية تستهدفان إضافة المزيد من الاستثمارات في الطاقة المتجددة. ومن هنا، تستهدف أرامكو الاستفادة من الطلب المتزايد على الصناعات الخضراء الناشئة في الصين، "ليتطوّر التعاون الصيني - السعودي في مجال الطاقة من مجرد تعاون في مصادر طاقة تقليدية. ليشمل قطاع الطاقة الجديدة"، بحسب رمضان.

شراكة تبادلية

يقول بارودي إن هذا التعاون يرتقي يوماً بعد يوم إلى مستوى الشراكة التبادلية، "فالفوائد متبادلة، ويعمل كل من الطرفين على تنويع إيراداته، وخفض إنفاقه الإنتاجي"، مذكراً بأن هذا التعاون "يدعم قدرة البلدين على تحقيق استقرار الاقتصاد العالمي، إذ يبشر "بتغييرات مالية ضخمة".

فمحتمل جداً أن تبدأ السعودية بقبول اليوان الصيني، من بين عملات آسيوية أخرى، بوصفه عملة معتمدة في التبادلات النفطية. وهذا، برأي بارودي، يمنح الصين والسعودية مزايا اقتصادية كبيرة، خصوصاً أن المملكة جادة في مسيرة تنويع مصادر اقتصادها، والخروج من دائرة

”الاعتماد الكلي على الإيراد النفطي

يضيف بارودي: ”إن تحققي المملكة هذا الهدف سيشكل نقطة تحوّل أساسية في سياستها الاقتصادية عموماً ، والنفطية خصوصاً ، إذ ستكمل تحررها من قيود البترو-دولار بعد اتفاقية مع الولايات المتحدة دامت 50 عاماً ، وبعد دخولها مع الصين في مجموعة الـ ’بريكس‘ التي وضعت نصب عينيها الوقوف في وجه هيمنة الدولار الأميركي على الاقتصاد العالمي