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 1.5º 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.

This is how we know when the world has its hottest day

On Sunday, the world had its hottest day on record. Just 24 hours later, that record was broken again, making Monday very likely the hottest day in thousands of years.

It may seem improbable for scientists to gauge the world's hottest day given that they don't have temperature monitors in every corner of the world and less than a century of relatively widespread observations. But they've developed a technique that's increasingly useful as the planet heats up.

This month's shocking heat findings, announced by the EU's Copernicus Climate Change Service, are based on "reanalysis," a technique that mixes temperature data and models to provide a global view of the climate. The center creates a nearly

real-time picture of the Earth’s climate, including temperature, wind and precipitation, for roughly every 30-square-kilometer chunk of the planet’s surface.

This reanalysis goes back to 1940, and it allows researchers to say with confidence when a record is broken, whether for a day, month or year. Beyond the new daily heat record, the data also shows that 2023 was the hottest year ever recorded and that every calendar month for the past 13 months has been the hottest on record.

Though there aren’t thermometers in every corner of the world, Copernicus receives a large amount of weather data that it uses to underpin its reanalysis.

“We have this constant flow of information coming into the center,” says Carlo Buontempo, director of the Climate Change Service, which is part of the European Center for Medium-Range Weather Forecasts (ECMWF).

Scientists at the center receive 100 million readings per day about weather conditions from around the world. Observations come from airplanes, satellites, ships, radar and surface-level weather stations – all feeding real-time information about temperature, wind, rain and snow information, as well as other factors like air pollution. This information is fed into a model, known as ERA5, which is already equipped with historic information about the global climate.

There are gaps in these observations, because the data sources don’t cover every part of the world. Weather conditions like cloudy skies may also reduce the amount of data coming from sources like satellites. To fill these gaps, the scientists take the predictions they have already made, based on the long-term ERA5 model, and test them against the observations. That means a forecast that predicts a particular temperature in a particular place will be tested against all the data researchers receive about the weather in that place and

nearby, as well as broader forces like ocean currents and air circulation.

This is done repeatedly while assessing how compatible the prediction is with what's actually been recorded. The model also accounts for any errors in the recorded data, and relies on the laws of physics, including the weather patterns, currents and airflow that govern how the global climate works.

In this way, it's possible to create a complete picture that is as accurate as possible. That's what allows scientists to confidently declare a record like when the world experiences the hottest day in human history.

Globally, five weather services — the U.S.'s National Oceanic and Atmospheric Administration and NASA, the ECMWF, the China Meteorological Administration and the Japan Meteorological Agency — carry out continuous appraisals of global temperature using this technique. While their models differ slightly, the five groups have come to similar conclusions about record heat in recent months and years.

Historical data is trickier to come by. The longest-running temperature series, the Central England Temperature in the U.K., started in the 17th century. Data from before humans were systematically monitoring temperatures comes from sources like bubbles of gas trapped in glacial ice, or tree rings. These sources aren't as specific as a thermometer reading, but it's possible to say with confidence that recent temperatures are likely the highest in around 100,000 years, Copernicus says.

Meteorologists also have a good idea when a particularly significant day, like the hottest day on record, is on its way. This is partly because global mean temperatures usually peak between early July and early August. Last year's hottest day — which was the previous record for the hottest ever — occurred in early July amid a historic oceanic heat wave. An

intensifying El Nino – a natural global climate phenomenon that usually means hotter temperatures globally – provided yet another clue that record heat was brewing.

Until this July, it looked for a while like the world wouldn't set a new daily record, says Buontempo.

"The global mean temperature for the oceans started rising again," he says. "Some of the people who systematically monitor our predictions started to sound alarm bells."

By the start of last week, they were paying extra attention to the reanalysis and getting ready to make an announcement.

This technique isn't just useful for making "hottest day ever" announcements: It's being used to train artificial intelligence forecasting models, especially for "ensemble" weather forecasts, which represent multiple possible future scenarios. It's also used by solar energy companies to help homeowners work out how much energy their panels might generate, and by wind energy companies to plan where to put wind farms.

Copernicus is currently working on a new model, known as ERA6, which will be more precise – dividing the world into 14-km squares – and incorporate many more historic data sources, including early satellite readings from the 1970s.

For Buontempo, more important than any one day is the recent extraordinary streak of record-breaking months, given that's a better indicator of how rapidly the world is warming. But pinpointing a specific day does make a changing climate feel much more immediate.

"I think we have to make it more tangible, more direct, more visible," he says. "It is important that people are informed."

‘Prerequisites for peace’: Expert applauds Skylakakis for endorsing energy transition policies that ‘open the way to dialogue and cooperation’

ATHENS, July 7, 2024 Greece: Energy and Environment Minister Theodoros Skylakakis is on the right track with his approach to Greece’s energy transition plans, a noted regional expert says.

“He’s got the right perspective,” industry veteran and author Roudi Baroudi said after Skylakakis spoke at this week’s

Athens Energy Summit. “He understands that although the responsibility to reduce carbon emissions is universal, the best policy decisions don’t come in ‘one-size-fits-all’.”

Baroudi, who has more than four decades in the field and currently serves as CEO of Doha independent consultancy Energy and Environment Holding, made his comments on the sidelines of the forum, where he also was a speaker.

In his remarks, Skylakakis expressed confidence that Greece’s increasing need to store electricity – as intermittent renewables generate a growing share of electricity – would drive sufficient investment in battery capacity, without the need for subsidies. Among other comments, he also stressed the need for European Union policymakers to account for the fact that member-states currently face the cost s of both limiting future climate change AND mitigating the impacts that are already under way.

“Every country is different in terms of how it can best fight climate change. Each one has its own set of natural resources, industrial capacity, financial wherewithal, and other variables. What works in one situation might be a terrible idea elsewhere. That’s crucial and Skylakakis gets it,” Baroudi said. “He also understands that an effective transition depends on carefully considered policies, policies that attract investment to where it can not only have the greatest impact today, but also maximizes the impact of tomorrow’s technologies and tomorrow’s partnerships.”

“What Skylakakis is saying and doing fits in nicely with many of the same ideas I spoke about,” Baroudi added. “When he talks about heavier reliance on wind farms, the added storage capacity is a foundation that will help derive a fuller return from each and every turbine. When he highlights the utility – pun intended – of power and gas interconnections with other countries and regions, these are the prerequisites for peace, the building blocks for cooperation and dialogue.”

In his own speech shortly after Skylakakis’, Baroudi told the audience at the capital’s Hotel Grande Bretagne that countries

in the Eastern Mediterranean should work together to increase cleaner energy production and reduce regional tensions.

“Surely there is a method by which we can re-establish the same common ground enshrined in the wake of World Wars I and II, recall the same common interests and identify new ones, and work together to achieve common goals, just as the UN Charter implores us to,” he said.

Baroudi advises companies, governments, and international institutions on energy policy and is an award-winning advocate for efforts to promote peace through dialogue and diplomacy. He told his audience that with both climate change and mounting geopolitical tensions posing threats to people around the world, policymakers needed to think outside the usual boxes.

In this way, he argued, “we might develop the mutual trust which alone can create a safer, happier, and better world for our children and grandchildren.”

“Consider the possibilities if Greece, Türkiye, and Cyprus became de facto – or de jure – partners in a pipeline carrying East Med gas to consumers in Bulgaria, Romania, and Italy,” he said. “Imagine a future in which Israeli and Lebanese gas companies were similarly – but independently – reliant on the same Cypriot LNG plant for 10-20%, or even more, of their respective countries’ GDPs.”

He also envisioned bilateral cooperation scenarios between Greece and Turkey and Syria and Turkey, as well as a regional interconnection that would provide backup energy for multiple coastal states.

“Instead of accepting certain ideas as permanently impossible, we ought to be thinking ahead and laying the groundwork,” Baroudi said. “For Greece and Türkiye – as for other pairs of coastal states in the region – a good starting point would be to emulate the Maritime Boundary Agreement agreed to by

Lebanon and Israel in 2022."

Stressing the potential for cooperation to address both energy requirements and the stability required for stronger growth and development, Baroudi – whose books include a 2023 volume about the Lebanon-Israel deal and a forthcoming one urging other East Med countries to do the same – called on the EU to take up the challenge.

"Using dialogue and diplomacy to expand energy cooperation would benefit not just the countries of the East Med but also the entire European Union and much of its surrounding 'neighborhood'," he told an audience of energy professionals and key government officials. "That level of promise more than merits the attention of Brussels, the allocation of support resources, and even the designation of a dedicated point-person tasked with facilitating the necessary contacts and negotiations."

"This is how we need to be thinking if we want to get where we need to go," Baroudi said. "Instead of allowing ourselves to be discouraged by the presence of obstacles, we need to be investigating new routes that go around them, strengthen the

rule of law – especially human rights law – as a basis for the international system, and promote lasting peace among all nations. Only then can we declare victory over what the 18th-century Scottish poet Robert Burns called ‘man’s inhumanity to man’.”

How Europe can get the Green Deal done

Since the European Green Deal was introduced in 2019, European Commission President Ursula von der Leyen has touted it as the European Union’s new economic-growth agenda. After all, while the strategy’s core objective is climate-related – to reduce the EU’s greenhouse-gas emissions to net-zero by 2050 – it aims to achieve that by modernising the economy and fostering

innovation. But not everyone is convinced.

In recent months, European drivers have complained about the EU's looming ban on the production and sale of cars with internal combustion engines, households have resisted plans to phase out gas boilers, and farmers have revolted against environmental regulations they view as overbearing. With the approach of next month's European Parliament elections, far-right parties are jostling to establish themselves as the official standard-bearers of this growing discontent and preparing to use any power they win to sabotage the green agenda.

The protesters make some legitimate points. The radical transformation that the European Green Deal entails raises difficult questions about who should bear the costs of climate action, both within and among countries. If those costs end up falling disproportionately on ordinary workers – let alone the poorest and most vulnerable communities – the transformation will exacerbate inequality, with potentially serious social and political knock-on effects. Fortunately, properly designed climate policies can avert that outcome and actually lead to greater social equality.

The European Green Deal has accounted for climate-justice considerations since the beginning. Advocates always knew that they would need to secure the political support of coal-intensive Poland, and they had not forgotten the "yellow vest" revolt that erupted in France in 2018, after President Emmanuel Macron attempted to introduce a carbon tax in road transport.

It is no coincidence that the first flagship initiative under the European Green Deal was the Just Transition Fund, which will dedicate €20bn ($21.6bn) in 2021-27 to support the "economic diversification and reconversion" of the territories expected to be the most negatively affected by the green transition. Nor is it a coincidence that, while creating the first-ever carbon market for buildings and road transport, the European Commission established the Social Climate Fund, which is expected to mobilize at least €86.7bn between 2026 and 2032

to compensate the most vulnerable groups for higher energy prices.

These policy initiatives reflect the advice one would find in the economic literature on carbon dividends. But they will prove insufficient to offset the profound distributional effects of climate policy, particularly as decarbonisation accelerates and includes sectors that directly affect ordinary people's daily lives, such as buildings and transport. That is why Europe also needs a new green social contract, which focuses primarily on these sectors.

To this end, the EU should streamline and simplify existing funding instruments to deliver even more decisive support for the transformation of coal and carbon-intensive regions. It should also take steps to ensure that EU countries make better, more targeted use of carbon-market revenues to support the uptake of green alternatives, from electric vehicles to home heating systems. And it should push for a "Rural Green Deal" that supports small farmers while requiring the agri-food industry to transform its systems. While such EU-level action would not eliminate the distributional consequences of climate policy, it would help significantly.

The EU must also turn decarbonisation into a real economic opportunity by developing a solid green industrial policy. This will require, first and foremost, revitalising the "boring" EU single-market agenda, in order to leverage the bloc's greatest asset – a huge shared market for goods, financial services, energy, workers, and ideas – to incentivise new investments in clean tech.

Interventions in specific technology areas will also be needed. Rather than mimic the broad-based US Inflation Reduction Act, the EU should make the most of its limited resources by delivering targeted support in areas where it already has a solid comparative advantage on which to build. While some incumbent industries might need support as they decarbonise, supporting breakthrough innovations should be the primary goal.

The European Green Deal has come a long way since it was

conceived five years ago. But if the EU is to achieve its 2030 climate goals and achieve net-zero emissions by 2050, it must act now to ensure that it can weather the inevitable political headwinds. A new green social contract and industrial policy can make all the difference. – Project Syndicate

- *Simone Tagliapietra, a senior fellow at the Brussels-based think-tank Bruegel, is an adjunct professor at the Johns Hopkins University School of Advanced International Studies, Bologna.*

1.5°C target for globalwarming must prevail

The world is burning, and our political leaders are failing us. With temperatures rising at an alarming rate, it seems that anyone who believes it is still possible to limit global warming to 1.5° Celsius is in a rapidly shrinking minority.

As governments around the world fail to meet their responsibilities under the Paris climate agreement, the window for keeping global temperatures below the 1.5°C limit has all but closed due to insufficient action. But while some eminent commentators have declared the 1.5°C target “deader than a doornail,” I have come to the opposite conclusion: 1.5°C will never die.

To be sure, the world is in a dire state. Greenhouse-gas (GHG) emissions dumped in the atmosphere since the start of the Industrial Revolution have already warmed the planet by roughly 1.3°C, according to this year’s annual report on Indicators of Global Climate Change. And studies, including mine, unequivocally show that crucial climate goals are not being met. Under current policies, global temperatures are projected to increase by 2.5-3°C by the end of this century. Even if governments meet all their existing climate pledges, the odds against global warming staying below 1.5°C are seven to one. Combine this with the fossil-fuel industry’s delaying tactics, including the greenwashing of their polluting business practices and recent roll-back on self-imposed emissions targets, and it becomes abundantly clear that our chances of staying below 1.5°C are indeed slim. Consequently, climate scientists expect global warming to “blast past” the 1.5°C limit.

But just as risks do not vanish when safety limits are exceeded, the Paris agreement’s climate commitments do not disappear once we cross 1.5°C. While 1.5°C is a political target, it was not pulled out of thin air. It is a scientifically informed limit, first championed by small island states and later supported by a broad coalition of ambitious countries.

By now, it is clear to many governments that allowing global warming to exceed 1.5°C involves unacceptable societal risks, undermines development, and poses an existential threat to vulnerable communities and their cultures. Moreover, the line between “safe” and “dangerous” warming is becoming increasingly blurred. As the devastating effects of climate

change worldwide show, even 1.5°C is dangerous and our societies are ill-equipped to handle it.

Over the past 20 years, we have experienced what a world that has warmed by about 1°C is like. No region has been spared the impact, with a growing number of countries facing fires, floods, and storms, resulting in devastating human and financial costs that extend well beyond national borders. Between 2000 and 2019, climate-related disasters claimed over half a million lives, caused over $2tn in estimated damage, and affected almost four billion people worldwide. Even at 1.5°C warming, up to one in seven species face extinction, critical ecosystems like tropical coral reefs face destruction, and extreme heat waves that our great-grandparents experienced once in a lifetime will occur on average every six years. Centuries of ice melt will cause sea levels to rise, flooding major cities like London, New York, Shanghai, and Kolkata. Vulnerable and marginalised communities' efforts to escape poverty will be undermined, and every country's economic development will be impeded.

Limiting global warming is thus a matter of social justice, human rights, and long-term development, and this imperative remains even if we cross the 1.5°C threshold. Moreover, while exceeding 1.5°C will have unpredictable political consequences as compensation claims for avoidable climate-related damage increase, the political implications of reducing GHG emissions remain consistent with what the Paris agreement already outlines.

To halt global warming, the Paris agreement expects countries to implement emission-reduction plans that represent their "highest possible ambition." While governments are failing to meet this goal, exceeding 1.5°C does not change their responsibilities; in fact, fulfilling these commitments will become more important as temperatures continue to rise. The only way to improve our chances of keeping warming close to 1.5°C is by pledging and implementing more ambitious near-term emission cuts every year until 2035.

Even if we cannot avoid overshooting 1.5°C, the 1.5°C target

remains relevant. Every fraction of a degree counts, and global climate efforts must therefore focus on limiting the exceedance of 1.5°C and returning to safe levels as quickly as possible. The Paris agreement's target of achieving global net-zero GHG emissions, in particular, could help reverse some of the excess warming. To maintain a safe, liveable, and just planet, we must keep our eyes on the 1.5°C limit and ensure that pursuing it remains our top priority.

Economic development in an age of great-power competition

Now that the United States has introduced a new set of import tariffs on Chinese goods, the world's two largest economies appear to be on the brink of open economic warfare – and developing countries are in danger of getting caught in the crossfire. Beyond the risk that they could face sanctions or other trade restrictions if one superpower perceives them to

be helping the other, Sino-American trade tensions are eroding the value of many of these economies' comparative advantages, such as cheap labour and land. Coping with these challenges will require skillful economic statecraft.

Comparative and competitive advantages are dynamic by nature; they can be acquired or lost over time. As Harvard's Michael Porter put it in 1990, "National prosperity is created, not inherited. It does not grow out of a country's natural endowments, its labour pool, its interest rates, or its currency's value, as classical economics insists." Rather, an economy's competitiveness "depends on the capacity of its industry to innovate and upgrade."

As a growing number of governments pursue industrial policies – from short-term protective measures, like tariffs, to more forward-looking initiatives, such as targeted subsidies and deep structural reforms – the capacity to innovate and upgrade depends significantly on the state's ability to work with the market to boost competitiveness. This poses a challenge for advanced economies no less than it does for developing countries.

Consider Europe, which was forced to rethink its prevailing business model – selling high-quality engineering products – after Russia's full-scale invasion of Ukraine in 2022. As supply chains were disrupted, and energy costs and inflation soared, Europe's reliance on others for critical goods, including inputs for its own manufacturing, became an enormous economic liability. Add to that China's growing dominance in electric vehicles, and Europe finds itself increasingly anxious about its future competitiveness.

To be sure, many European economies remain highly competitive: Europe dominates the top 20 of the International Institute for Management Development's 2023 World Competitiveness Rankings, with Denmark, Ireland, and Switzerland leading the pack. But Europe's larger economies have been sliding in the rankings.

Germany dropped seven spots between 2022 and 2023, to 22nd place, and France fell five spots, to 33rd.

One problem, pointed out in a report from the McKinsey Global Institute, is that while Europe leads in sustainability and inclusivity, per capita GDP (at purchasing power parity) is lagging. In 2022, it was 27% lower than in the United States, with about half that difference attributable to cultural norms – Europeans work fewer hours per capita over their lifetimes – and the other half resulting from differences in productivity levels. Boosting productivity is now a central concern of European policymakers and will have to be addressed partly through the development of high-tech industries.

This approach has certainly worked for the US, which spends 3.5% of its GDP on research and development – a smaller share than South Korea (4.9%) and Israel (5.6%), but significantly larger than China (2.4%) and the European Union (2.2%). All of these economies are devoting considerable attention to dual-use R&D in strategic areas like artificial intelligence, green tech, and quantum computing. What stands out about the US is that, while the government is providing funding and incentives, not least through the 2022 Inflation Reduction Act, it is the private sector that is driving plans to invest $400-500 billion in R&D over the next decade.

As a report by the Boston Consulting Group notes, R&D is part of a "virtuous cycle of innovation" that sustains America's technological leadership. For example, the US claims 46% of the global market for semiconductor design. Thanks to its advanced technologies, the US semiconductor industry has a gross profit margin of 59%, which is 11 percentage points higher than competitors. In 2020, US semiconductor revenues reached $208 billion – twice the revenues of the second-leading country.

But not just anyone can emulate America's high-tech success, which is partly a function of its large and dynamic capital market. In 2022, the total market capitalization of the US stock market was 2.5 times higher than that of Europe. As a share of GDP, total market value in the US exceeded 158% in 2022, lower than Taiwan (195% of GDP), but higher than every other economy, including China (65.4%), Japan (126%), Germany (45.5%), and India (103.7%).

With its deep capital markets, the US is well-positioned to generate funding for high-risk R&D and, more importantly, reward and retain talent. Other economies – including China, the EU, Japan, and most developing countries – cannot compete on this front, not least because their banking systems remain far more risk-averse.

Recognizing America's comparative advantages in high-tech sectors, China focused on building prowess in mid-tech areas of engineering and operational production and distribution, which opened the way to comprehensive competition at scale. Since 2014, China has led the world in exports of high-technology goods, accounting for more than 30% of the global market share. Since 2000, it has tripled its share of gross value added.

For developing countries, this means that it will be very difficult to compete in mid-tech industries, not just the high-tech sectors that the advanced economies (and, increasingly, China) dominate. Add to that their limited capacity to finance investment and their dependence on access to global or regional markets to achieve economies of scale, and economic statecraft becomes all the more challenging.

Some priorities are clear. To achieve technological upgrading, countries must invest as much as possible in digital infrastructure and education, as well as projects related to the United Nations Sustainable Development Goals. To cope with rising protectionism among major economies, they will most

likely also increase support for domestic “champions,” even if it means perpetuating market fragmentation.

Overall, however, we will probably see a lot more experimentation in development strategies in the coming years. Developing countries will just have to hope that the US and China come to some sort of grand bargain before their competition escalates into conflict.

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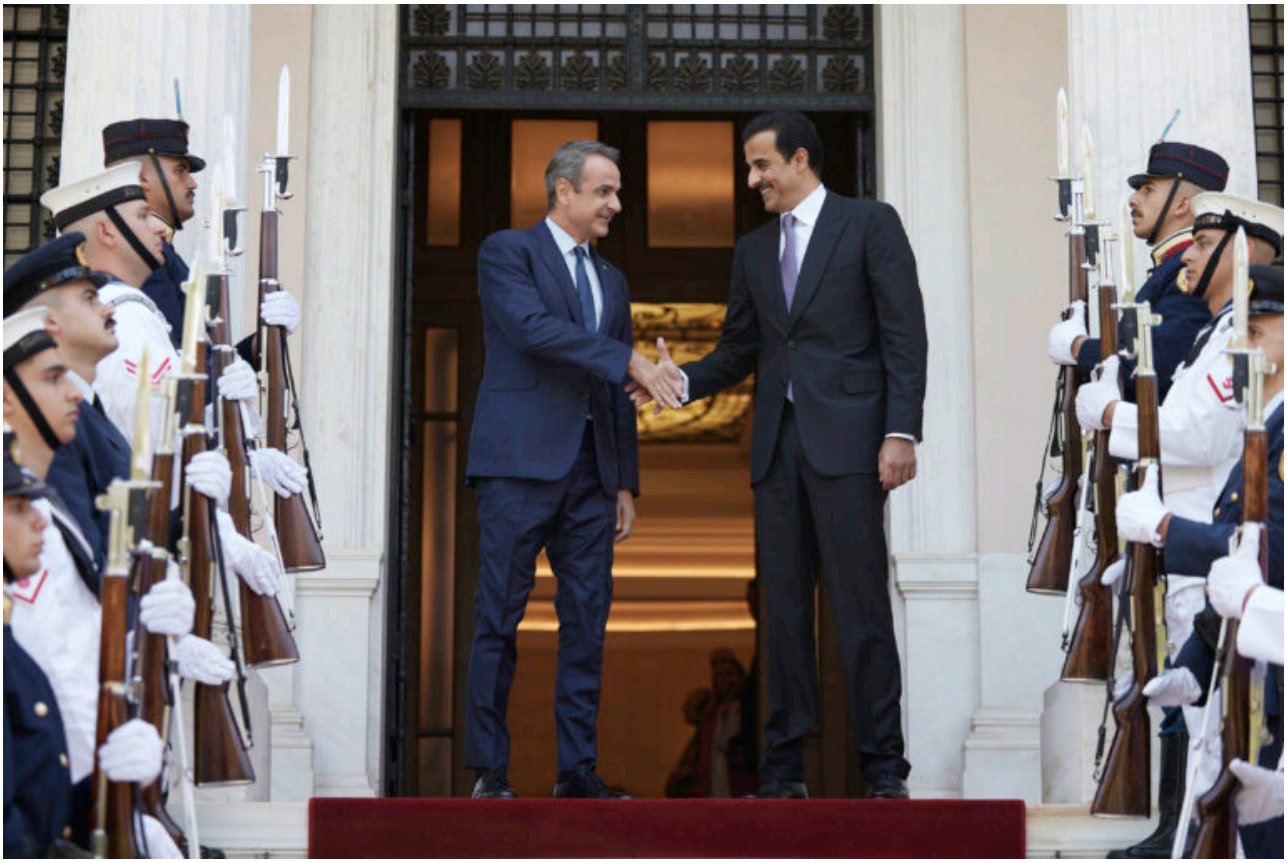
EMIR IN GREECE AND CYPRUS



Political 04.06.24
Interview by ALEXIA TASOULI
DIPLOMATIC CORRESPONDENT
POLITICAL.GR NEWSPAPER

Athens, Friday 31st of May 2024: Qatar's Emir Sheikh Tamim Bin Hamad AlThani paid official visits to Cyprus and Greece this week, meeting with senior officials from both countries as part of efforts to expand cooperation. International energy expert Roudi Baroudi, CEO of Dohabased independent consultancy Energy and Environment Holding, sat down to answer a few questions about the outcome and significance of the emir's mission.

Question: Overall, how successful were HH the emir's visits to Greece and Cyprus?

Answer: Both visits appear to have been very fruitful. HH the emir and his delegation held constructive talks with their

counterparts in both countries, and all sides came away with clearer understandings of where the already strong relationships should go next, and how they can get there. Several important first steps were taken toward identifying likely areas for further cooperation, and now both sides have the information they need to come up with proposals for the next steps on several fronts.

Q: From your perspective, what are the main takeaways from HH the emir's trip?

A: There are several elements at play here, multiple processes unfolding according to their own timelines, but all interrelated in some ways. The first thing to consider is that both visits constitute reaffirmations of Qatar's traditional diplomatic strategy, much of which revolves around having stable and friendly relations with as many counterparts as possible. That might sound a little basic, but it's really not: many governments "pick sides" in various international disputes, which often amounts to letting other countries decide your foreign policy for you. By contrast, the Qatari model seeks instead to be on good terms with all sides in most disputes, and the value of that approach has been on display for years: Doha has successfully used its good offices as a mediator in the past, and more recently it has done the same for ceasefire talks and other negotiations between Israel and Hamas.

This same philosophy also informs Qatar's stances in the Mediterranean, where it looks for the warmest possible relations with Greece and Cyprus while simultaneously maintaining close ties with Türkiye, with which both Athens and Nicosia have been at odds for decades. I should mention, too, that Cyprus follows a similar path, maintaining friendly relations with both Israel and Lebanon, for example.

Both Cyprus and Greece also would like to play central roles in the development and buildout of facilities aimed at carrying energy to the European mainland. This is a core part of their respective plans to grow and develop their respective economies, and the necessary investment and expertise will require strong partnerships.

Q: So how do these priorities tie in with the emir's visit?

A: In several ways, really. First, HH the emir's goodwill visit is a reconnection: the COVID pandemic threw a lot of international issues into hibernation as governments everywhere spent a lot of time looking inward for several years. By visiting now, he's demonstrating in general that he values Qatar's relationships with both Cyprus and Greece. The reengagement also bodes well for particulars, and there are several opportunities for cooperation because the parties can help one another. Both Greece and Cyprus want to be part of plans to open new channels for natural gas into Europe, whether it's Eastern Mediterranean gas or from further afield. For this they could find no better partner than Qatar, which, in addition to its own worldleading LNG industry, has also been acquiring stakes in energy assets around the world. But both countries also want investment in other sectors, too, and once again, both the Qatar Investment Authority, the country's sovereign fund, and various private investors are on the hunt for moneymaking ventures.

Q: What does the emir's trip mean for Greece, in particular?

A: To me the time looks ripe for more cooperation. The period since 20072008 has been very difficult, but the current government under Prime Minister Kyriakos Mitsotakis has done wonders, not just to stabilize the Greek economy and restore hope to the population, but also to help Greece regain its

rightful place at the European table. The country is now looking to build on this foundation by fully embracing cuttingedge sectors like digital connectivity and cleantech, but also by reinvigorating its traditional shipping expertise by becoming a major logistics center and by getting more out if its hospitality sector, too. The long recession is over, and some asset classes look very attractive to Qatari investors – and others, as well – especially given the stronger, cleaner governance and leadership on which Mitsotakis has built his reputation.

Q: What about Cyprus?

A: Another European land of opportunity. All other things being equal, if the world operated according to logic instead of politics, Cyprus would already be a major energy hub. Its location makes it the ideal base for the Eastern Med's burgeoning offshore gas industry, which also includes strategic ports, telecoms, and other support services. Many analysts see real potential in several sectors, including ports, banking, and a host of technologies. The increased economic activity will also introduce more people to the beaches and other attractions that make the island's tourism industry so popular. Another ingredient is leadership: President Nikos Christodoulides has been in office for less than a year, but the former diplomat and foreign minister has already shown himself to be both a highly competent Head of State and a stern defender of his country's economic development & interests.

And all this is not to mention the shipping of the gas itself, for Cyprus is not just part of the European Union: it is also very much an East Mediterranean country, so it stands to reason that it should become a gateway through which some of

the world’s newest gas producers can sell their wares into the world’s largest gas market. Whether it’s a pipeline to Greece, an LNG plant to supply customers in Asia and East Africa, or both, it’s a nobrainer that Cyprus is the place to start the journey. To me, this is Cyprus’ destiny, and if it’s further Qatari investment that makes it happen, so much the better. Remember, too, that QatarEnergy is already involved in Cyprus’ gas industry, partnering with ExxonMobil to explore two offshore blocks. The Qataris know the LNG business like no one else, and their robust & steady reliability as partners is unchallenged: in 20172021, despite an illegal blockade imposed by some of their neighbors, they continued to process and ship at the highest rates to keep supplying LNG to all of their customers around the world, helping to calm world markets during a very vulnerable period.

“Baroudi, left, with Mitsotakis at the 2019 EUArab World Summit in Athens, before the latter became Greece’s prime minister. According to Baroudi, Mitsotakis has done much to speed his country’s recovery.”

Finally, the role played by Qatar and its leaders has captured the attention of the international community due to the wise policies of the Ruler of the Gulf state. His efforts have been lauded and appreciated by East and West alike, ranging from visits of goodwill by the Emir to regional countries, to forging relations based on mutual respect and cooperation. It also has been noted that visits by the Emir tend to manifest high levels of support in mediation, bringing peace, providing materials or otherwise, as and when needed.

Only public-private co-operation can accelerate decarbonisation

As countries around the world experienced record temperatures last year, UN Secretary-General Antonio Guterres declared: “We must turn a year of burning heat into a year of burning ambition.” But to move away from fossil fuels and unlock the green transition’s economic benefits, such as job creation and universal access to clean energy, industry leaders and policymakers must work together to translate the commitments made at the UN Climate Change Conference in Dubai (COP28) into actual renewable gigawatts.

COP28 marked a historic turning point in the battle against climate change. Rallying around the UAE Consensus, world leaders pledged to move away from fossil fuels, agreeing to triple renewable power capacity to at least 11,000 gigawatts

and double energy efficiency by 2030.

But ambition alone is not enough to achieve these targets and limit global warming to 1.5C. Governments must invest in mature, cost-competitive renewable technologies that can be rapidly deployed at scale. When integrated with long-duration energy storage, green hydrogen, and system optimisation, these technologies represent the most reliable and flexible way to accelerate the energy transition.

Renewables will undoubtedly shape the global energy landscape in the coming years. Both solar and wind power are expected to grow significantly, with hydropower serving as the backbone of grid flexibility. Consequently, renewables are poised to become the twenty-first century's dominant source of global electricity.

But as a joint report released by the International Renewable Energy Agency (IRENA) and the Global Renewables Alliance (GRA) ahead of COP28 noted, tripling renewable capacity will require cooperation between the private and public sectors. Partnerships should focus on initiatives that deliver immediate results, such as mobilising low-cost financing, accelerating permitting processes, clearing grid connection backlogs, reforming government auction mechanisms for renewable-energy projects, and diversifying global supply chains. A strong commitment to inclusivity and the active participation of developing economies must be at the heart of these efforts. IRENA and GRA are demonstrating this commitment by collaborating on the annual reports commissioned by the COP28 Presidency to monitor progress toward the global tripling target and facilitate the energy transition.

We must, however, move faster, especially if we aim to ensure that progress is equitably distributed around the world. While renewable power capacity rose by 473 gigawatts in 2023, the economic benefits of the energy transition did not reach every country. Remarkably, 83% of these increases were concentrated in China, the European Union, and the US, leaving many countries in the Global South behind.

In fact, the shift to renewables is alarmingly slow in many

parts of the world. Opportunities to address development and access challenges in Sub-Saharan Africa, where more than 500mn people still lack access to electricity, are being squandered. This sluggish transition can be attributed largely to the lack of affordable financing, adequate planning, and the policy and market frameworks needed to support the adoption of renewable energy. Tellingly, public fossil-fuel subsidies reached $1.3tn in 2022 – roughly the annual investment needed to triple renewable capacity by 2030.

A critical first step toward fostering greater public-private co-operation in pursuit of COP28's ambitious targets is to reform the global financial architecture. Africa, for example, accounts for 17% of the world's population but has received less than 2% of global investments in renewable energy over the past two decades, underscoring the need to reduce capital costs and attract private investors. Developing industrial clusters and initiating grant programs could also help foster environments conducive to innovation and private-public partnerships.

Recent commitments by world leaders offer glimmers of hope. African leaders at the September 2023 Africa Climate Summit in Nairobi, for example, pledged to increase the continent's renewable capacity to at least 300 gigawatts by 2030. This effort aims to reduce energy poverty and boost the global supply of cost-effective clean energy suitable for industrial use.

Kenyan President William Ruto, a key advocate of the Nairobi agreement, established the Accelerated Partnership for Renewables in Africa, an African-led international alliance of governments and stakeholders that aims to accelerate renewable-energy deployment, increase access, promote green industrialisation, and strengthen economic and societal resilience.

Governments and business leaders should harness the current political momentum to foster co-operation between policymakers and private investors. As governments develop appropriate policy and market frameworks to facilitate the transition to

renewables, the private sector – historically responsible for 86% of global investments in renewable energy – is poised to lead the charge. Together, we can achieve a clean, secure, and just energy future. But to realise this vision, we must act fast. – Project Syndicate

- *Francesco La Camera is Director-General of the International Renewable Energy Agency. Bruce Douglas is CEO of the Global Renewables Alliance.*

In the dock: Pivotal climate change testimonies in US

From Mexicans left homeless by rising seas to Colombians affected by coral bleaching, hundreds of people are telling the top human rights court in the Americas what climate change means to them in an historic case that could shape international law.

Environmental lawyers also hope the hearings at the Inter-American Court of Human Rights (IACHR), which were requested by Colombia and Chile, will define the duties of states to confront the climate crisis and stop it infringing on human rights.

As well as receiving submissions from climate victims, the Costa Rica-based court, which started its inquiry in Barbados in April, will hear from UN agencies, legal experts, grassroots environmental campaign groups, and youth groups.

The next sessions are due to be held in Brasilia and then Manaus, Brazil at the end of May, and an advisory opinion is expected by May 2025.

“We’re hoping that the court’s legal opinion is a guide and reference for Mexico, and other states, to develop public policies from a climate justice perspective,” said Nora Cabrera, a lawyer and head of Our Future, a Mexico-based youth climate justice campaign group.

“And that it includes loss and damage compensation for affected communities, and adaptation policies for those not yet directly affected by climate change,” said Cabrera, who will be speaking at the next hearing in Manaus.

In January, Colombia and Chile asked the IACHR to issue the advisory opinion, saying that they were experiencing the “daily challenge of dealing with the consequences of the climate emergency,” including fires, landslides, droughts and floods.

“These events reveal the need for an urgent response based on the principles of equity, justice, co-operation and sustainability, with a human rights-based approach,” they said in their petition.

“There is a close relationship between the climate emergency and the violation of human rights,” they added.

It is this link between climate change and human rights that the IACHR will seek to define, while also examining how climate change affects migration and looking at the disproportionate effect on children, women and Indigenous people.

Chile and Colombia also asked the court for clarification on a state's duties to protect environmental activists.

Latin America is the most dangerous place in the world for environmental and land defenders, according to advocacy group Global Witness. Around 90% of the 177 killings of environmental activists recorded in 2022 took place in the region.

"The hearing aims to ask for clarity about human rights obligations and the climate crisis," said Jacob Kopas, senior attorney at the Earthjustice environmental group, one of a group of lawyers who spoke at the Barbados hearing on April 26.

"It will help to create a more concise framework to guide state behaviour and policy to confront the climate crisis and protect human rights," said Kopas.

Among those submitting testimonies will be the residents of the El Bosque fishing community in Tabasco, Mexico, where rising sea levels caused by climate change have swept away about 200 meters of coastline.

Since 2019, the school and more than 50 homes have been destroyed, forcing about 200 people to leave.

El Bosque community leader, Guadalupe Cobos, said she and 10 neighbours will probably have to leave within a year and resettle in an area about 12km away, where new homes are being built by the government.

"We depend on the sea but coastal erosion has affected our way of life. It's important for the court to know that we're living climate change now and that this isn't something that will happen in the future in 20 or 50 years' time," said Cobos.

"We want the court to hear our experiences and to know that our rights have been violated, that we have been forced to migrate," Cobos told the Thomson Reuters Foundation.

The court's advisory opinion could have important implications for climate litigation across Latin America and the Caribbean and make it easier for communities living with the effects of global warming to take legal action.

The opinion will apply to all signatories of the American Convention on Human Rights, most of whom are members of the Organization of American States. The United States and Canada have not ratified the treaty however.

The advisory opinion will help shape the region's legal systems as many countries incorporate its jurisprudence into their laws and constitutions.

"We're hoping that the court makes the link between the climate crisis and human rights violations and that it recognises climate displacement," said Cabrera, whose organisation has been supporting the El Bosque community.

The IACHR is known for its progressive stance on climate justice and human rights.

In March, it recognised that citizens in Peru have the right to a healthy environment when it ruled in favor of people living in the Andean mining town of La Oroya, who had suffered from decades of environmental pollution.

Other courts are also breaking new ground in this sphere.

In Colombia in April, in response to a lawsuit filed by a farming couple who were driven out of their home by flooding caused by heavy rains, the country's constitutional court recognised the links between environmental disasters and climate change and people being forcibly displaced.

Across the world, other top courts are also examining the connection between human rights and climate change. On April 9, the European Court of Human Rights (ECHR) ruled that the Swiss government had violated the human rights of its citizens by failing to do enough to combat climate change.

Two other courts – the International Court of Justice (ICJ) and the International Tribunal for the Law of the Seas (ITLOS) – are also expected to give advisory opinions on international legal obligations of states regarding climate change.

Kopas said the IACHR ruling could lead the way by delivering a "forward-reaching and progressive" advisory opinion.

"It's historic because of the climate crisis we are in. This is the crisis of our lifetime and of all future generations."

– Thomson Reuters Foundation

Greece Spearheads a Dynamic Energy Transition

Countries have different energy priorities due to factors like the availability of energy resources, geopolitics, the population size, environmental considerations and excessive use of energy, the needs of industry, and the availability of technology.

The most representative energy priorities among countries, including Greece, revolve around energy security, reduction of greenhouse gas emissions, affordability, and avoidance of deforestation. Construction of additional energy infrastructure and charging energy consumers with more taxes for excessive energy use constitute additional energy priorities. According to a market survey conducted by IPSOS in

late 2022 that engaged 24 thousand people in 28 countries, the top energy priority was that of energy security followed by the development of cleaner energy sources, like wind and solar, and the affordability of energy.

The war on Ukraine brought energy security to the forefront of concerns for many regions, particularly Europe. Directly impacted countries, like Germany, have had to reactivate coal production and extend the operational lives of nuclear power plants to ensure efficient supply of energy to consumers.

Electricity Generation from Renewables

Despite challenges associated with the war on Ukraine, Greece has emerged more resilient by enhancing reform of its energy market and accelerating deployment of renewables in accordance with the National Climate Law of 2022. The Climate Law signals concrete milestones for Greece's energy transition with most prevalent the reduction of greenhouse gas emissions by 55 percent by 2030 and, achievement of net zero emissions by 2050.

The Climate Law also foresees a total phase-out of lignite generated electricity by 2028. Notably, Greece ranks 2nd out of the 27 EU member states in the reduction of electricity generation from certain solid fossil fuels; lignite generated electricity decreased by 57,7 percent in the first 8 months of 2023 compared to the same period of 2019 according to the Greek Independent Power Transmission Operator (IPTO).

The reduction of the use of solid fossil fuels has been offset by the accelerated development of renewable sources of energy, construction of critical energy infrastructure, and promotion of plans for Greece to position itself as key hydrogen hub in Europe. It is only in four years that Greece enhanced the installed capacity of renewable energy plants, accounting for 50 percent of electricity generation, with a clear target for electricity generation from renewables to reach 80 percent by

2030. The Greek solar photovoltaic market has gained most traction with 1.4 GW of new photovoltaic projects connected to the grid in 2022 and with anticipation of 10.9 GW to be added during the period of 2024-2027 according to the latest report by industry association Solar Power Europe.

The Offshore Wind Challenge

Wind energy in Greece has been surpassed by photovoltaics in new and total installations primarily due to delays in the licensing process. The largest onshore wind power plants include the 336 MW onshore Evia Wind Farm of Ellaktor located in Evia, Central Greece; the 330 MW Kafireas wind farm of Terna Energy on the island of Evia; and the 153MW Imathia Kozani Wind Farm under development by 547 Energy LLC, located in West Macedonia. Greece's revised National Energy and Climate Plan (NECP) sets a clear target of 2 GW for onshore wind capacity and 2.7 GW for offshore wind capacity by 2030.

Greece swiftly moves forward to tap for the first time ever its offshore wind potential in pursuance of the national offshore wind farms development program that incorporates 25 eligible development areas in the Ionian, Aegean, and the East Mediterranean Seas.

An environmental impact assessment that has been completed by the Hellenic Hydrocarbons and Energy Resources Management Company includes maritime zones of over 2,712 square km where floating technology will be employed for the offshore wind farms in full compliance with environmental safeguards striking a balance between offshore wind energy, national security, and tourism.

Offshore wind energy falls under the creation and development of new markets along with carbon dioxide CO2 capture and green hydrogen production.

Unlocking the CO2 Storage Potential

Clean hydrogen can prove to be commercially viable due to the use of CO2. CO2 can be transported from where it is produced, via ship, truck or in a pipeline, and be used in commercial applications such as food and beverage production, metal fabrication, and cooling.

The majority of commercial applications center on the direct use of CO2 by turning it into chemicals and construction materials. Liquid CO2 can also be transported to an underground site where it can be permanently stored under strict environmental standards. The capture and storage of CO2 contribute to the decarbonization of heavy industries and the development of clean hydrogen.

It is in this context that Greece swiftly moves to identify potential areas for CO2 storage, with the most mature option being that of Prinos basin. Specifically, under Greek and European legal contexts, an exploration permit has been awarded to medium-sized Energean Oil & Gas for CO2 storage in the depleted Prinos field evaluated as the best option because of its depth and structure.

Prinos is scheduled to be operational from the fourth Quarter of 2025 as small-scale project with capacity of up to 1 million tons (MT) of CO2 annually and with plans to increase capacity from the fourth Quarter of 2027 up to 3 MT of CO2 annually. Areas with saline aquifers, mafic rocks and oil and gas fields throughout Greek territory are evaluated as potential storage sites.

Prospects of a Hydrogen Hub for Europe

Green hydrogen production and transportation falls within the priorities of the Greek National Energy and Climate Plan. It is estimated that little investment is required, primarily in the form of developing compression stations, for the conversion of the existing national network to transport hydrogen. Extensive cross-border pipelines like Interconnector

Greece-Bulgaria (IGB) and Trans Adriatic Pipeline (TAP) have the potential to transport hydrogen.

Proper energy infrastructure can guarantee that massive imports of hydrogen from the Middle East and North Africa are directed to Europe via Greece. The European Union has declared that as the Ukraine war goes on it will have to import 10 MT of renewable hydrogen annually until 2030.

The first major hydrogen project that meets demands of industrial production has been launched in the north-west of Saudi Arabia, in a region called NEOM, that has been declared an exclusive renewable and hydrogen zone. The Neom Green Hydrogen Company project constitutes an 8.4-billion-dollar green hydrogen and green ammonia production facility that will integrate 4 GW of wind and solar energy to produce 600 tons of carbon-free hydrogen per day. Large-scale production of renewable hydrogen from the NEOM region is expected to begin in 2026, and green hydrogen will be exported in the form of green ammonia.

Overall, Greece fosters an effective energy transition with a blend of renewable energy pathways and a match of CO2 storage and hydrogen transportation. It is with no doubt that important targets and deliverables are on the horizon.

Antonia Dimou

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