

What Africans want from COP30



The upcoming UN Climate Change Conference (COP30) will be the first to take place in the Amazon, sending a powerful symbolic message about the central role developing economies must play in the global response to the climate crisis. But at a time of geopolitical fragmentation and low trust in multilateralism, symbolism is not enough. Developing economies must plan and propel the green transition. Africa is no exception.

So far, Africa's climate narrative has been one of victimhood: the continent contributes less than 4% of global greenhouse-gas emissions, but it is highly vulnerable to the effects of climate change. This disparity fuelled the calls for "climate justice" that helped to produce ambitious climate-financing pledges from the industrialised economies at past COPs. But with those pledges going unfulfilled, and Africa's climate-finance needs rising fast, moral appeals are clearly not enough.

A shift to a more strategy-oriented discourse is already underway. The Second Africa Climate Summit (ACS2), which took place in Addis Ababa last month, positioned the continent as a united actor capable of shaping global climate negotiations. It also produced several initiatives, such as the Africa Climate Innovation Compact and the African Climate Facility, that promise to strengthen Africa's position in efforts to ensure a sustainable future.

Instead of continuing to wait for aid, Africa is now seeking to attract investment in its green transition, not because rich countries "owe" Africans – though they do – but rather because Africa can help the world tackle climate change. But success will require progress on four fronts, all of which will be addressed at COP30.

The first is the cost of capital. Because systemic bias is embedded in credit-rating methodologies and global prudential rules, African countries face the world's highest borrowing costs. This deters private capital, without which climate finance cannot flow at scale. While multilateral development banks (MDBs) can help to bridge the gap, they typically favour loans – which increase African countries' already-formidable debt burdens – rather than grants.

At COP29, developed economies agreed to raise "at least" \$300bn per year for developing-country climate action by 2035, as part of a wider goal for all actors to mobilise at least \$1.3tn per year. If these targets are to be reached, however, systemic reform is essential. This includes changes to MDB governance, so that African countries have a greater voice, and increased grant-based financing. Reform also must include recognition of African financial institutions with preferred creditor status, and the cultivation of a new Africa-led financial architecture that lowers the cost of capital.

The second area where progress is essential is carbon markets. Despite its huge potential for nature-based climate solutions,

Africa captures only 16% of the global carbon-credit market. Moreover, the projects are largely underregulated and poorly priced, with limited community involvement. Africa is now at risk of falling into a familiar trap: supplying cheap offsets for external actors' emissions, while reaping few benefits for its people.

While some African countries are developing their own carbon-market regulations, a fragmented system will have limited impact. What Africa needs is an integrated carbon market, regulated by Africans, to ensure the quality of projects, set fair prices, and channel revenues toward local development priorities, including conservation, renewable energy, and resilient agriculture. This system should be linked with Article 6 of the Paris climate agreement, which aims to facilitate the voluntary trading of carbon credits among countries.

The third imperative for Africa at COP30 is to redefine adaptation. Rather than treating it primarily as a humanitarian project, governments must integrate adaptation into their industrial policies. After all, investment in climate-resilient agriculture, infrastructure, and water systems generates jobs, fosters innovation, and spurs market integration.

By linking adaptation to industrialisation, Africa can continue what it started at ACS2, shifting the narrative from vulnerability to value creation. Africa should push for this approach to be reflected in the indicators for the Global Goal on Adaptation, which are set to be finalised at COP30. The continent's leaders should also call for adaptation finance to be integrated into broader trade and technology frameworks.

The final priority area for Africa at COP30 is critical minerals. Africa possesses roughly 85% of the world's manganese, 80% of its platinum and chromium, 47% of its cobalt, 21% of its graphite, and 6% of its copper. In 2022,

the Democratic Republic of the Congo alone accounted for over 70% of global cobalt production.

But Africa knows all too well that natural-resource wealth does not necessarily translate into economic growth and development. Only by building value chains on the continent can Africa avoid the “resource curse” and ensure that its critical-mineral wealth generates local jobs and industries. This imperative must be reflected in discussions within the Just Transition Work Programme at COP30.

These four priorities are linked by a deeper philosophical imperative. The extractive logic of the past – in which industrialisation depended on exploitation and destruction – must give way to a more holistic, just, and balanced approach, which recognises that humans belong to nature, not the other way around. Africa can help to lead this shift, beginning at COP30.

The barriers to progress are formidable. China likes to tout South-South solidarity, but it does not necessarily put its money where its mouth is. The European Union is struggling to reconcile competing priorities and cope with political volatility. The US will not attend COP30 at all, potentially emboldening others to resist ambitious action. If consensus proves elusive, parties might pursue “mini-lateral” deals, which sideline Africa.

When it comes to the green transition, Africa’s interests are everyone’s interests. If the continent is locked into poverty and fossil-fuel dependency, global temperatures will continue to rise rapidly. But if Africa is empowered to achieve green industrialisation, the rest of the world will gain a critical ally in the fight for a sustainable future. – Project Syndicate

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Σε συνομιλίες η Κύπρος για την ΑΟΖ με τον Λίβανο. Οι επαφές που κάνει ο πρόεδρος της Κύπρου



Οι τεταμένες σχέσεις Ισραήλ-Λιβάνου και οι ραγδαίες εξελίξεις στη Μέση Ανατολή έχουν κινητοποιήσει τη Λευκωσία για επαφές υψηλού επιπέδου για την επικύρωση της ΑΟΖ με το Λίβανο. Έτσι ο πρόεδρος της Κύπρου Νίκος Χριστοδουλίδης συναντήθηκε με

τον εμπειρογνώμονα περιφερειακής πολιτικής Ρούντι Μπραούντι, μακροχρόνιος υποστηρικτής του διαλόγου, της διπλωματίας και της ειρηνικής ανάπτυξης, ως προς τις ασφαλέστερες διαδρομές προς μεγαλύτερη σταθερότητα για ολόκληρη την Ευρω-Μεσογειακή περιοχή και άτυπο διαμεσολαβητή των δύο χωρών. Μάλιστα έχει γράψει και σχετικά βιβλία, όπως την «οριστικοποίηση θαλάσσιων Συνόρων στην Ανατολική Μεσόγειο: Ποιος θα Είναι ο Επόμενος;» και «Ένα Κλειδί, Πολλαπλά Έπαθλα: Οριστικοποίηση θαλάσσιων Συνόρων ανάμεσα στην Κύπρο, το Λίβανο και τη Συρία».

Ο κ. Χριστοδουλίδης και ο ομόλογός του από το Λίβανο, ο πρώην Γενικός Τζόζεφ Αουν, συμφώνησαν τον Ιούλιο να διαπραγματευτούν και να οριστικοποιήσουν μια γραμμή θαλάσσιων συνόρων. Και οι δύο χώρες αναμένουν ότι θα αποκομίσουν πολλά οφέλη από μια τέτοια συμφωνία, και η κατοχύρωση εδαφικών συνόρων στη θάλασσα θα καταστήσει ευκολότερη την προσέλκυση ξένων επενδυτών για την ανάπτυξη των ενεργειακών πηγών τους.

«Η επίτευξη συμφωνίας θα ανοίξει όλες τις πόρτες για την Κύπρο και το Λίβανο», δήλωσε ο κ. Μπαρούντι μετά από τη συνάντηση. «Οι τάσεις πηγαίνουν στη σωστή κατεύθυνση, και όχι μόνο σε σχέση με το Λίβανο. Ο πρόεδρος της Κύπρου έχει φιλόδοξα σχέδια εξωτερικής πολιτικής, ιδιαίτερα σχετικά με τις δραστηριότητες της Κύπρου τους πρώτους έξι μήνες του 2026, όταν θα έχει την προεδρία του συμβουλίου της Ευρωπαϊκής Ένωσης».

«Εκμεταλλεύτηκα επίσης την ευκαιρία να ευχηθώ στο πρόεδρο της Κύπρου καλή επιτυχία σε αυτή την αποστολή», πρόσθεσε, «ειδικά καθώς αναμένεται να εστιάσει όχι μόνο στην ενίσχυση της συνοχής της Ευρώπης, αλλά και στην ενίσχυση του ρόλου της Κύπρου ως γέφυρα μεταξύ Ευρώπης και γειτονικών χωρών.»

Πράγματι, η Λευκωσία έχει ένα φιλόδοξο πρόγραμμα για την προεδρία της και συνεργάζεται στενά με τη Δανία, που ασκεί την προεδρία αυτό το εξάμηνο, και την Πολωνία, που θα διαδεχθεί την Κύπρο. Η λεγόμενη «τριπλή προεδρία» βοηθά στη διασφάλιση συνέχειας από τη μία προεδρία στην επόμενη.

Ο κ. Μπαρούντι έχει γράψει αρκετά βιβλία και μελέτες σχετικά με το πώς τα υπάρχοντα εργαλεία του ΟΗΕ μπορούν να βοηθήσουν τις παράκτιες χώρες να συμφωνήσουν δίκαια και ισότιμα θαλάσσια σύνορα, να μειώσουν τις εντάσεις και να αποκομίσουν σημαντικά οικονομικά και κοινωνικά οφέλη. Έχει επίσης γράψει και μιλήσει δημόσια για διάφορες ευκαιρίες περιφερειακής συνεργασίας, από διασυνδεδεμένα ενεργειακά δίκτυα και υπεράκτια αιολικά πάρκα μέχρι κοινή διαχείριση θαλάσσιων προστατευόμενων περιοχών.

Το 2023, απονεμήθηκε στον κ. Μπαρούντι το Βραβείο Ηγεσίας από το Transatlantic Leadership Network, ένα think-tank της Ουάσινγκτον, για τη «πολύτιμη συμβολή του στην οικοδόμηση μιας ειρηνικής και ευημερούσας Ανατολικής Μεσογείου».

Σε δεκάδες άρθρα, μελέτες, εμφανίσεις στα μέσα ενημέρωσης και ομιλίες, για παράδειγμα, ο βετεράνος της κλάδου έχει τεκμηριώσει την επιχειρηματική βάση για το νησιωτικό κράτος να γίνει κέντρο επεξεργασίας και διανομής φυσικού αερίου για τους γείτονές του. Αυτό θα περιελάμβανε την Κύπρο να δημιουργήσει έναν υπόθαλάσσιο αγωγό φυσικού αερίου προς την ευρωπαϊκή ενδοχώρα, ένα εργοστάσιο υγροποιημένου φυσικού αερίου (LNG) που θα ήταν το μεγαλύτερο έργο που έχει ποτέ η χώρα, ή και υπεράκτια πλωτά συστήματα αποθήκευσης και υγροποίησης για την εξυπηρέτηση απομακρυσμένων χωρών δια θαλάσσης.

«Όλες αυτές οι μελέτες και οι παράγοντες που ανέδειξαν παραμένουν επίκαιροι σήμερα», δήλωσε ο κ. Μπαρούντι. «Η Κύπρος διαθέτει την εγγύτητα, τις τιμές γης και τις σχέσεις με τους γείτονές της για να γίνει ο συνεταιριστής όλων στις εξαγωγές ενέργειας, αλλά και να λειτουργήσει ως θεμέλιος λίθος για μια πιο σταθερή και ευημερούσα περιοχή.»

Amid Maritime Boundary Talks in the Region, Cypriot President Receives International Energy Expert, Roudi Baroudi, on UN Demarcation Tools



NICOSIA – 29, September 2025: Cypriot President Nikos Christodoulides met today with the international energy policy expert, Roudi Baroudi, who presented copies of his two latest books, “Settling Maritime Boundaries in the Eastern Mediterranean: Who Will Be Next?” and “One Key, Multiple Prizes: Settling Maritime Boundaries Among Cyprus, Lebanon,

and Syria”.

Baroudi, a long-time advocate of dialogue, diplomacy, and peaceful development as the surest routes to greater stability for the entire Euro-Med region, said he felt “honored to have been received by the President.”

Christodoulides and his Lebanese counterpart, former General Joseph Aoun, agreed in July to have their respective teams negotiate and finalize a maritime boundary line (MBL). Both countries expect to derive numerous benefits from such a pact, and having treated borders at sea will make it easier to attract the foreign investors required to develop their respective offshore oil and gas resources.

Reaching a deal “will open up all sorts of doors for Cyprus and Lebanon,” Baroudi said after the meeting. “The trends are going in the right direction, and not just vis-à-vis Lebanon. The President has ambitious foreign-policy plans, particularly with regard to Cyprus’ activities for the first six months of 2026, when it will hold the rotating presidency of the European Union.”

“I also took the opportunity to wish His Excellency every good fortune on that mission,” he added, “especially since it is expected to focus not only on shoring up Europe’s cohesion, but also on beefing up Cyprus’ role as a bridge between Europe and its neighbors.”

Indeed, Nicosia does have an ambitious agenda for its time in the presidency, and is working closely with Denmark, the current holder, and Poland, which will follow Cyprus’ term. The so-called “trio presidency” helps to ensure continuity from one presidency to the next.

Baroudi has published several books and studies on how existing United Nations tools can help coastal states to agree fair and equitable maritime boundaries, reduce tensions, and reap significant economic and social rewards in the bargain.

He also has written and spoken publicly about a variety of opportunities for regional cooperation, from interconnected power grids and offshore wind farms to joint management of marine protected areas. In 2023, he was awarded the Transatlantic Leadership Award by the Transatlantic Leadership Network, a Washington think-tank, for what it described as “his valuable contribution in building a peaceful and prosperous Eastern Mediterranean.”

In addition to these works, ever since 2011, when the full potential of the East Med’s offshore hydrocarbon deposits began to emerge, Baroudi’s advocacy role has seen him provide thought leadership for a variety of projects and proposals that would transform Cyprus into a regional energy hub. In dozens of articles, studies, media appearances, and speaking engagements, for example, the industry veteran has made the business case for the island nation to become a gas processing and distribution center for its neighbors. This would include Cyprus hosting one end of an undersea gas pipeline to the European mainland, a liquified natural gas (LNG) plant that would be the country’s largest-ever project, and/or offshore floating storage and gasification units(s) to serve more distant customers by ship.

“All of these studies and the factors they highlighted are still relevant today,” Baroudi said. “Cyprus has the proximity, the land prices, and the relationships with its neighbors to make it everyone’s partner for energy exports, but also to serve as the bedrock for a stabler and more prosperous region.”

**'The madness has to end':
Long-time promoter of
dialogue says 'decent
nations' must 'finally'
punish Israel for
'indefensible outrage' in
Doha**



Israel's strike on a residential building in Doha on Tuesday was a "cowardly, treacherous act of war" that "cries out" for stronger efforts to end the war, a prominent Lebanese expatriate said in a statement after explosions rocked the Qatari capital.

"This is an indefensible outrage, an unprovoked attack on a

country that has done nothing but try to reduce tensions and help the region regain some semblance of stability,” said Roudi Baroudi, a high-profile executive, author, and energy expert who has spent years advocating for dialogue, diplomacy, and peaceful development across the Mena region.

“This country and its government have done everything possible to help end Israel’s continuing wars, mediating ceasefire talks since the beginning of the conflict in Gaza, also helping to end the brief but exceedingly dangerous clash between Israel and Iran, and using its good offices to reduce tensions on several other fronts as well. Qatar’s leaders and diplomats have worked tirelessly, arranging several possible off-ramps that would not only have helped to spare the Palestinian and other peoples, but also to give Israel a way out of the corner its prime minister has painted it into. The Israelis should be thanking Qatar for having played such a diplomatic constructive and selfless role,” he added.

“Instead, today, the Netanyahu government has carried out a cowardly, treacherous attack that cries out for the international community to finally step in and apply all the pressure at its disposal. History will not look kindly on a government that clearly seeks to prolong the war – and the suffering of the Palestinians and others – for no other reason than to keep itself in power. Those who fail to stand for the defenseless civilians who continue to die under Israeli bombardment and blockade will not escape the same historical judgment.”

“The madness has to end, and for that to happen, all states with any influence over Israel have to use it,” Baroudi stated. “It must be made unequivocally clear that no state can conduct itself in this manner without inviting a swift and

painful response from the decent nations of this Earth: stop arming it, stop protecting it, stop funding it, stop trading with it – stop everything unless and until it starts behaving itself.” We need peace for all.

**بارودي: استجرار الكهرباء
والغاز من قبرص ينوع مصادر
الطاقة ويحميها من أي تداعيات
جيوسياسية**

ARTISTIC MAP ILLUSTRATION OF CYPRUS BLOCK 6 GAS & ELECTRICITY PLAY



تبدو العلاقات اللبنانية القبرصية في حال تطور سريع وقد فتح هذا الباب رئيس الجمهورية العماد جوزاف عون فلاقى استجابة ورغبة عارمة لدى نظيره القبرصي كريستو دوليديس تجاه تطوير العلاقة بين البلدين الجارين وما لفت أن الرئيس القبرصي هو الذي بادر وطرح على الرئيس عون استجرار الكهرباء من قبرص إلى لبنان وقد تلقف رئيس الجمهورية اللبنانية هذه المبادرة وطلب من وزير الطاقة جو صدي متابعة الموضوع.

وفي هذا السياق أثنى خبير الطاقة الدولي رودي بارودي على مبادرة الرئيس القبرصي واللبناني، مؤكداً وجوب الترحيب بأي خطوة من هذا النوع باعتبارها نقطة انطلاق مهمة لتأمين الكهرباء للبنانيين وحل أزمة القطاع المستفحلة جزئياً منذ عقود وأن هذه الخطوة تأتي بعد الإعلان عن استئناف مفاوضات ترسيم الحدود البحرية بين البلدين. كما أثنى بارودي على الدور الذي يلعبه الرئيس عون في ملف الطاقة

ككل واعتباره أولوية لما فيه من فائدة على الاقتصاد وتعزيز القدرات الاجتماعية للمواطنين اللبنانيين.

ولفت بارودي إلى أن هذه الخطوة ستتيح تزويد لبنان ما بين 150 و300 ميغاواط وفق مراحل متعددة ولا سيما بعد عام أو عامين على الأكثر عندما تبدأ قبرص بإنتاج الكهرباء من الغاز المستخرج من ENI & TOTAL ENERGIES حولها البحرية خاصة حقل كرونوس الذي يديره كل من شركتي ما يعزز تنوع مصادر الطاقة وبأسعار مقبولة لا سيما وأن الحقل المعني في قبرص لا يبعد عن حقل زهر المصري سوى 60 كلم ما يعني أن كلفة الإستخراج ستكون مماثلة لتلك المعتمدة في الحقل المصري وهي كلفة رخيصة نوعاً ما.

ولفت بارودي إلى وجود محطتين رئيسيتين لإنتاج الكهرباء في قبرص، بين ليماسول Vassiliko إحداهما بين لارنكا وليماسول، والأخرى في وبافوس، بقدرة إجمالية تقارب 1600 ميغاواط من دون الكهرباء المنتجة من الطاقة الشمسية وبالتالي يمكن للبنان الاستفادة من هذه الطاقة بكلفة يتم التوافق عليها موضحاً أن الكلفة ستكون أقل بكثير من كلفة الكهرباء المنتجة في لبنان عندما تبدأ قبرص العام المقبل باستخدام الغاز المستخرج من حقولها البحرية لإنتاج الكهرباء ولاسيما البلوك رقم 6.

بارودي طالب الحكومة اللبنانية بالإسراع بوضع الأطر الإصلاحية والتنظيمية للقطاع بشأن استجرار الكهرباء من قبرص وبإعداد دراسة جدوى اقتصادية تأخذ في الاعتبار كلفة الاستجرار ولفت أن محطة هي المحطة التي تصدر الغاز في 2026، على أن يواصل Vassiliko لبنان مساعيه لربط شبكته بالشبكة السورية للحصول على دعم إضافي كهربائي عن طريق محطة دير نبوح، بما في ذلك محطة الكسارة في منطقة البقاع.

Israel-Iran war needs to stop

before we all get burned



The long-feared war between Israel and Iran is now fully under way, and the repercussions threaten to include significant disruptions – not just for the two belligerents, but also for economies, peoples, and governments around the world.

To understand how and why an armed conflict between two

regional powers could have such a widespread impact, start by considering the following:

1. Iran's reserves of crude oil and natural gas are, respectively, the second- and third-largest in the world;
2. While Israel has posited Iran's alleged nuclear activities as its reason for going to war, its strikes have also focused on Iran's oil and gas infrastructure;
3. At the time of this writing, five of Iran's nine major oil refineries had been hit and knocked out of service, along with storage depots and other facilities;
4. Israeli forces also started a huge fire at the South Pars gas field, which Iran shares with Qatar – and which holds almost as much gas as all of the other known gas fields on Earth.
5. For good measure, Iranian strikes against the Israeli refinery complex at Haifa have led to the shutdown of several offshore platforms, further crimping regional hydrocarbon output;

Now consider that it gets worse. The destruction or shutdown of Iran's ability to extract, process, distribute, and export hydrocarbons would cause tremendous problems at home, and put upward pressure on prices everywhere, although the global impact would likely be manageable. The situation would be far more disruptive if Israeli attacks hit Bandar Abbas area. That could cause prices for gas – and other forms of energy – to soar on world markets.

And yet even this is not the greatest peril threatened by this war. That desultory honour goes to the possibility that traffic could be disrupted in the Strait of Hormuz, the relatively narrow channel that connects the Gulf to the open ocean. The passage is only 40 kilometres at its narrowest spot, wending for over 150 kilometres between Oman and the

United Arab Emirates, to the west and south, and Iran's Hormozgan Province to the east and north. Hormozgan is also home to the famous port city of Bandar Abbas, which hosts a giant oil and petrochemical complex that has already been struck at least once by Israeli forces.

What really matters for our purposes is that Hormuz also connects several other of the world's most prolific oil and LNG producers – including Iraq, Kuwait, Qatar, and Saudi Arabia – to their overseas clients. As a result, every day, about a quarter of the world's crude oil and LNG requirements exit the Gulf through Hormuz, making it the most strategically important chokepoint of our times. If this flow were halted or even significantly slowed, the consequences could be disastrous for much of the world. Although most of these exports are typically bound for markets in Asia, even a brief reduction in available oil and gas could send crude prices, currently a little more than \$70 a barrel, shooting past \$100 or even \$120 in short order.

If such a supply crisis lasted any length of time, the global economy would enter uncharted territory. Not only would sky-high energy prices cause inflation to rise across the board, but fuel shortages could also be expected to cripple businesses of every size and sort. Transport and manufacturing, food processing and medical research, power generation, household heating and cooling, even the Internet itself: everything that depends on energy could slow to a trickle. A global recession would almost certainly ensue, and given the current trade environment, that might lead to another Great Depression.

So what might cause such an interruption? There are several possibilities, including the accidental sinking or crippling of a supertanker or two in just the right (i.e., wrong) place(s). Even if one or more accidents did not make Hormuz physically impassable, they could make insurance rates prohibitively expensive, causing many would-be off-loaders to

decide against hazarding their ships amid the crossfire. Alternatively, Iran could decide to close the strait in order to punish the “international community” in general, for not doing enough to rein in the Israelis.

Whatever the rationale, the potential for global economic ruin – not to mention the ecological and public health risks posed by leaks of oil, nuclear materials, and/or other toxins into the environment – is simply not a risk that most intelligent people want to run. It therefore behooves those with the power to change the situation to do everything they can to end the conflict before its costs become more than a fragile world economy can bear.

Another is how to get Iran to behave itself, and that, too, shapes up as a difficult task. The Islamic Republic has spent most of the past half-century seeking to undermine US and Israeli influence over the region, and its substantial investments in proxy militias abroad and its own military at home may be skewing high-level decision-making. As the saying goes, when all you have is hammer, everything starts to look like a nail.

Despite these obstacles, it remains a fact that war is almost never preferable to negotiation. Iran and Israel agree on very little, their objectives are often in direct opposition to one another, and each views the other as a murderous and illegitimate state. Nonetheless, whether they realise it or not, both sides have a vested interest in ending the current conflict. Given the massive disparities in their respective strengths and weaknesses, this conflict could turn into a long-term bloodletting in which the value of anything achieved will be far outstripped by the cost in blood and treasure.

But who will get the two sides to so much as consider diplomacy when both of them are increasingly committed to confrontation? Although several world leaders have offered to act as mediators, the belligerents don't trust very many of

the same people. To my mind, this opens a door for Qatar, which has worked assiduously to maintain relations with all parties – and which already has a highly impressive record as a peacemaker – to step up in some capacity.

Whether it provides a venue for direct talks, a diplomatic backchannel for exchanging messages, or some other method, Doha has proved before that it can be a stable platform and a powerful advocate for peaceful negotiations. Let us hope it can do so again.

- *Roudi Baroudi is a four-decade veteran of the oil and gas industry who currently serves as CEO of Energy and Environment Holding, an independent consultancy based in Doha.*

The true cost of ocean plastic pollution



The problem of maritime plastic-waste pollution first became apparent in the 1970s. In the half-century since then, the problem has become ever more widespread, as scientific expeditions conducted by the Tara Ocean Foundation (of which I am executive director) have shown. Large pieces of debris, such as fishing nets, and their disastrous effects on marine life, are the most visible symptom. Such waste is estimated to kill more than one million seabirds and over 100,000 marine mammals annually, often through entanglement or suffocation, and promotes transport of invasive species, triggering a cascading effect on the ecosystems in which they play a central role.

Less visible, but more pervasive, are microplastics, which have been found in the deepest ocean trenches and all types of marine life. Microplastics can, among other things, modify bacterial and viral communities and disperse chemical toxins in food chains (often after being ingested by marine organisms). Some of these toxins, such as phthalates, are

associated with the chemistry of plastics, while others, such as pesticides and heavy metals, are absorbed by the plastic before it reaches the ocean and enters the food chain.

How these toxic substances interact with plastics has been the subject of much study. Plastic is comprised of monomers that have been chemically bonded to form long chains of polymers – ethylene, styrene, and propylene become polyethylene, polystyrene, and polypropylene. But the process of polymerisation is often imperfect, and some of the unpolymerised monomers that remain in plastic, like different types of styrene and bisphenol, pose major environmental and health risks.

Moreover, other chemical additives, including plasticisers, fillers, colorants, flame retardants, and antioxidants, are incorporated into polymer formulations to modify their properties. And non-intentionally added substances (NIAS) – impurities, raw materials used in manufacturing, byproducts, and degradation products – bind to finished plastics. In most cases, because free monomers, additives, and NIAS are simply trapped within the tangle of polymer chains, rather than being chemically bound to them, they are more likely to leach out during the production, use, and disposal of plastic, migrating into liquids, gases, and solids. Some 16,000 such molecules have been identified, but their effects are still not fully known, nor is their toxicity, which can change depending on how they are combined. What we do know is that one-quarter of these 16,000 molecules are pose a hazard to human health or the environment by disrupting biochemical processes in living organisms.

Halting the flow of microplastics and toxic pollutants into the world's bodies of water is a Sisyphean task. Nevertheless, scientists are trying to stem the problem. For example, the Tara Europa expedition, in coordination with the European Molecular Biology Laboratory and more than 70 scientific institutions across the continent, has spent the past two

years investigating how these hazardous substances make their way into the seas and oceans bordering Europe. The mission plans to share its findings soon.

But the generation of toxic waste and debris is not the only way that plastic can harm ocean health. The plastics industry has been a major driver of climate change, accounting for an estimated 3.4% of global greenhouse-gas (GHG) emissions. Plastic production is on track to contribute 15% of GHG emissions by 2050, exacerbating global warming and thereby increasing the threats to marine life, which is sensitive to rising water temperatures.

Because plastic degrades the entire biosphere, not just the ocean, it is not a waste problem that can be solved by a few sustainability-minded citizens' recycling efforts. This is a systemic crisis that requires an economy-wide solution. A better approach is to understand plastic as one of the "new entities" that must not leak into the environment, a view initially formulated by the Stockholm Resilience Centre in its work on planetary boundaries and later endorsed by the United Nations. While acknowledging the impossibility of defining a precise threshold for harm, such an approach highlights the need for a drastic reduction in plastic use.

Research suggests that it would be economically feasible to halve global plastic production at a cost which would almost surely be less than the cost of inaction. But, according to a recent study by researchers at the University of California, Berkeley, even this reduction would not be enough to limit global warming to 1.5° Celsius above preindustrial levels, the target set by the Paris climate agreement. Instead, they found that meeting this goal would require a 75% reduction in plastic production compared to 2015.

'THE POSSIBILITIES ARE ENDLESS': ENERGY EXPERT LAUNCHES NEW BOOK ON RESOLVING MARITIME BOUNDARIES



ZOUK MOSBEH, 23-04-2025: Energy expert Roudi Baroudi signed copies of his latest book during a launch event at Notre Dame University – Louaize on Wednesday.

The book, "Settling Maritime Boundaries in the Eastern Mediterranean: Who Will Be Next?", is part of Baroudi's years-long effort to promote regional energy cooperation. In it, the author makes the case that if East Med countries are serious about exploiting their offshore hydrocarbons, they need to settle their maritime borders in order to attract the major energy companies whose technical and financial muscle are virtual prerequisites for undersea oil and gas activities.



Co-hosted by the Office of NDU Publications (which published the book) and the university's Office of Research and Graduate Studies, the signing event took place at NDU's Pierre Abou Khater Auditorium. All proceeds from sales of the book will go toward Student Financial Aid at NDU.

Inspired by the landmark US-brokered October 2022 agreement that saw Lebanon settle most of its maritime boundary with old foe Israel, the new tome stresses the need to define other East Med borders as well, including those between Lebanon and Cyprus, Lebanon and Syria, Syria and Cyprus, Cyprus and Turkey, and Turkey and Greece.

Publication was delayed by the outbreak of the Gaza war in October 2023, but the author says that conflict – which also led to massive destruction and loss of life in Lebanon – only underlines the need for regional players to find a new *modus vivendi*.



“We can’t keep doing the same things over and over again, and then expecting a different outcome,” Baroudi said during the NDU event. “For the first time in many years, all of Lebanon’s branches of government – Parliament, Cabinet, and Presidency – are fully functional. We have to start thinking of ways to reduce the scope for friction, to open the way for foreign investment, and hopefully start producing offshore gas.”

“Almost all of Lebanon’s energy needs are met by imported hydrocarbons; imagine if we discover enough gas to provide 24/7 electricity to all Lebanese,” he added. “And what if we had enough to start exporting it, too? Lebanon’s coast is less than 100 kilometers from Cypriot waters: this means that once the island and its partners have built a pipeline and/or a liquified natural gas plant, Lebanese gas could flow straight into the entire European Union, one of the world’s largest energy markets. The possibilities are endless. And now imagine all of the countries of the region having similar prospects – just because they finally got around to figuring out where their national waters begin and end.”

In addition to the manifold benefits of energy security and lucrative export revenues to fund domestic investment in things like education, healthcare, fighting poverty, and transport, Baroudi said the exercise of negotiating sea

borders could help build trust and good will.

“There isn’t enough of those commodities in the East Med region, and often for good reason,” he explained. “But we have to start somewhere, and maritime boundaries are a great place to do that because they open the way for investment and various forms of cooperation, direct or indirect, including fisheries monitoring and regulation, marine protected areas, tourism, weather forecasting, search and rescue, etc.”

With more than 47 years of experience, Baroudi has worked in multiple fields, from electricity, oil and gas, and petrochemicals to pipelines, renewables, and carbon pricing mechanisms. He also has led policy and program development with, among others, the World Bank, the US Agency for International Development, the International Monetary Fund, and the European Commission. The author of several books – including “Climate and Energy in the Mediterranean: What the Blue Economy Means for a Greener Future” (2022) – as well as numerous studies and countless articles, his expertise has made him a highly sought-after speaker at regional energy and economic conferences. Currently serving as CEO of Energy and Environment Holding, an independent consultancy based in Doha, he is also a Senior Fellow of the Transatlantic Leadership Network, a Washington think-tank. In 2023, he received the TLN’s Leadership Award in recognition of his efforts to promote peace.

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.

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