

Open Letter to H.E. António Guterres, Secretary-General of the United Nations



By Roudi Baroudi

Dear Secretary-General Guterres,

I write to thank you for your efforts to bring about a ceasefire in the current conflict pitting the United States and Israel against Iran, to applaud your calls for civilians to be protected, and to urge you in the strongest possible terms to expand and intensify these efforts with all of the tools at your disposal.

People are already dying in countries that have little or nothing to do with the conflict, devastating socioeconomic consequences are spreading around the globe, and conditions can only get worse if current trends continue.

It was inevitable that any prolonged hostilities so close to the Strait of Hormuz would cause energy prices to go up, at least temporarily, because insurance rates would rise at the increased risk of an errant missile or two hitting a supertanker. But that is not what has happened here. Instead, just three weeks into the fighting, the strait is effectively closed to shipping, and global markets for oil and gas are undergoing the worst supply disruption in history. Prices are up sharply, and it will be months or even years before they return to previous levels.

The rapid escalation of the situation has not been due to chance; rather, it is because Iran threatened to directly target shipping in the strait, and several vessels have come under deliberate fire from its forces. These are risks to which most shipping companies will not subject their crews and hulls under any circumstances, not least when the cargo is something as volatile as oil or liquified natural gas (LNG).

Ergo, the strait is closed, meaning that roughly one-fifth of the world's oil and LNG can no longer reach market, and therefore that two pillars of global economic stability – affordable transport and affordable electricity – are becoming increasingly brittle. In addition, significant percentages of the global trade in other key commodities, including fertilizers, aluminum, helium, polymers, and various forms of chemical feedstock. These are essential to myriad industries everywhere, and to the jobs they provide, everything from agriculture, construction, pharmaceuticals, and food processing to clothing, footwear, heavy industry, and the latest digital technologies.

Even these obstacles could have been overcome, provided the disruption did not persist for too long. And indeed, early releases of strategic oil reserves by the United States (172 million barrels) and members of the International Energy

Agency (400 million barrels) initially helped to calm markets when they were announced. This effect soon began to wear off, however, when markets realized that those releases amount to only about a month of usual Hormuz traffic. The United States then found two other cards to play by temporarily “de-sanctioning” Russian oil and an estimated 140 million barrels of Iranian crude currently held in floating storage, helping to alleviate the supply gap and reducing upward pressure on prices.

Sadly, we are beyond that point as well. After Israel attacked Iranian infrastructure associated with the latter’s South Pars gasfield (part of the world’s single largest field and shared with Qatar), Iran’s response was not just to attack Israel’s largest refinery: it also lashed out at energy production and export facilities in several of its Arab neighbors. Refineries, LNG plants, and other assets have now been damaged or destroyed in all six member-states of the Gulf Cooperation Council, which groups Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.

I stress here that each of the GCC states is also a full member of the United Nations, and several of them count among the world’s most prolific providers of relief and development assistance, both via UN bodies and through their respective overseas development agencies.

This loss of production capacity constitutes an exponential worsening of the situation, for even if Hormuz were to reopen tomorrow, there is no way to fully compensate for the oil, gas, and other products that have been taken off the market. Delay alone is costly and disruptive, but the destruction of production capacity constitutes a massive step-change because

much of it simply cannot be replaced any time soon.

In some cases, repairs may take weeks or months, but others entail more lasting impacts. QatarEnergy says the damage at Ras Laffan, for example, has taken 17% of Qatar's national LNG capacity offline – and that it will take two or three years to repair. Qatar is the world's leading exporter of that product, so a long period of elevated gas prices is unavoidable. Of course, several countries have new LNG capacity at various stages of design or construction, including Qatar itself, plus the US, Australia, and Canada. These will help, of course, but not with the current price surge, and even when they do come online, much of their output will already be accounted for.

Mr. Secretary-General,

As catastrophic as these setbacks are, they pale in comparison to what awaits billions of people if current trends continue.

First, consider the GCC countries themselves. They did not ask for this war, several of them expended considerable diplomatic effort trying to prevent it, and yet they are incurring enormous physical and economic damage, not to mention the lives and livelihoods lost. Much of the focus has been on what is no longer coming out of the Gulf, but the GCC states also have to worry what is no longer coming in: this includes most of their food and other essential products, and virtually all of their cars, computers, televisions, and industrial machinery. Of course they can arrange alternative delivery routes, but that will impose significantly higher costs for virtually everything – a burden that will be particularly

onerous for the millions of migrant laborers who live in the GCC countries.

These same countries have shown remarkable restraint (thus far) by not retaliating for Iranian missile and drone strikes, but the recent meeting of Arab foreign ministers in Riyadh signaled that this patience is not infinite. These countries cannot be expected to remain on the receiving end of so much underserved devastation without responding in kind, and if and when that happens, the global supply crisis is liable to get even worse.

I stress here that the vast majority of all countries also are members of the United Nations, and many of them are likewise generous contributors to the UN and the developing world. Even many of the poorer ones have made enormous sacrifices in the name of international peace and security, often by sending their troops to act as peacekeepers in some of the world's most dangerous hotspots.

The interests of all 193 UN member-states are at stake in this war, and most them are looking to the UN for help, guidance, and leadership.

Mr. Secretary-General,

The United Nations is the most important institution in the world today, even and perhaps especially because it has become so fashionable to denigrate it, and because some governments seek to undermine it at every turn. Above all else, the UN was

established to prevent war when it can, and to alleviate the resulting human suffering when it cannot. Its ability to do either of these things is being sorely tested these days, particularly since many governments view the rules of the international system as hindrances to be bulldozed or ignored.

Like all supporters of a rules-based order, I recognize that the realities of great-power politics sometimes make it impossible for the UN to impose solutions consistent with both international law and the often nebulous but always noble notion of collective security. But now is no time to accept failure, not when we know that the effects of the current war are going to reach into so many homes around the world, and that this will take place by design.

The United Nations still has options because its remit includes the day-to-day handling of incidents, joint activities, and other interactions that take place between member-states. As such, it is the custodian of several specialized agencies and treaties relating to various aspects of maritime law in peace- and wartime alike, including the International Maritime Organization (IMO) established in 1948, the 1969 Vienna Convention on the Law of Treaties, and the 1982 UN Convention on the Law of the Sea (UNCLOS).

These agencies regulate and otherwise provide a level playing field for all manner of international interactions, and their responsibilities are not suspended during wartime. On the contrary, the UN's work is never more vital than after the shooting starts, especially when the intended targets of the war's negative impacts include everyone, everywhere.

The duty to protect civilians during armed conflict is a universal and overriding one, and while many belligerents harm civilians and their interests by accident, Iran's actions deliberately target the welfare of civilians around the world. The United Nations is the ultimate forum for the resolution of disputes great and small, and even when governments choose to ignore it, the UN remains bound by its Charter to seek peace and security.

Most importantly, never stop reminding the belligerents of their obligations under the UN Charter, particularly when they fail to live up to them. Call out Iran for inter alia, having illegally interfered in the innocent transit of civilian shipping, which is specifically protected within straits, even in wartime, by IMO & UNCLOS – and therefore for weaponizing energy and turning it on the whole world.

Diplomacy takes place on multiple levels, from public statements and backchannel communications to purely procedural exchanges and informal trust-building exercises. In the current circumstances, given how many people are being affected, no stone can be left unturned in convincing Iran to stop choking out the global economy, or in convincing its opponents to cease fire.

Finally, I would note that when the belligerents are unwilling to consider dialogue or other alternatives to conflict, that is precisely when the good offices and moral authority of the United Nations are needed most. Now is no time to let them fight it out, not when the welfare of billions of people is at stake.

Sincerely,

Roudi Baroudi

رسالة مفتوحة إلى سعادة الأمين العام للأمم المتحدة السيد ، أنطونيو غوتيريش المحترم



سعادة السيد أنطونيو غوتيريش

، الأمين العام للأمم المتحدة

الولايات المتحدة الأمريكية 10017 NY ، نيويورك

مارس 2026 22

رسالة مفتوحة إلى سعادة الأمين العام للأمم المتحدة السيد أنطونيو غوتيريش المحترم ،

رسالة إلى الأمين العام للأمم المتحدة: تحركوا الآن قبل فوات • الأوان... إغلاق هرمز... بداية أزمة قد تغير العالم

، حضرة الأمين العام ،

أكتب إليكم لأعرب عن شكري لجهودكم الرامية إلى التوصل إلى وقف لإطلاق النار في النزاع الحالي بين الولايات المتحدة وإسرائيل من جهة وإيران من جهة أخرى، ولأثني على دعواتكم لحماية المدنيين، ولأحثكم بأشد العبارات على توسيع هذه الجهود وتكثيفها باستخدام جميع الأدوات المتاحة لديكم .

الناس يموتون بالفعل في دول لا علاقة لها تُذكر بالنزاع، كما أن التداعيات الاجتماعية والاقتصادية المدمرة تنتشر في جميع أنحاء العالم، ولا يمكن للأوضاع إلا أن تزداد سوءًا إذا استمرت الاتجاهات الحالية .

كان من الحتمي أن تؤدي أي أعمال عدائية مطوّلة بالقرب من مضيق هرمز إلى ارتفاع أسعار الطاقة، ولو بشكل مؤقت، بسبب زيادة تكاليف التأمين نتيجة ارتفاع مخاطر إصابة ناقلات النفط العملاقة بصواريخ طائشة. لكن هذا ليس ما حدث مع هذه الحرب. فبعد ثلاثة أسابيع فقط من اندلاع القتال، أصبح المضيق مغلقًا فعليًا أمام الملاحة، وتواجه الأسواق العالمية للنفط والغاز أسوأ اضطراب في الإمدادات في التاريخ. ما أدى إلى ارتفاع الأسعار بشكل حاد، ومن المرجح أن يستغرق الأمر شهرًا أو حتى سنوات قبل أن تعود إلى مستوياتها السابقة .

إن التصعيد السريع للوضع لم يكن نتيجة للصدفة؛ بل جاء نتيجة تهديد إيران باستهداف الملاحة في المضيق بشكل مباشر، وقد تعرضت عدة سفن بالفعل لنيران متعمدة من قبل قواتها. وهذه المخاطر لا تقبل معظم شركات الشحن تعريض طواقمها وسفنها لها تحت أي ظرف، لا سيما عندما تكون الحمولة مواد شديدة الحساسية مثل النفط أو الغاز الطبيعي المسال .

نتيجة لذلك، أصبح المضيق مغلقًا، ما يعني أن نحو خمس إمدادات

النفط والغاز الطبيعي المسال في العالم لم تعد تصل إلى الأسواق، وهو ما يؤدي إلى تآكل ركيزتين أساسيتين من ركائز الاستقرار الاقتصادي العالمي، وهما النقل العادي التكلفة والكهرباء ذات التكلفة العادية. وإضافة إلى ذلك، فإن نسبةً كبيرة من التجارة العالمية من سلع أساسية أخرى- بما في ذلك الأسمدة، والألمنيوم، والهيليوم، والبوليمرات، ومختلف المواد الكيميائية الأولية - تتأثر أيضًا. ومن المعروف إن هذه مواد أساسية لعدد لا يُحصى من الصناعات حول العالم، وللوظائف التي توفرها، بدءًا من الزراعة والبناء والصناعات الدوائية وتصنيع الأغذية، وصولاً إلى الملابس والأحذية والصناعات الثقيلة وأحدث التقنيات الرقمية.

كان من الممكن التغلب على هذه العقبات، لو لم يستمر هذا الاضطراب لفترة طويلة. وبالفعل، ساهمت عمليات الإفراج المبكرة عن الاحتياطات النفطية الاستراتيجية من قبل الولايات المتحدة (172 مليون برميل) وأعضاء وكالة الطاقة الدولية (400 مليون برميل) في تهدئة الأسواق في البداية. غير أن هذا التأثير بدأ يتلاشى عندما أدركت الأسواق أن هذه الكميات لا تعادل سوى نحو شهر واحد من حركة المرور المعتادة عبر مضيق هرمز. ثم لجأت الولايات المتحدة إلى خيارين إضافيين تمثلا في تخفيف موقت للعقوبات على النفط الروسي، والسماح بطرح نحو 140 مليون برميل من النفط الإيراني المخزن عائمًا، ما ساهم في تقليص فجوة الإمدادات والحد من الضغوط التصاعديّة على الأسعار.

ومع الأسف، فقد تجاوزنا هذه المرحلة أيضًا. فبعد أن استهدفت إسرائيل بنى تحتية إيرانية مرتبطة بحقل غاز جنوب فارس (وهو جزء من أكبر حقل غاز في العالم ويُشترك فيه مع قطر)، لم يقتصر رد إيران على مهاجمة أكبر مصفاة في إسرائيل، بل امتد ليشمل استهداف منشآت إنتاج وتصدير الطاقة في عدد من جيرانها العرب. وقد تعرضت مصافي ومنشآت للغاز الطبيعي المسال وغيرها من الأصول للتدمير أو الأضرار في جميع الدول الست الأعضاء في مجلس التعاون لدول الخليج العربي، وهي البحرين والكويت وعمان وقطر والمملكة العربية السعودية والإمارات العربية المتحدة.

أود التأكيد هنا أن جميع دول مجلس التعاون هي أيضًا أعضاء كاملة في الأمم المتحدة، وأن عددًا منها يُعد من أبرز مقدمي المساعدات الإنسانية والتنمية في العالم، سواء عبر هيئات الأمم المتحدة أو من خلال وكالاتها التنموية.

إن فقدان هذه القدرات الإنتاجية يمثل تدهورًا متسارعًا وخطيرًا للوضع؛ فحتى لو أُعيد فتح مضيق هرمز غدًا، فلن يكون بالإمكان تعويض كامل كميات النفط والغاز وغيرها من المنتجات التي خرجت من السوق. فالتأخير وحده مكلف ومُربك، لكن تدمير القدرة الإنتاجية يمثل تحولاً جذريًا، لأن الكثير منها لا يمكن استبداله في وقت قريب.

وفي بعض الحالات، قد تستغرق الإصلاحات أسابيع أو أشهرًا، لكن في حالات أخرى تكون التأثيرات طويلة الأمد. فعلى سبيل المثال، أفادت شركة قطر للطاقة بأن الأضرار التي لحقت بمنشآت رأس لفان أدت إلى توقف 17% من القدرة الوطنية لإنتاج الغاز الطبيعي المسال، وأن إصلاحها قد يستغرق عامين إلى ثلاثة أعوام. ونظرًا لأن قطر هي أكبر مصدر عالمي للغاز الطبيعي، فإن فترة طويلة من ارتفاع أسعار الغاز أصبحت أمرًا لا مفر منه. وبالطبع، هناك دول عدة تعمل على تطوير قدرات جديدة في هذا المجال، مثل قطر نفسها والولايات المتحدة وأستراليا وكندا، غير أن هذه المشاريع لن تُسهم في معالجة الأزمة الحالية، وحتى عند دخولها الخدمة، سيكون جزء كبير من إنتاجها قد تم التعاقد عليه مسبقًا.

، حضرة الأمين العام

على الرغم من جسامه هذه التحديات، فإنها تبدو ضئيلة مقارنة بما قد يواجه مليارات البشر إذا استمرت الاتجاهات الحالية.

ففي المقام الأول، ينبغي النظر إلى دول مجلس التعاون نفسها. فهي لم تطلب هذه الحرب، وقد بذلت عدة دول منها جهودًا دبلوماسية كبيرة لمنعها، ومع ذلك تتكبد أضرارًا مادية واقتصادية جسيمة، فضلًا عن الخسائر في الأرواح وسبل العيش. وبينما ينصب التركيز على ما لم يعد يخرج من الخليج، فإن هذه الدول تواجه أيضًا مشكلة في ما لم تعد تستطيع استيراده، بما في ذلك معظم احتياجاتها من الغذاء والسلع الأساسية، وكذلك معظم السيارات والحواسيب وأجهزة التلفاز والآلات الصناعية. بإمكانها بالطبع إيجاد طرق بديلة للإمداد، لكن ذلك سيؤدي إلى ارتفاع كبير في التكاليف، وهو عبء سيكون أشد وطأة على ملايين العمال الوافدين المقيمين في هذه الدول.

أظهرت هذه الدول حتى الآن قدرًا كبيرًا من ضبط النفس بعدم الرد على الهجمات الصاروخية والطائرات المسيّرة الإيرانية، إلا أن الاجتماع الأخير لوزراء الخارجية العرب في الرياض أشار إلى أن لهذا

الصبر حدودًا. ولا يمكن توقع استمرار هذه الدول في تحمل هذا القدر من الدمار دون رد، وإذا حدث ذلك، فمن المرجح أن تتفاقم أزمة الإمدادات العالمية.

كما أُؤكد هنا أن الغالبية العظمى من دول العالم هي أيضًا أعضاء في الأمم المتحدة، وأن العديد منها يسهم بسخاء في دعمها ودعم الدول النامية. بل إن حتى الدول الأقل دخلًا قدمت تضحيات كبيرة في سبيل السلم والأمن الدوليين، من خلال إرسال قواتها للمشاركة في مهام حفظ السلام في أكثر مناطق العالم خطورة.

إن مصالح جميع الدول الأعضاء الـ 193 في الأمم المتحدة على المحك في هذه الحرب، ومعظمها يتطلع إلى الأمم المتحدة طلبًا للمساعدة والتوجيه والقيادة.

،حضرة الأمين العام

تُعد الأمم المتحدة أهم مؤسسة في العالم اليوم، وربما بشكل خاص بسبب ما تتعرض له من انتقادات ومحاولات تقويض. فقد أُنشئت أساسًا لمنع الحروب متى أمكن، وللتخفيف من معاناة البشر عندما يتعذر ذلك. واليوم، تواجه قدرتها على أداء هذين الدورين اختبارًا صعبًا، خاصة في ظل تجاهل بعض الحكومات قواعد النظام الدولي.

ومثل غيري من الداعمين لقيام نظام قائم على القواعد، أدرك أن واقع سياسات القوى الكبرى قد يجعل من الصعب على الأمم المتحدة فرض حلول تتوافق تمامًا مع القانون الدولي ومفهوم الأمن الجماعي. لكن هذا ليس وقت الاستسلام، لا سيما وأن آثار هذه الحرب ستطول عددًا هائلًا من البشر حول العالم.

ولا تزال لدى الأمم المتحدة خيارات، نظرًا لمسؤولياتها في إدارة التفاعلات اليومية بين الدول الأعضاء، بما في ذلك عبر وكالاتها المتخصصة والاتفاقيات المتعلقة بالقانون البحري، مثل المنظمة البحرية الدولية، واتفاقية فيينا لقانون المعاهدات لعام 1969، واتفاقية الأمم المتحدة لقانون البحار لعام 1982.

هذه الهيئات تنظم التفاعلات الدولية حتى في أوقات الحرب، من المعروف أن دور الأمم المتحدة يصبح أكثر أهمية بعد اندلاع النزاعات، خاصة عندما تمتد آثارها بشكل واسع.

إن حماية المدنيين أثناء النزاعات المسلحة واجب عالمي لا يقبل



Brent crude tops \$90 after gas producer says it will take 'weeks to months' to restore deliveries

Qatar's energy minister has warned that war in the Middle East could "bring down the economies of the world", predicting that all Gulf energy exporters would shut down production within days and drive oil to \$150 a barrel. Saad al-Kaabi told the FT that even if the war ended immediately it would take Qatar "weeks to months" to return to a normal cycle of deliveries following an Iranian drone strike at its largest liquefied natural gas plant. Qatar, the world's second-largest producer of LNG, was forced to declare force majeure this week after the strike at its Ras Laffan plant. While Qatar only exports a small proportion of its gas to Europe, the energy minister said the continent would feel significant pain as Asian buyers outbid Europeans for whatever gas is available on the market, and as other Gulf countries find themselves unable to meet their contractual obligations. "Everybody that has not called for force majeure we expect will do so in the next few days that this continues. All exporters in the Gulf region will have to call force majeure," Kaabi said. "If they don't, they are at some point going to pay the liability for that legally, and that's their choice." Kaabi's comments reflect rising

concern in the Gulf about the economic repercussions of the US and Israel's war with Iran, which has wreaked havoc across the oil-rich region. Brent crude rose 5.5 per cent to \$90.13 a barrel on Friday following the publication of this article, the highest level since the start of the conflict. European gas prices gained 5 per cent, but were still below this week's peak. "This will bring down the economies of the world," Kaabi said. "If this war continues for a few weeks, GDP growth around the world will be impacted. Everybody's energy price is going to go higher. There will be shortages of some products and there will be a chain reaction of factories that cannot supply." He said while there had been no damage to Qatar's offshore operations, the aftermath onshore was still being reviewed. "We don't yet know the extent of the damage, as it is currently still being assessed. It is not clear yet how long it will take to repair," he said.

Qatar's \$30bn development to increase production capacity at its vast North Field gasfield from 77mn to 126mn tonnes a year by 2027 would also be delayed, he added. The first production was to begin in the third quarter of this year. "It will delay all our expansion plans for sure," Kaabi said. "If we come back in a week, perhaps the effect is minimal; if it's a month or two, it is different." Saudi Arabia and the UAE both have pipelines that can redirect a portion of their oil exports to be loaded at ports outside the Strait, but significant production volumes remain trapped. He forecast that crude prices could soar to \$150 a barrel in two to three weeks if tankers and other merchant vessels were unable to pass through the Strait of Hormuz, a key maritime trade route through which a fifth of the world's oil and gas passes. He predicted that gas prices would rise to \$40 per million British thermal units (£117 per MWh) – almost four times the level they were before the war began. He added that the impact of the disruption of maritime trade through the strait would reverberate far beyond energy markets and hit multiple industries as the region produces much of the world's petrochemicals and fertiliser

feedstocks. Traffic through the waterway has slowed to a halt since the US and Israel launched their attack on Iran on Saturday. At least 10 ships have been hit, insurance premiums have soared and shipping owners have been unwilling to risk their vessels and crews. US President Donald Trump and Israeli officials have warned that the war could last weeks as they seek to destroy the Islamic regime. Trump said this week that the US navy will escort ships through the strait and has offered to provide additional insurance to shipping companies. But Kaabi said it would still be unsafe for vessels to pass through the strait, which is just 24 miles wide at its narrowest point and traces the Iranian coastline, as long as the war was ongoing. "The way that we are seeing the attacks, bringing ships into the strait . . . it's too dangerous. It's too close to the shore to bring ships in. It will be difficult to convince ships to go in," he said. "Most of the ship owners will see that they become a bigger target because they're [Iran] targeting the military ships." Kaabi added: "In addition to energy, there will be a halt on all other trade in between the [Gulf] and the world, which will have a significant effect on the economies of the [Gulf] and all the trading partners around the world." Qatar, which hosts the biggest American military base in the region, has traditionally had good relations with Iran. But the Islamic republic has fired multiple barrages of missiles and drones at it and other Gulf states as Tehran sought to raise the stakes for the US by targeting energy facilities, airports, American bases and embassies.

Kaabi, who is also chief executive of QatarEnergy, said the company had no choice but to declare force majeure after Ras Laffan was hit in an Iranian drone attack on Monday. He cited safety reasons, adding that the company's offshore facilities were also facing the threat of attack, although they were not damaged. "We were actually informed by our military that there is an imminent threat on the facilities offshore. So we shut down operations safely, as safely as we can, and we mobilised

around 9,000 people in 24 hours and brought them back," he said. "When we have our people in danger and we're actually being hit in a military zone and we can't work anymore, and we can't put our people in harm's way, we have to declare force majeure." Production in Qatar will not restart until there is a complete cessation of hostilities, he said. "So the signal is when our military says there is a complete stop of hostilities and we are not being attacked anymore," Kaabi said. "We are not going to put our people in harm's way."

After the restart, he predicted huge logistical issues on top of the restoration of the machinery that cools and compresses gas into liquid that can be shipped. "Our ships are all over the place," he said, adding that only six or seven out of Qatar's fleet of 128 tankers were at hand. "Each ship takes a day or two and you can load six or seven at a time," he added, explaining the length of time it would take to restore normality. He rejected the idea that Qatar's decision to invoke force majeure and miss shipments would damage the country's long-cherished reputation as the most reliable supplier of LNG. "We don't think anybody would dare to come to us and say we are not reliable because you were being bombed and you did not deliver," he said. Even if it wanted to, Qatar was unable to find gas in the market to make good the lost deliveries to its clients, he said. "Let's assume you want to buy 77 million and deliver it to customers, there is no 77 million tonnes lying around for you to buy."

<https://www.ft.com/content/be122b17-e667-478d-be19-89d605e978ea>

خام - حرب الطاقة تنفجر إقليميا ولبنان اكبر الخاسرين... ...بارودي يكشف



إيمان شويخ

بدأت تداعيات الحرب الدائرة في المنطقة تضرب أسواق الطاقة العالمية. فالمواجهة العسكرية التي بدأت في إيران ونُقلت سريعًا إلى الخليج تؤثر بشكل سلبي كبير على الاقتصاد العالمي، مع انتقال الاستهدافات إلى منشآت الطاقة وممرات الملاحة، في مشهد يربك الأسواق ويرفع منسوب القلق حيال إمدادات الطاقة والغاز، ما يندرج بحرب طاقة تضرب الممرات البحرية وخطوط الإمداد.

في حديثٍ لموقع الكلمة أونلاين، اعتبر خبير النفط د. رودي بارودي أن الحرب الراهنة وحالة الاضطراب بين إيران وجيرانها الدول الخليجية، العراق والكويت والمملكة العربية السعودية وقطر والإمارات العربية المتحدة وسلطنة عمان، حتمًا ستؤثر على أسعار الطاقة العالمية، بالنسبة للنفط الخام أو الغاز الطبيعي المسال

(LNG) .

وهم قلة وعلى (LNG) وفي حال بقي مضيق هرمز مغلقةً، فإن منتجي الـ رأسهم دولة قطر وأستراليا والولايات المتحدة الأمريكية وروسيا وماليزيا والجزائر، فإن الأسعار سترتفع حوالي 50%. وفي حال بقي المضيق على حاله ولم تتمكن الناقلات من المرور، فإن هذا الارتفاع مرجح للتصاعد .

أما بالنسبة للنفط، يقول بارودي إنه هناك 20 مليون برميل في اليوم تمر من مضيق هرمز، وبالتالي من أجل تعويض هذه الكمية يجب الذهاب إلى الولايات المتحدة وروسيا وكندا والصين، إضافةً إلى البرازيل، لأن المملكة العربية السعودية لن تعد قادرة على أن تمد من مضيق هرمز خلال العراق. أما السعودية، فتمتلك خط أنابيب شرق-غرب 1 وخط أنابيب شرق-غرب 2، الذي يمر من المنطقة الشرقية في المملكة، وهي تستطيع نقل 7 براميل نפט يوميًا، ولكن مع ذلك فهذا لا يكفي للتعويض عن النقص في النفط، بل يجب البحث عن بدائل أخرى .

وعن أسعار النفط، أشار الخبير النفطي رودي بارودي إلى أنها قفزت من 70 إلى 85 دولارًا للبرميل، وهي قفزة كبيرة جدًا. وإذا بقي مضيق هرمز مقفلاً، فهي سترتفع إلى 100 دولار للبرميل الواحد، وهذا يعني أن أسواق الطاقة العالمية ستعرض لارتفاعات جنونية في الأسعار .

وبالنسبة للبنان، اعتبر بارودي أن صفيحة البنزين أساسًا قد ارتفعت 20 دولارًا، وهي حتمًا سترتفع إلى 25 دولارًا للصفحة الواحدة متأثرةً بأسعار النفط العالمية. كذلك فإن أسعار النقل والسلع الغذائية والخضروات والكهرباء وغيرها، بالإضافة إلى كلفة بطاقات السفر، ستقفز بشكل جنوني .

وفي حال ارتفعت هذه الأسعار بالوتيرة التي ترتفع بها الأسعار في العالم، وبقيت المداخيل على حالها، فإن هذا الأمر سيؤدي إلى كارثة اقتصادية في لبنان تضاف إلى الأزمة الاقتصادية التي يعيشها لبنان منذ سنوات .

Hormuz: No one has the right to choke out the global economy



The past few days have served up multiple reminders of why armed conflict is almost never a good option, let alone the best one: war is dangerous, expensive, and unpredictable, making it the last resort for prudent leaders.

The entire region is on edge, with Iran seeking to internationalize the conflict so that other states will put pressure on the United States and Israel to halt their air and missile offensive. We are now on the precipice, however, of developments whose impacts will effect virtually everyone, everywhere.

I refer, of course, to the Strait of Hormuz, the narrow, shallow, and uniquely vital waterway that connects the Gulf to the open seas and haunts the dreams of risk analysts everywhere.

About a fifth of the world's oil – worth more than half a trillion dollars annually – transits this passage, and while Saudi Arabia and the United Arab Emirates have pipelines that avoid the strait, they can't handle nearly the same volumes. In addition, approximately the same share of the world's liquefied natural gas passes through the same corridor, most of it Qatari LNG outbound for Asia. For good measure, Hormuz is also the route by which some 200 million people, including most of the six-nation Gulf Cooperation Council (GCC), receive most of their food and other imports.

For decades, the Iranian government has claimed the right, boasted the ability, and vowed the willingness to close this waterway in response to various forms of military or other pressure from the US. Then as now, its reasoning has been both subtle and brutal.

Outwardly, Iranian officials have denied targeting GCC and other states with missiles and drones, insisting that their forces were aiming instead at US military assets on their soil, even though most of these countries have not allowed

their airspace to be used for the US/Israeli offensive. Even if it were true, the Iranian interpretation would certainly be a distinction without a difference for those mourning lost loved ones, but there have now been countless attacks drone and missile attacks on homes and residential buildings, port facilities, oil and gas infrastructure and other civilian targets in several GCC countries. Either way, the Iranians seem to have calculated that inflicting some degree of pain on their neighbors will cause more voices – in this case from within US-allied countries – to demand an end to the war.

A similar arithmetic makes Hormuz the world's ultimate choke point. The mere possibility of lasting disruption there has caused energy prices to rise on countless occasions, including the current crisis, and an actual closure for any length of time would be highly corrosive to the global economy. And since energy prices get baked into virtually everything else, the pain would be felt virtually everywhere.

The number of countries that Iran can hit with missiles or drones is relatively limited. But close Hormuz and no country on earth would be immune to the consequences, causing many of them to demand a return to diplomacy.

The fact of the matter is that Iran administers only a small section of the strait, specifically a strip of the northern channel usually used for entering the Gulf, and international law gives it no legal authority to suspend shipping there for more than a few hours without compelling reasons. Article 44 of the 1982 Law of the Sea specifically mentions that innocent passage cannot be denied. This is one reason why Tehran has been so cagey about its intent, for instance by having its parliament pass and illegal legislation supposedly authorizing

closure, but then leaving the activation to the executive branch.

In legal terms, then, it is difficult to conceive of circumstances in which Iran could justify closing the strait and imposing so much hardship on so many people around the world. Whatever its stated intentions, its actions would amount to little more than sabotage and extortion.

In reality, Iran is already getting some of what it wants. Information published by Navionics and other ship tracking services indicates that until the current interruption, increasing numbers of ships were avoiding Iranian waters altogether, sailing entirely or almost entirely in Omani waters. But several ships have already been damaged, putting instant upward pressure on insurance rates and convincing most shipping companies that the risk is too great. Dozens of hulls – carrying oil, LNG, and all manner of general cargo – are now waiting to leave the Gulf, and dozens more are piling up outside it. Prices are already starting to rise, and each day that passes makes energy scarcer and more expensive.

It won't take long for the consequences of this kind of disruption to grow in size and severity. Traders and speculators may be able to stave off the full impact for a few days, and other oil producers can pump more to compensate, but eventually most of the GCC states will run out of storage and have to halt production. The situation for LNG could be even worse because there are so few producers, and Qatar has already halted production over safety concerns, idling almost a fifth of global output.

For all of these reasons, this war involves far more than the

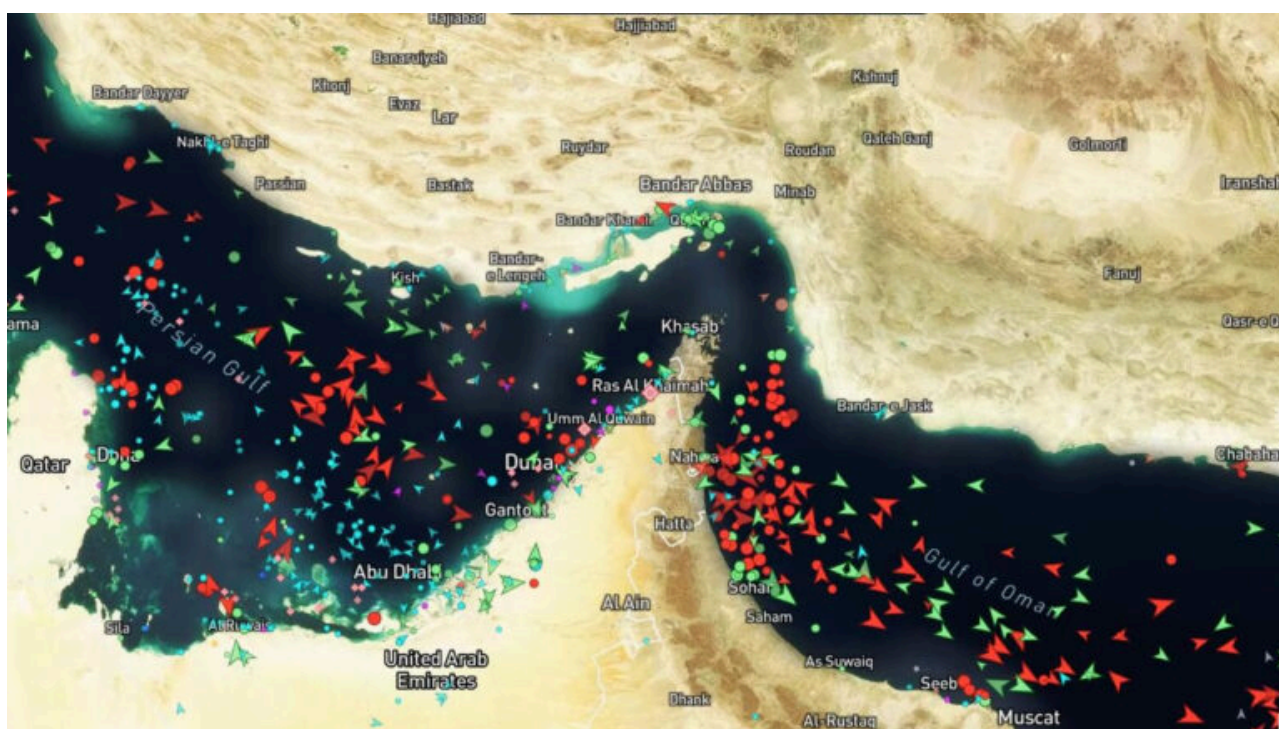
official belligerents. The region's geography and geology mean that anyone who uses energy in any way has a direct stake in the outcome. Even countries that export oil and gas have a vested interest in a return to stability: rising prices might be tempting in the short term, but they inevitably damage economies and weaken demand over time. For this reason in particular, all responsible participants, willing or otherwise, need to be pushing for a negotiated solution.

Dialogue and diplomacy are never wasted efforts. Even when they fail to prevent or end a conflict, discussions carried out in good faith can leave behind the building blocks for a future understanding. The mere fact of direct or indirect contacts can also attenuate the intensity of operations – therefore limiting potential casualties and renewed impetus for more war – as planners start considering the repercussions for diplomacy.

As human beings, therefore, we should never give up on the possibility of peace. But nor can we sit and say nothing as Iran lashes out at peoples and countries who have nothing to do with this conflict, destabilizing the entire region and undermining standards of living the world over. This is especially true of Qatar and Oman, both of which have left no stone unturned in trying to keep Iran out of a war in the first place.

Roudi Baroudi is the author of several books about maritime boundaries and has worked in the international energy business since the 1970s. He currently serves as CEO of Energy and Environment Holding, an independent consultancy based in Doha.

BAROUDI SOUNDS ALARM ON HORMUZ, SAYS OIL COULD HIT \$150



A picture of the shipping traffic in the Strait of Hormuz.



March 2, 2026, DOHA, Qatar: In a televised interview with Al Jazeera's main Arabic channel, international energy expert

Roudi Baroudi said that no country had the right to close the Strait of Hormuz.

The United Nations Convention on the Law of the Sea (UNCLOS), Baroudi told Al Jazeera, is clear on this matter, specifically Article 38, which explicitly guarantees the “right of transit passage, which shall not be impeded” for all foreign vessels transiting through the strait, and Article 44, which holds that states bordering straits “shall not hamper transit passage”.

Baroudi also warned that if traffic through Hormuz were halted, oil prices would quickly soar past \$100 – and even \$150 if the interruption persisted for any length of time.

While the strait is commonly described as being 30-45 kilometers wide, he explained, most of it is too shallow for large vessels, and the transit lane – designated for the passage of all types of shipping, from oil tankers and LNG tankers to container ships and bulk food and other commercial cargos – is only 3 kilometers wide. Even here the depth is just 200-300 meters, and many of the oil tankers that use the strait are more than 325 meters long, and Qatar’s Q-Max LNG carriers are 345 meters.

Baroudi also noted that while Iran and Oman have had a maritime border agreement in place since 1974, only Oman has fully ratified UNCLOS. Iran – like the UAE, whose coast also touches the strait – has signed but not fully implemented all of the provisions. Nonetheless, he said, UNCLOS’ principles have become part of customary international law, making them enforceable on all coastal states, so all civilian vessels enjoy the right of passage without obstruction, inspection, or arbitrary restrictions.

Regarding the impact of current tensions, Baroudi noted that LNG prices were already rising and that \$100 or even \$150 oil was a distinct possibility if the conflict continued beyond a



Following criticism of the Lebanon-Cyprus Maritime Boundary Agreement (MBA) by the governments of Israel and Turkiye, LebTalks spoke with energy and policy expert Roudi Baroudi, who has authored several books and studies on sea borders in the Eastern Mediterranean. Baroudi praised the pact as “full of positives” for the interests of both parties and stressed the words of Lebanese President Joseph Aoun, who pledged after signing the MBA that “this agreement targets no one and excludes no one.”

LebTalks: How significant is the signing of the maritime boundary agreement between Lebanon and Cyprus?

RB: The official signing of the Lebanon-Cyprus deal is a major achievement, one that confers important advantages on both parties. This process was delayed for a very long time for no good reason, so President Joseph Aoun and the government deserve congratulations for having seized the initiative, and for having seen the job through to completion. So do Cypriot President Nikos Christodoulides and his team, because they did the same thing. What made this historic agreement possible –

after an impasse lasting almost two decades – was that Lebanon finally had a president who both understood the need for an MBA and made achieving it a top priority.

LebTalks: What does Lebanon gain by signing this deal?

RB: The agreement, which was reached by the negotiating teams in September, provides several benefits for both countries in the short, medium, and long terms.

The new equidistance line between the two states, defined according to the rules and guidelines of the United Nations Convention on the Law of the Sea (UNCLOS), provides a fair and largely uniform boundary between the two brotherly countries' maritime zones. Most of the new turning points used to draw the line have moved in Lebanon's favor compared to the earlier negotiation in 2011, giving it an extra 10,200 meters on its western front while Cyprus received 2,760 meters.

Crucially, the MBA wipes away all overlapping claims caused by previous uncertainty over the precise location of the border. Accordingly, this eliminates 108 km² of (map attached) Lebanese offshore blocks that were actually in Cypriot waters, as well as 14 km² of Cypriot blocks which were also on the wrong side of the line.

Apart from removing a key risk for would-be investors, the agreement also contributes to stability and security by providing clarity and thereby enabling easier cooperation, not just bilateral, but also, potentially, involving other states as well. It really is full of positives for both Lebanon and Cyprus, and therefore for the region as a whole.

LebTalks: What should Lebanon do to follow up on this agreement?

RB: To make the most of this clearer playing field, the logical next step is for Lebanon and Cyprus to immediately start drafting a joint development agreement, which would

allow them to have a smooth partnership in place for any hydrocarbon reserves which are found to straddle their maritime boundary.

Perhaps the most important feature of the Lebanon-Cyprus MBA is that it provides a clear and stable starting point, putting Lebanon in ideal position to finish defining its maritime zones. The new line means that Lebanon's existing maritime boundary arrangements with Israel, signed in 2022, should be tweaked a little, but it also makes it easier to do that – and to negotiate a similar agreement in the north with Syria when that country's new leadership is ready to do so.



LebTalks: What about the objections voiced by Israel and Turkiye?

RB: With all due respect, these claims and complaints are completely baseless. As President Aoun has stressed from the very day it was signed, this accord targets no one, excludes no one, challenges no one else's borders, and undermines no one else's interests. I know there has been some negative commentary from both Israel and Turkiye, but there really is nothing here for anyone to be upset about. The line agreed to

by Lebanon and Cyprus, which Turkiye has claimed is 'unfair' to residents of the self-styled 'Turkish Republic of Northern Cyprus', is literally several kilometers away from any waters claimed by the TRNC. Beirut and Nicosia were very careful to make sure of this.

As for the Israelis, the only material change relating to the Lebanon-Cyprus line is that it pushes the Israel-Cyprus line in Cyprus' favor. But that's not Lebanon's fault. Or Cyprus' or anyone else's. It's just a fact of new mapping technologies, which today are far more precise and more accurate than those used when the Israel-Cyprus line was drawn in their 2011 treaty.

On that subject, I would also note for all stakeholders in the East Med that while Lebanon and Cyprus are the region's only full-fledged members of UNCLOS, all states are subject to its rules and precedents, which have become part of Customary International Law. Since the Lebanon-Cyprus deal adheres strictly to those rules and the science behind them, the criticisms haven't got a legal leg to stand on. This is especially true with regard to Israel, whose own treaty with Cyprus was negotiated on the basis of the very same laws, rules, and science.

I have to assume that a lot of this is posturing, that both Israel and Turkiye will settle down once they've had more time to analyze the deal and see that, far from damaging them in any way, it could help all concerned by contributing to regional stability and economic growth. And again, I would go back to Aoun's words on signing day, when he declared that "this agreement should be a foundation for wider regional cooperation, replacing the language of violence, war, and ambitions of domination with stability and prosperity."

اتفاية ترسيم الحدود البحرية مع قبرص



https://euromenaenergy.com/wp-content/uploads/2025/11/WhatsApp-Video-2025-11-05-at-21.02.16_2f318946.mp4

ماذا بعد اكتشاف حقل الغاز
الجديد في حقل "كاريش" في
إسرائيل؟ بارودي: ضرورة وضع

لبنان أسس اتفاقات ترسيم حدود بحرية مع قبرص وسوريا



المركزية- يُظهر الاكتشاف الأخير للغاز في حقل "كاريش" الواقع في جنوبي لبنان، بغاية الوضوح أن على لبنان فعل كل ما في وسعه ليمهّد الطريق أمام صناعة النفط والغاز البحرية الخاصة به، وعلى وجه التحديد من خلال تسوية الحدود البحرية مع قبرص وسوريا، ووفقاً لأحد أهم الخبراء في المنطقة في مجال الطاقة

وفي مقابلة عقب إعلان شركة إنرجيان اليونانية - الإسرائيلية عن اكتشاف ثانٍ في حقل "كاريش" المتاخم للمياه اللبنانية، يكشف خبير

الطاقة الدولي رودي بارودي الذي يتمتع بخبرة تزيد عن أربعة عقود "في مجال الطاقة، أن هذه الأخبار جيّدة بالنسبة إلى لبنان".

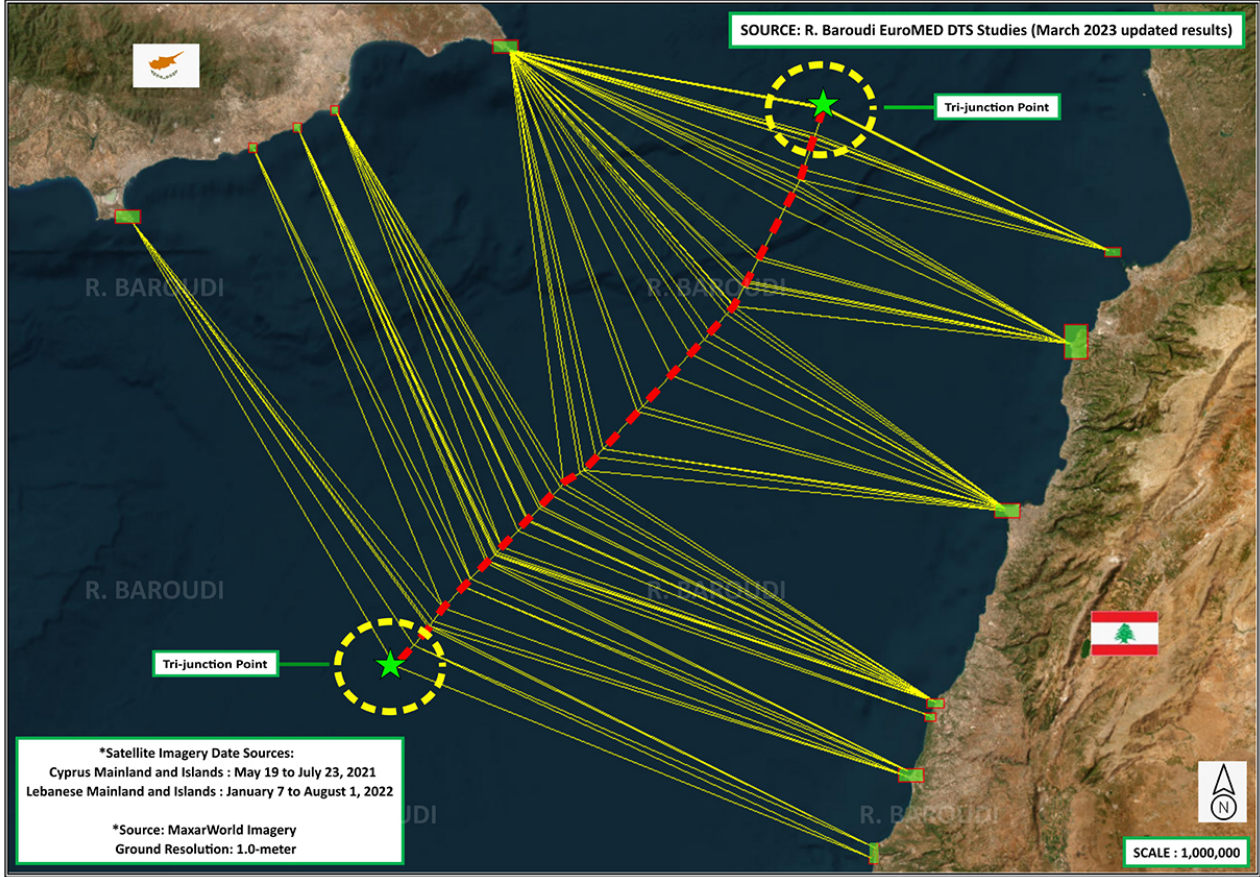
ويقول بارودي، الذي يشغل حاليًا منصب الرئيس التنفيذي لشركة الطاقة والبيئة القابضة وهي شركة استشارية مستقلة مقرها في الدوحة - قطر، لـ"المركزية": ليس مستغربًا أنهم وجدوا المزيد، فذلك يؤكد ما كنا نعرفه منذ سنوات عدة. ولم نتمكن من تحديد موقع جميع الموارد الموجودة في قاع بحر شرق المتوسط، بما في ذلك الرواسب النفطية التي تنتظر الاكتشاف قبالة سواحل لبنان. المشكلة أن المأزق السياسي المعقّد الذي يعيشه لبنان قد تسبّب بتأخير كبير في تطوير قطاع الهيدروكربونات البحرية الناشئ في البلاد".

(MBL) ويؤكد أن "الاكتشاف الجديد يقع بالقرب من خط الحدود البحري الذي اتفق عليه لبنان وإسرائيل في تشرين الأول/ أكتوبر 2022"، ويوضح أن "هذا الاتفاق الذي تم التوصل إليه بعد وساطة استمرت سنوات من قِبَل الولايات المتحدة، كان "خطوة ضرورية"، لكنه لم يكن كافيًا وحده لتنشيط صناعة النفط والغاز في لبنان وتفعيلها بشكل كامل".

CYPRUS - LEBANON MBL

Cyprus vs. Lebanon *Strict Equidistance Maritime Boundary Line (MBL)

100% *Full Effect Line (red dashed line), using all relevant Cyprus coastlines and offshore Islands (see close-up inset example), plus also all relevant Lebanese mainland coastlines and all offshore Islands (see closeup inset example). This MBL begins at the northern computed Cyprus-Syria-Lebanon Trijunction point (TRJ ~ green star) and terminates at the southern modified computed Cyprus-Lebanon-Israel Trijunction point (TRJ ~ green star). See the report for specific details on the Trijunction Points and MBL Line Latitude and Longitude geographic coordinates, along with methodology on how the Trijunction Points and this MBL was produced.



وردًا على سؤال عن كيفية المضي قدماً في بيروت في هذه المرحلة، يشدد بارودي على "أهمية التقدم في الجهود الرامية إلى وضع اللمسات النهائية على اتفاقات ترسيم الحدود البحرية بين لبنان وقبرص وبين لبنان وسوريا، والتي من شأنها أن تحقق اعترافاً دولياً كاملاً بالمنطقة الاقتصادية الخالصة للبنان، وبالتالي تقليل المخاطر التي تواجهها شركات النفط الكبرى التي يحتاج لبنان إلى خبرتها ومساعدتها للتمكن من إجراء عمليات استكشاف واستغلال موارده البحرية بشكل مفيد وكامل".

ويُضيف: لقد تفاوضنا سابقاً على ترسيم الحدود البحرية مع قبرص، لكن المجلس النيابي اللبناني لم يصادق على الاتفاقية. وهذا يعني أنه يتعيّن علينا أن ننتقل من النقاط المتفق عليها في المباحثات السابقة وأن نُضيف إليها بعض الإحداثيات من أجل تحديد نقطة تقاطع ثلاثية حيث تتقاطع خطوط الحدود البحرية اللبنانية

والقبرصية والإسرائيلية في البحر. وتحديد هذا المثلث في الجنوب سيبسّط تلقائياً عملية تحديد مثلث آخر في الشمال بين لبنان وقبرص وسوريا.

وفي السياق، يقلل بارودي من شأن المزاعم التي تتحدث عن وجود فجوة كبيرة بين الخط اللبناني - القبرصي والخط القبرصي - الإسرائيلي، مما يزيد من صعوبة تحديد الخط الثلاثي. ويقول: هناك فجوة بالطبع، لكنها في الحقيقة صغيرة جداً. والدليل على ذلك هو ترسيم حدود المناطق البحرية التي أصدرها كل من لبنان وقبرص منذ حوالي عقد من الزمن. إضافة إلى أن جميع الخرائط الدولية للمنطقة، بما في ذلك تلك الصادرة عن شركات النفط والغاز والتي تركز في الأصل على تصوير دقيق للحدود والمساحة، لا تؤشر إلى أي تداخل بين لبنان وقبرص. في الواقع، إن الخط الفاصل بين الكتل اللبنانية والقبرصية المتفق عليه والذي وافقت MBL يتبع بدقة خط ترسيم الحدود البحرية عليه نيقوسيا وبيروت في الاتفاقية التي لم يتم المصادقة عليها. أما الفرق في الجانب الجنوبي من نقطة التقاطع فهو صغير جداً

ويُضيف: نظراً إلى أن الخطوط قريبة جداً، فإن تحديد تقاطع ثلاثي - النقطة التي تتقاطع فيها الحدود اللبنانية والقبرصية والإسرائيلية - يجب أن يكون سهلاً نسبياً. بالإضافة إلى ذلك، فإن الاتفاق على هذا التقاطع الثلاثي في الجنوب من شأنه أن يبسّط تلقائياً عملية تحديد تقاطع ثلاثي في الشمال بين لبنان وقبرص وسوريا. من دون أن ننسى أن لبنان يتمتع بعلاقات ودية وقوية مع كل من قبرص وسوريا، وبالتالي فإن المفاوضات معهما ستكون أكثر وديّة من تلك التي جرت مع إسرائيل، والتي كان لا بد من متابعتها بشكل غير مباشر عبر وساطة أميركية.

ولدى سؤاله عن كيفية تأثر أي جهود دبلوماسية جديدة لترسيم الحدود البحرية، بالشلل السياسي المستمر منذ فترة طويلة في بيروت، حيث يعاني لبنان من شغور في رئاسة الجمهورية منذ أواخر العام 2022 لأن البرلمان اللبناني لم يستطع انتخاب خلف للرئيس السابق ميشال عون، يُجيب بارودي: هذا المأزق يؤكد ضرورة اتخاذ إجراءات جديدة.

ويقول: صحيح أن لبنان لا يستطيع في الوقت الحالي، المصادقة رسمياً جديدة مع قبرص أو سوريا لأنها MBL على اتفاقية ترسيم حدود بحرية تتطلب توقيع رئيس الجمهورية عليها، لكن هذا لا يمنعنا من إجراء المحادثات التقنية اللازمة. في الواقع، يجب أن نسارع إلى تسوية كل

للجمهورية، نكون مستعدين للانطلاق بسرعة من دون مزيد من التأخير،
والبدء بجمع عائدات الغاز التي يحتاج إليها الاقتصاد اللبناني
بشدة" يختتم بارودي.

Greenland's ice loss surges: Satellite data shows alarming retreat



Aggravating concerns about global warming and its consequences, a new, comprehensive analysis of satellite data has found Greenland has lost more ice than previously estimated and that the majority of glaciers on the landmass have retreated significantly. The Greenland Ice Sheet has shed about one-fifth more ice mass in the past four decades than previously estimated, researchers at Nasa's Jet Propulsion

Laboratory in Southern California reported in a new paper. Icebergs are falling into the ocean at an accelerating rate. Though this additional ice loss has had only an indirect impact on sea levels, it could hold implications for ocean circulation in the future.

Published in *Nature* on January 17, the analysis offers a comprehensive look at retreat around the edges of the entire ice sheet from 1985 to 2022, drawing from nearly a quarter million pieces of satellite data on glacier positions. Of the 207 glaciers in the study, 179 retreated significantly since 1985, 27 held steady, and one advanced slightly. Most of the ice loss came from below sea level, in fjords on Greenland's periphery. Once occupied by ancient glacial ice, many of these deep coastal valleys have filled with seawater – meaning the ice that broke off made little net contribution to sea level. But the loss likely accelerated the movement of ice flowing down from higher elevations, which in turn added to sea level rise.

“When the ice at the end of a glacier calves and retreats, it's like pulling the plug out of the fjord, which lets ice drain into the ocean faster,” said Chad Greene, a glacier scientist at JPL and the study's lead author. For decades researchers have studied the Greenland Ice Sheet's direct contributions to global sea level rise through ice flow and melting. Scientists participating in the international Ice sheet Mass Balance Inter-comparison Exercise (IMBIE) estimated that the ice sheet had lost 5,390 billion tonnes between 1992 and 2020, adding about 13.5 millimetres to global mean sea level, according to the Intergovernmental Panel on Climate Change. But the IMBIE measurements do not account for ice lost due to the retreat of terminal glaciers along the edges of Greenland. (These glacier edges were already in the water, whether submerged or floating.) The new study quantifies this amount: For the 1985 to 2022 period in the new paper, the ice sheet was estimated to have lost about 1,140 billion tonnes – 21% more mass lost than in the IMBIE assessment.

Although it doesn't add to sea levels, the additional ice

represents a significant influx of fresh water to the ocean. Recent studies have suggested that changes in the salinity of the North Atlantic Ocean from melting icebergs could weaken the Atlantic Meridional Overturning Circulation, part of the global "conveyor belt" of currents that transport heat and salt around the ocean. This could influence weather patterns worldwide, as well as affect ecosystems, the authors said.

Icebergs have tumbled from Greenland's glaciers for thousands of years as part of a natural cycle that typically balanced glacier growth in the winter with melting and retreat in the summer. The new study finds that ice retreat has far outpaced growth throughout the 21st century. The researchers also found that Greenland's ice extent remained relatively steady from 1985 to 2000, then started a marked recession that continues to this day.

The data showed a glacier in northeast Greenland called Zachariae Isstrom lost the most ice, dropping 176 billion tonnes of mass due to retreat. It was followed by Jakobshavn Isbrae on the western coast, which lost an estimated 97 billion tonnes and Humboldt Gletscher in the northwest, which lost 96 billion tonnes. Only one glacier, Qajuuttap Sermia in southern Greenland, experienced any growth over the study period, but its gains were too small to offset the losses from other glaciers.

The researchers also found that glaciers with the largest seasonal fluctuations in the position of their ice front experienced the greatest overall retreat. The correlation suggests the glaciers that are most sensitive to warming each summer will be most impacted by climate change in the coming decades.