

Cyprus runs the risk of being trapped into an expensive undertaking with gas deal



DEFA announced on 23 August its decision to award the tender for the construction of an LNG import terminal at Vasilikos. This will comprise a floating storage regasification unit (FSRU), a jetty for the mooring of the FSRU, pipelines, port and other facilities.

The winner is a consortium comprising China Petroleum Pipeline Engineering Co Ltd (CPPE), Aktor SA and Metron SA, Hudong-Zhonghua Shipbuilding Co. Ltd and Wilhelmsen Ship Management Ltd.

Announcing its decision DEFA said “we believe that the future of the country is aligned with natural gas and we expect it to

play a major role in the economic development of the country in years to come.

“The establishment of the natural gas market will boost the development of the whole energy and industry sectors of the Republic.”

Indeed, natural gas can help bring carbon emissions down. In order to produce the same energy output gas emits about 27 per cent less carbon dioxide in comparison to diesel oil. As a result, replacing diesel by gas in power generation will be helpful, at least initially. I say initially, because the EU’s target is to reduce emissions by 40 per cent by 2030 in comparison to 1990 levels.

The challenge for Cyprus is that so far it has been promising small reductions to its CO₂ emissions in comparison to 2005, when these were close to their peak – about 60 per cent higher in comparison to 1990 according to Eurostat data. By the end of 2017 Cyprus’ emissions were only marginally lower than in 2005.

In fact the incoming European Commission (EC) President, Ursula von der Layen, promised to increase EU’s 2030 CO₂ reduction target to 50 per cent. In addition, the EC has already sent back Cyprus’ Energy Plan to 2030 for not being ambitious enough and requested it to be revised nearer EU targets.

With no other change, and with power generation being only 20 per cent of Cyprus’ total energy consumption, introduction of LNG will reduce carbon emissions only by 8 per cent in comparison to 2005 and close to 50 per cent higher than in 1990. A modest but useful reduction, but it will not get close to EU expectations for 2030. Cyprus will need to do a lot more to achieve that – by substantially increasing use of renewables and biofuels.

Impact on electricity costs

When asked about cost implications, DEFA said that state ownership of the project will allow the cost of importing and regasifying LNG to be kept sufficiently low to keep the cost of gas offered to EAC below \$10/mmBTU (per about 1000 cubic feet) – the equivalent cost of oil at current prices.

DEFA was also asked how can Cyprus commit itself to expensive infrastructure when it does not yet know whether it can secure gas at an affordable price. The response was that that even if the ongoing process – in response to the request for expressions of interest for the long-term supply of LNG for 10-20 years – does not produce favourable prices, DEFA's needs can be met in the short-term by the spot market, which with today's prices can provide LNG at \$3-\$4/mmBTU.

Indeed, as a result of excessive supplies of LNG, spot gas prices in Europe are currently at a low, at about \$4/mmbtu. However, in October 2018 they were about \$10/mmbtu. But by 2022 – the time at which Cyprus will be ready to import LNG – demand is expected to exceed supply, with prices rising again. Available forecasts estimate the price of gas in Europe to average about \$6.50/mmbtu in the ten-year period to 2030.

Given the small quantities required by Cyprus – initially about 0.5 million tonnes LNG per year – the spot price for LNG to be delivered to Cyprus is expected to be higher. Adding to this the recovery of the cost of constructing the facilities (allowing for the EU grant), operation and maintenance – and other related costs and costs incurred by EAC – is likely to bring the total cost above the \$10/mmbtu level. Long-term supply contracts would cost even more.

What is amazing is that the decision to proceed with award of the construction contract appears to have been taken without first securing LNG at reasonable prices and without a commercial viability study based on expected, reliable, LNG costs.

Other issues

DEFA expects to finalise award of the construction contract by mid-October, with the facilities becoming operational by the end of 2021.

But there may be complications. First, its decision to award the tender to the CPPE consortium, taken after a short evaluation period of six weeks, may be disputed by other bidders, which may cause delays.

It should be noted that the unsuccessful consortia are well known, experienced companies, in the global LNG industry. In contrast, CPPE, the leader of the winning consortium, has no real LNG experience.

There are also questions about members of the winning consortium. Aktor SA is the sister company of Helector, facing corruption charges related to HYTY Paphos. Aktor SA had accusations leveled against it for fraud related to projects in the Balkans. Both companies are fully-owned by Greece's Ellaktor Group. These and other questions will hopefully be cleared during the period before final award, but could, nevertheless, cause months of delays.

Will gas boost Cyprus economy?

Given the above, this is not certain. Gas could boost industry and benefit the economy if its introduction leads to substantial cost reductions in comparison to diesel. But this may not be the case. In fact it could be the opposite.

Import of gas by pipeline, either directly from Aphrodite or by accepting Energean's offer to supply gas from its gas-fields in Israel, could do exactly that, with gas prices to EAC less than \$7/mmbtu. Sadly these options have not been taken on.

Moreover, gas alone will not reduce carbon emissions to the

levels required by the EU. This would require a substantial increase in the share of renewables and biofuels in Cyprus energy mix.

Without properly and transparently demonstrating the commercial viability of the project – based on reliable data – Cyprus runs the risk of being trapped into an expensive undertaking for at least the next ten years. Not only this may not boost industry, but may also become a long-term burden to Cyprus' economy.

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Britain's Brexit breakdown



British democracy was once widely seen as a model for others to follow. But it has now sunk into its deepest crisis in living memory. At stake is not only whether the United Kingdom crashes out of the European Union without an exit deal, but also how far a country once famed for stability and moderation descends into political civil war. Prime Minister Boris Johnson seems determined to take the UK out of the EU on October 31 at any cost. The chances of a chaotic no-deal Brexit increased dramatically on August 28, when Johnson moved to suspend the UK parliament for five weeks between mid-September and October 14.

It will now be much harder – but not impossible – for his parliamentary opponents to thwart him. Johnson claims that he wants a deal, but that the threat of leaving without one is needed to force the EU to compromise. In his view, curtailing parliament's ability to block a no-deal Brexit was necessary to make the threat credible. It is not inconceivable that EU leaders, who meet as the European Council on October 17-18,

might agree on a revised deal that British MPs would then rubberstamp, for fear of the alternative. But Johnson's demands are extreme. In particular, he wants to scrap, not just modify, the "backstop" designed to keep the Irish border open – and to preserve the fragile peace in Northern Ireland – after Brexit. That suggests his real aim is to blame EU intransigence for the failure of renegotiations and to provoke his parliamentary opponents into forcing a general election, for which he is already preparing with a blizzard of spending promises and catchy policy announcements. In the election campaign, Johnson would accuse parliament of thwarting "the will of the people," meaning the narrow 2016 vote to leave the EU. This tactic might erode support for Nigel Farage's Brexit Party and rally most Leave voters under Johnson's Conservative banner. With Remainers divided, Johnson might win the sizeable parliamentary majority that eluded his predecessor, Theresa May, in the 2017 general election. But for now, there is no democratic mandate for a no-deal Brexit. The 2016 referendum did not specify how the UK would leave; the Leave campaign simply promised that doing so would be easy, painless, and by agreement. A no-deal Brexit would be none of those things. The government's own planning envisages ports seizing up and businesses going bust as tariffs on UK exports to the EU go up overnight. Food, medicines, and fuel could run short. Civil unrest would be likely. And a painful recession would doubtless ensue. Worse, such an outcome would cut the UK adrift from its European neighbours. A post-Brexit trade deal with the EU, with which the UK does nearly half its trade, would be postponed indefinitely; even starting talks would require Britain to swallow the terms of the rejected withdrawal agreement. Bad blood would also jeopardise security and foreign-policy co-operation. No wonder US President Donald Trump, who hates the EU because it enables Europeans to stand up to him together, is cheering Johnson on. A no-deal Brexit also would be painful for the EU, and especially Ireland. The fragile eurozone economy, which already is grappling with China's slowdown and the uncertainty created by

Trump's trade wars, could plunge into recession. And given the limited scope for European monetary or fiscal stimulus, the damage could be more severe than expected. How, then, might a no-deal Brexit still be stopped? Rebel MPs' preferred option had been to pass legislation instructing Johnson to seek a further extension to the UK's exit deadline. They might still do so next week, or even just after the October European Council meeting. But the timing is very tight, and government delaying tactics could stymie the rebels. Moreover, Johnson might ignore such an instruction; the EU could reject an extension request; or, more plausibly, it might impose conditions on the extension that Johnson would reject. The rebels' second choice – a no-confidence vote – now seems likely next week. With his allies from Northern Ireland's Democratic Unionist Party, Johnson has a parliamentary majority of just one. And because his suspension of parliament has outraged rebel Conservatives who had previously balked at bringing down their own government, a no-confidence vote now stands a greater chance of success.

But bringing down the government would not be sufficient to stop a no-deal Brexit. The motley crew of rebels also would need to support the formation of a caretaker government that would seek a Brexit extension, call a general election, and perhaps also legislate for a second referendum. Moreover, Labour Party leader Jeremy Corbyn, a hardline socialist and closet Brexiteer, insists on leading such a government. That would require Conservative rebels, opposition Liberal Democrats, and also MPs who quit Labour in protest over Corbyn's leadership to rally behind him – a tall order.

Alternatively, if Corbyn failed to muster a majority, he could give Labour's backing to a caretaker government led by someone less controversial – but that is also unlikely. If an alternative government could not be formed within two weeks of a successful no-confidence vote, rebels would need to hope that Johnson called – and lost – an election before October

31. Johnson might calculate that it would be easier for him to win an election before no-deal chaos materialises; for now, at least, he says he won't trigger a pre-Brexit poll. That leaves the nuclear option of parliament voting to revoke unilaterally Britain's notification of its intention to leave the EU under Article 50 of the Treaty on European Union. This is the only surefire way to thwart a no-deal Brexit. But it would be an incendiary move. Many Leavers would see it as an anti-democratic coup. And because it would reverse the 2016 referendum result, such a step would necessitate a new plebiscite pitching Remain against No Deal. With luck, Johnson's scorched-earth tactics will spur his disparate opponents into overcoming their differences to stop a no-deal Brexit. But whatever happens, the pragmatic centre is being squeezed out of British politics. Both hardline Brexiteers and diehard Remainers have rejected the only available exit deal. As each side ups the ante, Brexit is now an all-or-nothing fight to the death among absolutists. – Project Syndicate

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Shale drilling drops to 19-month low after output hits new high



American oil explorers, which are producing record volumes of crude, cut drilling to a 19-month low as they seek to show investors they can do more with less. Working oil rigs fell by 12 last week to 742, according to data released on Friday by oilfield-services provider Baker Hughes. The count has dropped by more than 140 from a November high. In the Permian Basin, 5 rigs were idled, lowering the count there to 429. As explorers dial back spending, Bank of America Merrill Lynch downgraded a trio of shale servicers this week, including Nabors Industries Ltd, owner of the world's biggest fleet of land drilling equipment. "For US onshore, structural changes are accelerating," Chase Mulvehill, an analyst at Bank of America Merrill Lynch, wrote last week in a note to investors. "Doing more with less remains prevalent across US shale, leaving a destructive impact on US onshore activity that is likely to extend well into '20 (or beyond)." Despite the rig-count decline this year, US crude production keeps increasing. It rose to a record 12.5mn barrels a day last week, eclipsing the previous high mark set in late May, according data from the Energy Information Administration. That's partly because producers have an ample backlog of wells that have already been drilled in the past and can be tapped for fracking, but they are also seeking better technology to get more crude from each hole. Plus, it may take a few more months for output from wells bored during last year's drilling peak to start declining.

Shell's woeful August risks run as 2nd-largest oil major



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Big Oil has a new contender for the No 2 spot. Chevron Corp has almost displaced Royal Dutch Shell Plc as the second-largest oil company by market capitalisation.

It's been a particularly grim month for Big Oil, as a US-China trade war dimmed the picture for global economic growth, stymieing crude demand. The Stoxx Europe 600 Oil & Gas Index was headed for a 6.3% decline, among the largest monthly drops in nearly four years, which mirrors the slide in Brent prices.

But Shell had it worst. Its B shares in London have plunged more than 12% last month, a decline not seen since the 2008 financial crisis, which has knocked almost £26bn (\$32bn) off its market value. That's put chief executive officer Ben van Beurden's dream of being No 1 in the industry by every measure

even further out of reach.

Shell established itself as the No 2 oil company following its acquisition of BG Group Plc, narrowing its market cap gap with Exxon Mobil Corp. But its US competitor Chevron has now caught up with it again.

Blame earnings. Shell's net income slid in the second quarter and was far weaker than expected, falling short of the average analyst estimate by almost 30%. That was its biggest miss in more than two years, and pushed chief financial officer Jessica Uhl to acknowledge the company should probably find a way to better manage expectations.

"Shell's shares have suffered from an unwelcome relapse of earnings volatility," said Christyan Malek, head of European oil and gas research at JP Morgan Chase & Co. "While we view this as more of a bump in the road, together with the oil price correction – which Shell is more geared to – it has under-performed more than others."

Chevron, on the other hand, surpassed second-quarter analyst estimates by 21%. Its shares still fell in August, along with the rest of the industry, but its dip was only a third of Shell's. It's also traded in dollars, an advantage over sterling-denominated Shell B shares. The British currency has been pummelled by the Brexit process.

Both companies still trail Exxon by a large margin. The Irving, Texas-based oil giant's market cap is almost \$290bn, compared to Chevron and Shell's \$223bn.

Flaring, or why so much gas is going up in flames



If you take a drive along the well-worn highways of West Texas, orange flames will punctuate your journey. Those are gas flares, and they're lighting up the skies above West Texas oilfields like never before as drillers produce crude faster than pipes can be laid to haul the attendant natural gas away. Oil drillers say flaring is the most environmentally friendly way to get rid of excess gas they can't sell. Environmentalists say that in many cases what flaring is friendly to is oil drillers' profits. They think regulators in states including Texas and North Dakota should be tougher on a practice that harms air quality and contributes to climate change.

1. Why do drillers flare?

When an oil well begins to spew, less-valuable natural gas comes up alongside crude. Pipelines can capture that gas, but when they're not available, producers often get rid of the gas so they don't have to stop pumping oil. They do that by either igniting the gas, in the case of flaring, or releasing it directly into air, known as venting. Flaring is preferred because methane, an especially potent greenhouse gas, is burned off, though carbon dioxide is released into the air.

2. How much gas is flared?

A lot. The World Bank estimated that globally in 2018, 145 billion cubic meters of gas was flared, about as much as Central and South America use in a year. The amount is rising because of the oil boom in the U.S., which is fueled by the use of hydraulic fracturing – fracking – to unlock fuel from shale rock. Increased flaring in the U.S. is concentrated in the shale oil basins known as the Eagle Ford in Texas, the Permian in Texas and New Mexico, and the Bakken in North Dakota. Permian flaring rose about 85% last year, according to data from Oslo-based consultant Rystad Energy. The volume flared in Texas by the end of 2018 was greater than residential gas demand in the entire state.

3. What are the effects?



Gas flaring globally emits more than 350 million tons of carbon dioxide in a year, according to the World Bank. That's the equivalent of the carbon emissions from 90 coal-fired power plants. In the U.S., flaring accounts for an estimated 9% of the greenhouse gas emissions of the oil and gas industry. In addition, the practice spews particulate matter, soot and toxins into the air that have been shown to be hazardous to humans.

4. How does the U.S. regulate flaring?

Flaring is allowed when the gas could cause a safety concern due to high pressure in a well and when pipelines aren't in place to carry the fuel away. In either case, flaring spares drillers from having to suspend production, a costly move that can damage a reservoir's future output. The Texas Railroad Commission, the main oil and gas regulator in the state, has never denied a request for a flaring permit. In a controversial case, it granted one Aug. 6 to Exco Resources Inc. even though the company's wells were already connected to pipelines. Exco successfully argued that it would lose money paying to access the network.

5. Isn't the gas worth something?

The short answer is no, not in oil-dominated basins where what matters is the ability to keep pumping black gold. In the Permian, local gas prices have gone negative multiple times this year, meaning drillers were actually paying customers to haul their gas.

6. Will more pipelines help?

Yes, when prices justify the costs of capturing the gas and transporting it to markets. A new pipeline led by Kinder Morgan Inc. is expected to reduce the pressure to flare. At the same time, pipeline projects in Texas are beginning to attract public opposition, a more common phenomenon in the northeastern U.S. Landowners along the route of another Kinder Morgan line are fighting the project in court, arguing against the company's use of eminent domain to take private property. It's not clear whether the legal battle will affect the project, but the challenge portends a tone shift in a historically industry-friendly state.

7. Are there alternatives to flaring?

Apart from transporting gas to markets via pipeline, oil producers can use it on-site as an energy source or reinject it underground. Both options require investments, however.

Russia requires oil drillers to make use of 95% of the gas they produce, while Nigeria prohibits flaring, yet the practice is common in both places. That suggests bans may not be sufficient without incentives to curb flaring.

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Iran official says US showing 'some flexibility' on oil sales



DUBAI (Reuters) – A senior Iranian official said on Saturday the United States had shown flexibility on the licensing of Iranian oil sales and this was a sign that Washington’s “maximum pressure” policy against Tehran had been defeated, state media reported.

French President Emmanuel Macron paved the way at a G7 summit a week ago for a potential diplomatic solution to a confrontation between the United States and Iran brewing since President Donald Trump withdrew Washington last year from world powers’ 2015 nuclear deal with Tehran.

“Macron met with ...Trump during the G7 meeting and the U.S. side has shown some flexibility in the licensing of Iranian oil sales,” Iranian Deputy Foreign Minister Abbas Araqchi was quoted by the state news agency IRNA as saying.

“This is a breach in the U.S. maximum pressure policy and a success for Iran’s policy of maximum resistance,” he said.

Araqchi did not elaborate, and there was no immediate French or U.S. comment.

Since ditching the nuclear deal, calling it flawed to Iran's advantage, Trump has reimposed sanctions to strangle its vital oil trade and force Tehran to accept stricter limits on its nuclear activity, curb its ballistic missile program and end its support for proxy forces around the Middle East.

Araqchi said Iran and its European partners in the nuclear deal faced "difficult and complex" talks towards salvaging the pact. He said Tehran was determined to continue reducing its commitments under the accord until it received protection against sanctions on its oil sales and banking transactions.

Iranian President Hassan Rouhani urged his people on Wednesday to unite to overcome Washington's "economic war" while his government said it would use diplomacy to try to solve the standoff even though it distrusted Trump.

IRANIAN TANKER BLACKLISTED

On Friday, the U.S. Treasury Department blacklisted the Iranian oil tanker Adrian Darya, with Secretary of State Mike Pompeo saying Washington had reliable information the vessel was headed to Syria, an ally of Tehran.

The ship was detained by Britain off Gibraltar in July due to suspicions it was carrying Iranian oil to Syria in violation of European Union sanctions. It was released in mid-August after Iran gave assurances that its cargo was not destined for Syria.

Turkey said on Friday the ship was headed to Lebanese waters after changing course several times. Beirut said it was not informed of the plan, but Turkey's information suggested that a ship-to-ship transfer of cargo might be attempted once it nears the coast of Lebanon, which borders on Syria.

A senior Iranian military commander vowed that Iran would retaliate if any of its vessels was stopped in international waters, according to Fars news agency.

“Piracy against Iran can’t be easily overlooked. It is natural for us to act when Iranian ships are stopped in any part of the world’s waters. Iran’s armed forces will certainly retaliate,” Brigadier General Kiumars Heydari, the head of Iran’s regular ground forces, told Fars.

Reporting by Dubai newsroom; Editing by Mark Heinrich

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Opec posts first 2019 oil output rise despite Saudi cuts: Survey



LONDON (Reuters) – OPEC oil output has risen in August for the first month this year as higher supply from Iraq and Nigeria outweighed restraint by top exporter Saudi Arabia and losses caused by U.S. sanctions on Iran, a Reuters survey found.

The 14-member Organization of the Petroleum Exporting Countries has pumped 29.61 million barrels per day (bpd) this month, the survey showed, up 80,000 bpd from July's revised figure which was the lowest OPEC total since 2014.

The survey indicates Saudi Arabia is not deviating from its plan of restraining output by more than called for by an OPEC-led supply deal to support the market. Despite calls this year from U.S. President Donald Trump on OPEC to raise output, the producers renewed the supply pact in July.

OPEC's supply curbs should eventually start to support the price of crude LC0c1, which has fallen from a 2019 high above \$75 a barrel in April to \$61 on Friday on concern about slowing oil demand and economic growth, analysts at Commerzbank said.

"Even the moderate demand growth that can be expected is likely – given the considerable production discipline shown by OPEC – to result in an ongoing tightening of supply and to support rising prices," Commerzbank analyst Eugen Weinberg said.

OPEC, Russia and other non-members, known as OPEC+, agreed in December to reduce supply by 1.2 million bpd from Jan. 1 this year. OPEC's share of the cut is 800,000 bpd, to be delivered by 11 members and exempting Iran, Libya and Venezuela.

In August, the 11 OPEC members bound by the agreement, which now runs until March 2020, achieved 136% of pledged cuts, down from 150% in July, the survey found. Two of the three exempt producers pumped less oil.

The biggest supply boost of 80,000 bpd came from Nigeria,

Africa's largest exporter, which is seeking a higher OPEC quota and in August continued to produce above its target by the largest margin.

The second-largest rise of 60,000 bpd came from Iraq, which boosted exports from both its northern and southern outlets according to the survey.

Smaller increases came from Libya, where the country's largest oilfield, El Sharara, resumed output on or around Aug. 8 following an outage. Kuwaiti output climbed slightly while remaining below its quota, the survey found.

Saudi Arabia, which in July cut supply even further below its OPEC target in a bid to reduce inventories, has kept output at a similar rate in August. The survey pegged Saudi production at 9.63 million bpd, down from its quota of 10.311 bpd.

Fellow Gulf producer the United Arab Emirates also kept output flat and below its target.

Among countries with lower output, Iran posted the largest decline of 50,000 bpd.

The United States reimposed sanctions on Iran in November after pulling out of a 2015 nuclear accord between Tehran and six world powers. In a bid to cut Iran's sales to zero, Washington in May ended sanctions waivers for importers of Iranian oil.

In Venezuela, supply fell slightly due to the impact of U.S. sanctions on state oil company PDVSA and a long-term decline in production, according to the survey.

July's output was the lowest by OPEC since March 2014, excluding membership changes that have taken place since then, Reuters surveys show.

The Reuters survey aims to track supply to the market and is based on shipping data provided by external sources, Refinitiv

Eikon flows data and information provided by sources at oil companies, OPEC and consulting firms.

Additional reporting by Rania El Ghamal; Editing by Edmund Blair

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Deforestation



By Eric Roston New York When it comes to saving the world's rainforests, governments can make a big difference, and fast. Take Indonesia, which in 2012 surpassed Brazil as the world's leader in tropical rainforest destruction. In 2017, it engineered a 60% drop in tree loss from the previous year by strictly enforcing protections in vulnerable regions. On the other hand, governments can reverse course just as swiftly. Take Brazil, where a decade-long trend of improving forest protections has now gone into reverse. It's a concern both in and beyond the tropics, with multinational companies coming

under increasing pressure to stop doing business with suppliers that ravage the environment. Rainforests host half the species on Earth, help regulate global weather patterns and produce much of the planet's oxygen. Their disappearance, through burning or felling, creates about 10% of the greenhouse gases the world produces in a given year that drive climate change.

By one estimate, more tropical tree cover was lost globally in 2016 and 2017 than in any other years this century. The Situation A handful of nations are the guardians of the world's rainforests, with Brazil home to one third and roughly 15% shared by Indonesia and the Democratic Republic of Congo. Critics blame Brazil's relapse on the rollback of environmental protections and enforcement in the Amazon in recent years. One analysis pointed to an 84% year-on-year increase in forest fires to record levels in 2019, many caused by loggers incentivised by the government's disdain for environmental oversight. Brazilian leader Jair Bolsonaro, who relishes criticism of his attitude toward the Amazon and jokingly refers to himself as "Captain Chainsaw," is facing a backlash from trading partners including Germany, Norway and the European Union. In Congo, agriculture, logging and energy projects pushed deforestation to record levels in 2017. The global bright spot was Indonesia, where authorities imposed a moratorium on developing peatlands, carbon-rich areas where the tree canopy shields waterlogged soil. When cleared, peatlands are drained, leaving a vast area of tinder that can smolder under the ground for years. Combined with better educational campaigns and stricter law enforcement, the moratorium cut primary forest loss to the lowest level in 14 years, notwithstanding setbacks in Sumatra, an island that's home to endangered tigers and orangutans. Tree loss declined yet further in 2018. The Background Although tropical deforestation rates have dropped by more than a third since the 1990s, rainforests remain on course to disappear in about a century. The 2015 Paris agreement to fight climate change

recognised forests as part of the solution to curbing carbon emissions. Rainforests absorb prodigious amounts of carbon dioxide and store it in trees, other plants and soil. Forest fires in Indonesia in 2015 pumped out more greenhouse gases than the entire US economy. Tropical deforestation continues mostly because people, both near and far, demand timber as well as commodities – typically soy, palm oil, and beef – that flourish where forests get in the way. Indonesia, for example, delivers about half the world's \$50bn palm-oil crop each year. It's cheaper than other vegetable oils, widely used in products from mayonnaise to makeup and a route out of poverty for farmers. Hundreds of international companies have pledged to clean up their supply chains, sourcing commodities only from producers certified as having sustainable practices. The Argument Climate scientists say that preserving rainforests, and restoring former forested land, represents a relatively straightforward and economical way to meet climate change targets. Such measures, they estimate, could help bring humanity about one-third of the way to the Paris goal of limiting warming to below 2 degrees Celsius (3.6 degrees Fahrenheit). Environmentalists argue over the best approach, but targets and protections have proven most effective only when strictly applied. On-the-ground strategies include removing roads into sensitive areas or paying rural and indigenous communities to maintain habitats. Activists urge rich nations to follow Norway's lead and offer incentives to countries to curb forest loss (and to withdraw them if necessary).

Conservation groups say Corps should step up, for instance by including environmental audits in their financial reporting. They are pressing for better systems to certify producers of sustainably grown commodities; these make it easier both for companies to avoid illegal operators and consumers to make eco-friendly choices. There's some way to go: A 2018 survey by environmental group Greenpeace found that all 16 multinationals surveyed either failed to publicly identify

their palm-oil suppliers or used producers that harmed rainforests.

World's \$1tn wealth fund weighs in on Amazon wildfire uproar

Norway's \$1tn sovereign wealth fund, the world's largest, is adding its clout to a growing number of asset managers across the globe scrutinising supply chains and businesses as wildfires rip through the Amazon. "We have had a focus on deforestation for several years and follow the ongoing serious situation," Carine Smith Ihenacho, chief corporate governance officer at Norges Bank Investment Management, said in an emailed comment. The wealth fund's chief governance officer said that she expects companies to have a strategy for reducing deforestation from their own activities and supply chains. In 2017, the fund initiated dialogue with companies that buy and sell soy and cattle products in Brazil, Ihenacho said. The Norwegian investor, which holds more than 9,000 companies around the world, has ratcheted up its work on ethics and sustainability over several years. It has taken steps to exclude or put companies under observation on a set of criteria, and it also engages directly in dialogue with companies to express its views. By the end of 2018, the fund had invested \$6.2bn in stocks in Brazil, and about \$2.8bn in bonds, according to a holdings overview on its website. "We have in previous years divested from one soy producer in this region due to links to unsustainable production and deforestation," Ihenacho said. Not only engaging directly with companies, the Norwegian fund has also taken initiative to

talk to lenders to get a broader perspective on deforestation and financing, according to the governance officer. The fund engaged with banks in Brazil, Colombia, Indonesia and Malaysia last year, Ihenacho said, to understand how they monitor deforestation risk in their credit loan portfolios.

Brazil's neighbours are also burning, poisoning the Amazon



As the fires ravaging Brazil's Amazon stoke global outrage, its neighbours are also scorching, ripping up and poisoning their forests – largely under the radar.

Bolivia and Peru have seen faster growth in the number of fires this year than Brazil, as illegal miners, ranchers and cocaine producers continue to wreak havoc.

The 2.5mn square-mile Amazon is being attacked on all sides, with fires claiming an area equivalent to dozens of soccer pitches every hour in Brazil alone. At the deforestation rates seen in recent years, the whole forest will lose an area about the size of Virginia over the next decade according to Michael T Coe, senior scientist at the Woods Hole Research Center.

That's endangering an eco-system that not only hosts a vast and largely unknown share of the world's biodiversity but also helps regulate the continent's climate.

Fires have multiplied in Brazil as loggers and farmers, emboldened by President Jair Bolsonaro's disdain for

environmental oversight, set ablaze land cleared earlier this year. Countries like Colombia, Peru and Bolivia aren't encouraging deforestation, but lack resources and political will to enforce existing regulations, according to Carolina Gil, an attorney for environmental protection group Amazon Conservation.

"The current crisis in Brazil is just the tip of the iceberg," Gil said.

Continued destruction threatens to turn dense forests into scrub-land covered in shrubs and weeds, she added, wrecking a region which provides a home to tens of thousands of animal and plant species, and roughly one-fifth of the world's fresh water.

Colombia, which has the largest swath of the Amazon after Brazil and Peru, lost 530,400 acres (215,000 hectares) of the rainforest in 2017, according to satellite data monitored by Amazon Conservation. Brazil, which has about six times as much of the jungle, has been losing about 1.58mn acres a year.

Meanwhile, cultivation of coca plants, the raw material for cocaine, more than quadrupled in Colombia between 2012 and 2017. Farmers often slash down forest in national parks to plant illegal crops in remote parts of the country where the government's presence is weak or non-existent.

Mercury used by informal gold miners also continually seeps into the rivers in Colombia's Amazon, poisoning fish.

Colombia's environment ministry didn't reply to a written request for comment.

Brazil has experienced more than 83,000 fires so far this year, up 77% from the same period last year, according to the country's National Institute for Space Research, known as Inpe. Meanwhile, Bolivia and Peru have seen their number of fires roughly double during the same period.

In Bolivia, where nearly 19,000 fires have destroyed more than 1mn acres of forest this year, left-wing President Evo Morales has mobilized firefighters and used a Boeing 747 Supertanker to fight the blazes.

Bolivia's environment ministry and presidential press office

did not return phone calls and emails seeking comment. Morales on Sunday said he was open to international help to put out fires and called for a summit between countries that make up the Amazon to “coordinate immediate actions and long-term plans,” according to a statement.

Peru’s environment ministry didn’t reply to an email seeking comment.

Brazil’s neighbours don’t share Bolsonaro’s belligerence, or hostility to environmental protection, but their record isn’t much better, said Rodrigo Botero, director for the Foundation for Conservation and Sustainable Development in Colombia.

“You can see across the region that the pressures in countries like Bolivia, which is suffering huge losses, or Paraguay are the same as in Brazil,” he said. “It’s not a question of left or right.”