

CATMOCK DAILY CAPSULE

April 30 , 2026

KAKURO

Kakuro puzzles are similar with crosswords, but instead of letters board filled with digits (from 1 to 9).

The board's squares need to be filled in with these digits in order to sum up to the specified numbers.

You are not allowed to use the same digit more than once to obtain a given sum.

Each Kakuro puzzle has a unique solution. Good luck!

		30	11	
	7			
	16			4
18				
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SUDOKU

Every sudoku grid always contains some partially completed grids with digits. The objective of the game is to fill the missing digits into the grid. With 4x4 grids you need to use and fill digits from 1 to 4; with 6x6 -grids digits 1 to 6 and 9x9-grids contain digits from 1 to 9 respectively. In each column, row and block you can use each digit only once.

	4		7	9				5
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9	2		1		5	4		
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CHIP SUPPLY CHAINS RISK BEING NEXT CASUALTY OF WAR

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Bloomberg

Mention propylene glycol methyl ether acetate (PGMEA) as a casualty of the Iran war, and few will know what you're talking about. More visible commodities like oil and, to a lesser extent, inputs for fertilizer have dominated the headlines. But PGMEA, a special kind of paint based in the oil derivative naphtha, also known as photoresist, is harder to find since the Middle East conflict erupted two months ago.

How much this matters depends on PGMEA's role in the chipmaking process and whether there are useful replacements. Its unavailability risks rekindling supply chain strains still not fully healed from the pandemic. With semiconductor production concentrated in East Asia, disruption will first be visible there — and already the alarm bells are ringing.

Japan's largest chemical company, Shin-Etsu Chemical, has withheld its full-year forecast, citing supply constraints on naphtha-derived products due to the war. Shin-Etsu, which also makes silicon wafers for semiconductors, says it's difficult to "reasonably predict" performance for the fiscal year. Its most-recent quarterly operating income of about \$860 million was down 13% from last year and short of estimates.

Could this be the canary in the coal mine? Sohil Sinha writing in the FirstPost points out that the distance between a naphtha cargo and a finished semiconductor is measured in months and dozens of intermediate steps, so disruptions to the feedstock take a while to register and are very hard to reverse.

But the market isn't pricing any downside risk to chip manufacturing because of this, nor should AI data-center buildouts fail to sustain massive chip demand if hyperscalers' earlier investments disappoint. Bloomberg's index of companies exposed to the chips supply chain suggests nothing is amiss:

Far From Cheap

Supply chain disruptions suggests chipmakers' rally has more room to run

— Bloomberg Global Semiconductors Supply Chain Select Total Return Index



Source: Bloomberg

Bloomberg Opinion

Lessons from the Covid supply chain crisis warrant caution, and the impact of the Iran war may be overstated. The key question concerns companies' preparedness. Morningstar's Brian Colello says there were concerns about helium, vital to chipmaking, of which a third comes from Qatar — but companies have enough inventory to last months and alternative sources readily available. Still, Colello says pressures on helium bear watching the longer the conflict goes on.

Fallout should still be contained. Ramiro Palma of Boston Consulting Group notes that photoresist materials account for about 15% of chip production's overall cost:

There is a large ability of the overall value chain to absorb the shot from a price increase perspective. And I think the volumes of production are sufficiently small that I would not expect that shortages would materially impact production. So, I tend to worry less about photoresist.

Regarding companies like Shin-Etsu Chemical, which are reeling from the disruption, the most plausible explanation is that they're particularly heavily exposed to photoresist. For the broader semiconductor industry, the impact appears manageable for now.

Unlike photoresist, crude oil's impact is immediate. Brent futures are going through the roof with Washington and Tehran deadlocked. The United Arab Emirates' announcement that it's exiting OPEC didn't help. Perhaps most significantly, futures for December are now at a new high, showing that the enduring blockade is having an impact:



Other commodities are reacting in a similar way. Bloomberg's agricultural commodities index is at its highest since late 2023, and up 13% over the last three months:

In the absence of active hostilities, the US stock market is proceeding on the basis that the worst has been avoided and the war can be ignored. Emerging markets — including some big chipmakers and a number of oil exporters — have also made good their losses. The MSCI

EAFE index (Europe, Australasia and the Far East — effectively the non-US developed markets) has not. It's more dependent on the Strait, and lacks the chipmakers that are dominating attention:

Food for Thought

Agricultural prices are at a 30-month high

▲ Bloomberg Agricultural Commodities Index



Source: Bloomberg

Bloomberg Opinion

For the time being, the bet is that chipmakers and oil exporters are insulated from the war. That may be right. But it's worrying that prices currently seem to ignore the downside risks altogether. Keep an eye on PGMEA.

—Richard Abbey

Hawks Over Tokyo

Central bankers must feel as though they're caught between Scylla and Charybdis — or at least between the shores of the Strait of Hormuz. For oil importers, the blockade is directly inflationary, but poses an immediate threat to growth. How to respond?

It's trickier in Japan, where the evidence mounts that the deflation trap has been escaped (so any central banker would want to bring rates higher), but the political system has broken its own impasse with the arrival of the most popular prime minister in generations, Sanae Takaichi, who opposes rate hikes.

Thus life was even harder for Kazuo Ueda and his colleagues at the Bank of Japan this week than it will be for the Federal Reserve and the European Central Bank. They responded with a "hawkish hold" — rates didn't change, but the BOJ tried to lift the odds that they'll rise soon. The

vote to hold rather than hike was 6-3, a record number of dissents. And it made a declaration of intent:

The ¥160 Line

Since other central banks started hiking, nothing strengthens the yen

Yen Per Dollar



Source: Bloomberg

Bloomberg Opinion

Underlying CPI inflation has been approaching 2% and real interest rates are at significantly low levels, the Bank will continue to raise the policy interest rate... while closely monitoring... the Middle East.

The grammar is important. The BOJ intends to raise rates. It will watch the Mideast but there's nothing about hikes being conditional on good news from the conflict. That implies an increase, probably in June, barring a serious escalation in Iran (in which case Japanese rates would be far down everyone's list of concerns).

But the decision had minimal impact on the yen, which is weak and continues to teeter close to 160 per dollar:

The ¥160 Line

Since other central banks started hiking, nothing strengthens the yen



Source: Bloomberg

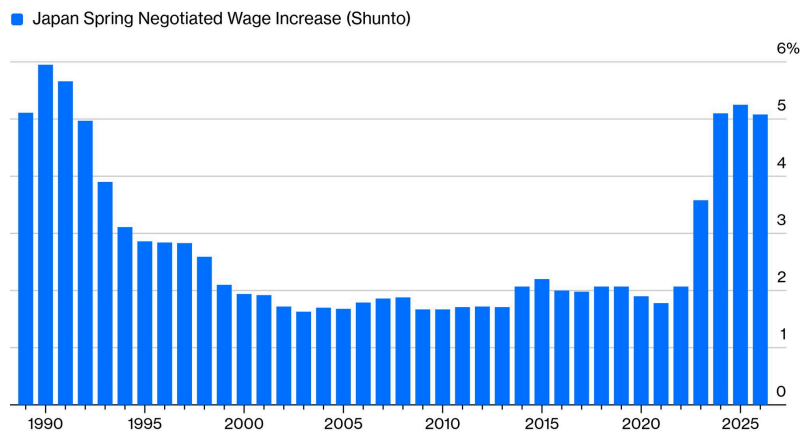
Bloomberg Opinion

There are reasons for this. Ueda didn't speak very hawkishly in his press conference, and the new dissenter is due to leave after the next meeting. It's part of a baffling fresh uncertainty over whether Japan's monetary policy will indeed normalize.

Wages are rising, with the spring "Shunto" negotiations producing a 5% raise for salaried workers, for the third year running. The deflationary morass seems over:

Return of the Salaried Workers

The Shunto wage negotiations suggest workers have regained some power



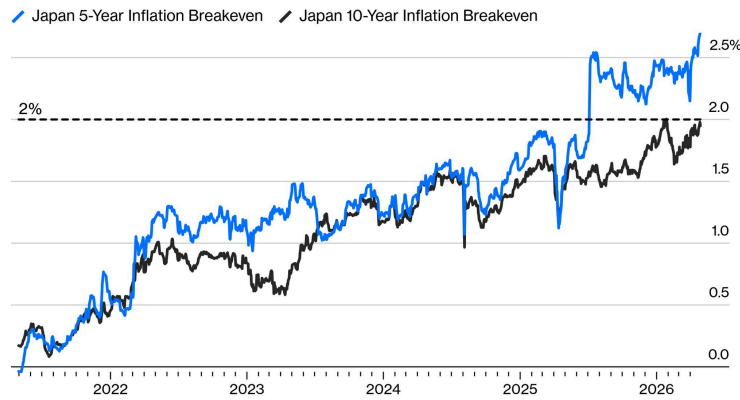
Source: Bloomberg

Bloomberg Opinion

Bond market forecasts also call for Japanese inflation to tick up at 2% or more, no longer an exception to the rest of the world. The break-even rate for the next five years is as high as 2.7%:

Great Expectations

Markets now expect inflation above 2%, which might justify hawkishness



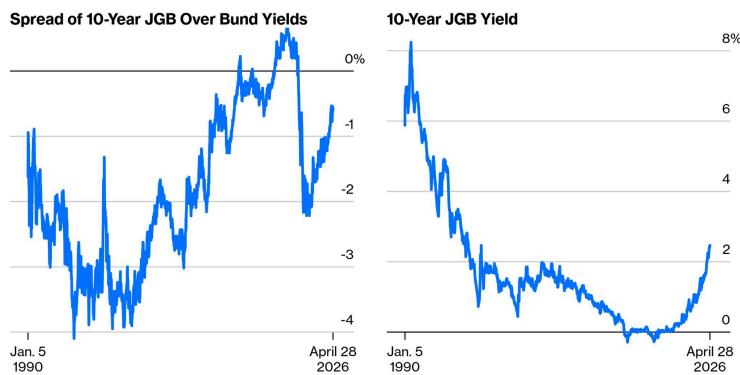
Source: Bloomberg

Bloomberg Opinion

Japanese government bonds are also behaving as though the country has truly changed. After ending almost a decade of yield curve control, the central bank has allowed the 10-year JGB yield to reach 2.45%, not so much lower than German bunds:

Yield Curve Uncontrolled

After years of slump, JGB yields are normalizing fast



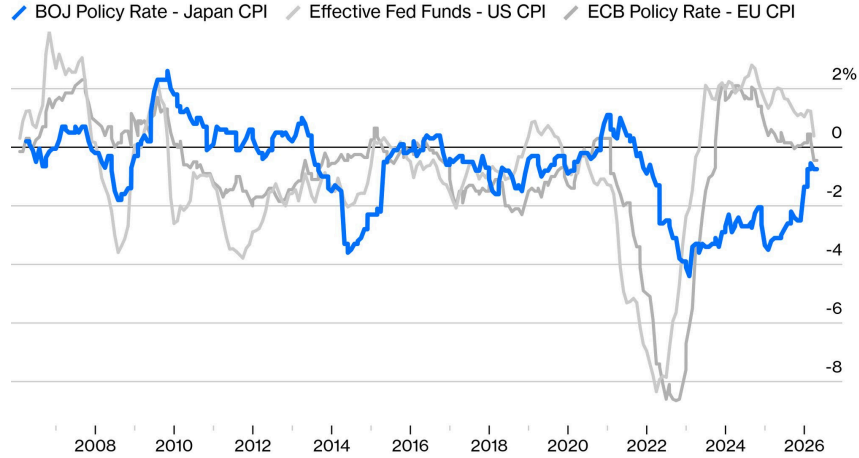
Source: Bloomberg

Bloomberg Opinion

There's also an argument that the BOJ's real rates, accounting for inflation, are no longer so far out of line with the US and the euro zone:

Outlier No More

Compared to inflation, the BOJ's rates are barely out of line



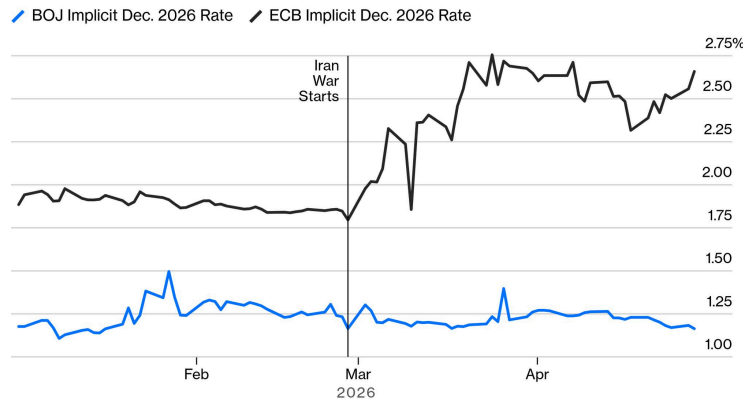
Source: Bloomberg

Bloomberg Opinion

But the yen is weak because investors are losing certainty Ueda will raise rates as much as others. The war has transformed expectations for the European Central Bank, now forecast to hike three more times this year, but had no effect on forecasts for the BOJ:

Spoils of War

Iran transformed expectations of the ECB - but not the BOJ



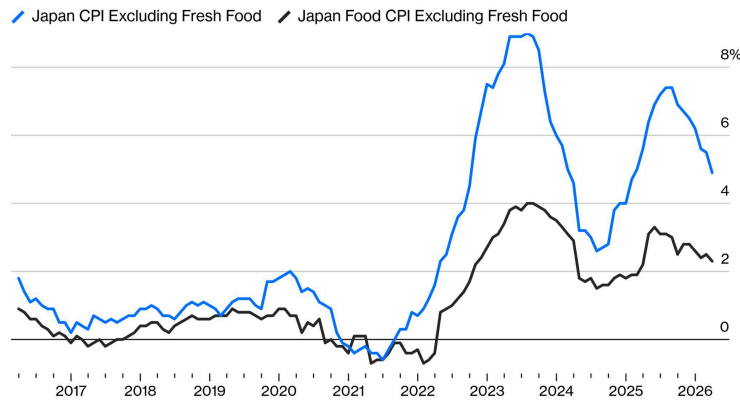
Source: Bloomberg World Interest Rate Probabilities

Bloomberg Opinion

Why? In part, the return of inflation isn't cut and dried. The core number most widely cited excludes energy and fresh food — but not all food, as in other countries. The staple, rice, has endured massive inflation of late. If it's excluded, the return of inflation largely vanishes:

Japanese Prices: A Fresh Look

The price of Japan's staple, rice, has skewed its inflation metrics



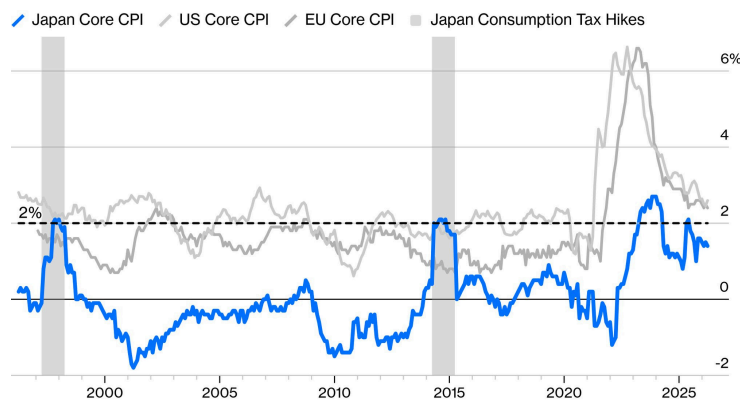
Source: Bloomberg

Bloomberg Opinion

Comparing CPI excluding fuel and all food to the US and the EU suggests that Japan might not have shed its deflationary psychology. Barring years following consumption tax hikes, it has been below other developed markets for decades, and rose only very briefly above 2%:

Japan's Inflation: Still Different

Core CPI is back below 2%, unlike prices in other developed markets



Note: Excludes Food & Energy. EU also excludes Alcohol & Tobacco.

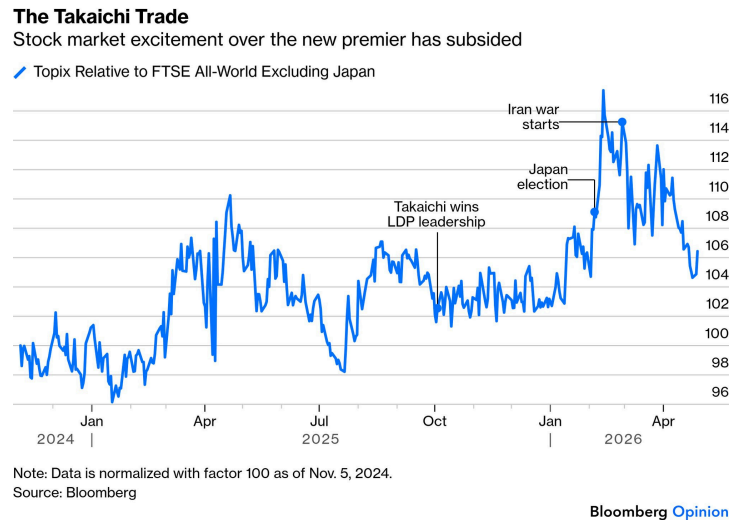
Source: Bloomberg

Bloomberg Opinion

Takaichi herself is the biggest factor keeping the yen and rates down. She's long been on the record in favor of a weak yen to support exports, much as her political patron Shinzo Abe was. Udith Sikand of Gavekal concedes that she's "no longer publicly berating the BOJ for offering guidance on its plans to raise rates," but her position remains clear. She appointed two dovish candidates to the rate-setting committee last month, and more recently criticized Trade Minister Ryosei Akazawa for suggesting that higher interest rates could strengthen the yen.

Hikes still look likely. Mansoor Mohi-Uddin of the Bank of Singapore argues that "further gradual BOJ rate hikes combined with the Federal Reserve retaining its easing bias" should support the yen "at its current very weak levels." But investors want something more than a reliance on cheap exports, while a weak yen encourages Japanese investors to put their money abroad.

That could endanger the dramatic leap in Japanese stocks that Takaichi has overseen, as old-line industrial groups benefit from her corporate governance reforms and dealmaking. But it could be a one-time re-rating that's running its course, and stocks have lagged since war started:



Like Donald Trump, Takaichi is testing the limits of the market's tolerance for political influence over monetary policy. She should be careful. Long-time Japan investment banker Jesper Koll, who publishes the Japan Optimist newsletter, warns:

Soon the corporate governance arbitrage — Japan catching up to global best practices — will go from “wow, Japan is changing and I must buy to be part of that change” to “so what – of course CEOs work for shareholders, but what are they doing to create future growth?” Abenomics 2.0 is not enough.

Japan shouldn't need a weak yen for Takaichi to execute her plans.

Inside India's response to the global helium shortage

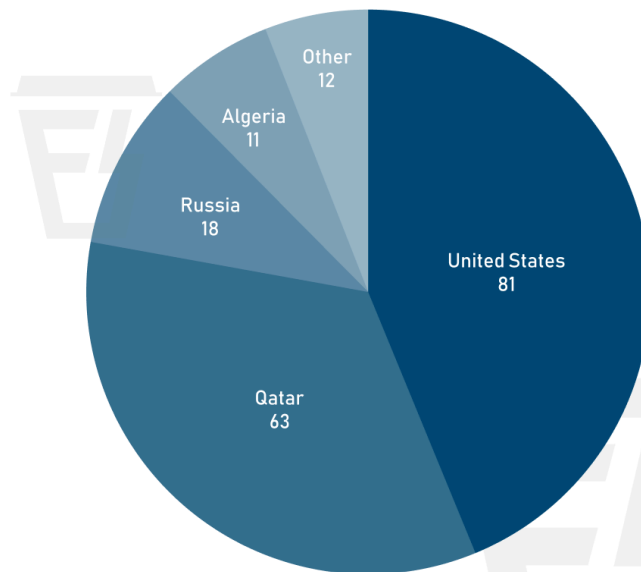
- Finshots

WHERE DOES THE WORLD'S HELIUM COME FROM?



Global helium production by region as of 2025 (in million cubic metres)

Source: United States Geological Survey



Qatar contributes a major share of global helium supply, around 63 million cubic metres, making it the largest producer after the US.

A few days ago, Union Bank of India released a report on the prolonged closure of the Strait of Hormuz due to war and how it could reprice global risk because of rising oil and gas prices. The report said that disruptions in Hormuz have pushed oil prices above \$100 per barrel, up from a stable level of around \$70 before the war. That somehow feels like an “energy tax” on India’s economy, since we import nearly 85% of our crude oil.

But while everyone is talking about oil price rises and inflation, there’s one thing fewer people are talking about. And that folks, is helium.

Helium is an inert gas, which means it’s an introvert and does not react readily with other substances. And while you might not realise it, many of the products and processes you use every day depend on helium.

For instance, every electronic device you use today has helium in its origin story, i.e., it helps make the tiny chips that power your smartphones, laptops, and TVs. Plus, when you buy something at a supermarket, helium-neon lasers in barcode scanners read your items during checkout. Helium also helps inflate your car’s airbags in case of crashes. It is used to dry fibre

optic cables during production, enabling faster internet. And of course, it's the gas that fills your party balloons.

But the world is slowly running out of this useful gas. We wrote about this here, exactly a year ago. But back then, things weren't as bad as they are today, as the war in the Middle East has disrupted the global supply of helium.

For context, Qatar supplies about 30% of the world's helium, most of which comes from its Ras Laffan facility, the world's largest liquefied natural gas (LNG) plant. But after attacks on its gas infrastructure, it was forced to stop production and supply of LNG and related products, even to contracted customers.

And LNG is where helium comes from. It is formed over very long periods through the natural decay of uranium and thorium in rocks and then gets trapped in some gas reservoirs. Producers can only recover it economically when natural gas contains enough helium to make separation worthwhile.

And despite being inert and seemingly harmless, there are two things about helium that are quite scary.

First, helium is scarce on Earth and is a non-renewable resource. Second, it is so light that it's difficult to store as a gas because it can easily leak into the atmosphere and escape into space.

So naturally, exporting helium isn't simple. It requires highly specialised cryogenic containers to keep it extremely cold — at around -269°C during transport. Anything above that, and liquid helium slowly boils off, even in insulated containers.

That's why it has to be transported and used, or stored in proper reserves, within about 4–6 weeks. Beyond that, the boil-off losses can exceed 50%, making it economically unviable to use.

So you can imagine what's happening to shipments stuck at sea, as Iran has partially blocked the Strait of Hormuz, allowing very few ships to pass through one of the world's busiest shipping routes, through which Qatar exports both natural gas and helium.

All of this is affecting global helium access, especially in Asia, where semiconductor manufacturing accounts for a large share of demand. The gas is used in chip-making processes for cooling and for flushing out contaminants from wafers.

Now, we know what you're thinking. Qatar isn't the world's largest helium supplier. That crown belongs to the US. And US helium doesn't pass through the Strait of Hormuz. So why worry?

Well, the issue is that Qatar's sudden disruption creates an outsized impact. Its production is concentrated in a single major facility and is heavily export-dependent, so any shutdown can remove a significant chunk or about 14% of global supply at once.

The US, on the other hand, has production spread across multiple states and facilities, with a stronger domestic focus. Also, the US government officially sold off the last of its National Helium Reserve in 2024, shutting down a federal stockpile that once held about 30% of the world's helium. So, while the government no longer maintains a strategic reserve, large privately held supplies still exist, mainly in Texas and Wyoming. Which means that as supply tightens and prices rise, access increasingly depends on who can pay more and afford it.

That's a big challenge for a country like India, which imports 100% of its helium needs. India consumed about 3.4 million cubic metres of helium in 2025. That's only about 2% of global consumption, but over 50% of India's imports traditionally come from Qatar — which itself accounts for roughly a third of global helium exports.

And even though India is not yet a major semiconductor manufacturing hub, the helium shortage affects it in two big ways.

First, India wants to become a global player in semiconductor and electronics manufacturing. But the helium shortage is pushing up costs in the sector by 35–50%. It has also extended chip lead times to about 12 weeks and delayed the commissioning of new fabs and OSATs (Outsourced Semiconductor Assembly and Test), even if it hasn't caused complete shutdowns.

And since helium has no real substitute, and India typically holds just 7–10 days of inventory, you can imagine the impact. It could slow down India's semiconductor ambitions.

Second, helium is widely used in India's healthcare system, especially in MRI (Magnetic Resonance Imaging) machines.

These machines offer a non-invasive way to see inside the body in detail — especially soft tissues like the brain, muscles, ligaments, and organs. Unlike X-rays or CT scans, they don't use radiation. Instead, they rely on magnetism and radio waves to create images.

Inside every MRI machine there's a powerful superconducting magnet. But this magnet doesn't work that way naturally. It needs to be cooled to extremely low temperatures to become superconducting. That's where liquid helium comes in. It's one of the few substances cold enough to make this possible.

Once cooled, the magnet creates a strong and stable magnetic field. This interacts with hydrogen atoms in your body, which behave like tiny magnets. Their responses are then used to generate detailed images.

Without regular helium refills, hospitals can't run MRI machines efficiently. And that's already showing up in rising costs, as helium prices have increased sharply over the last few weeks. In some cases, hospitals may even have to prioritise only emergency scans.

So yeah, these are the two key sectors where helium demand in India is expected to grow — potentially at around 8% each year, especially with the AI-driven semiconductor push. But repairs at Ras Laffan could take 3–5 years.

So how can India manage this crisis, you ask?

Well, at least in the short term, things can be manageable, even with low inventories.

If we're talking about healthcare, most MRI scanners in India now use zero boil-off (ZBO) technology, which recycles helium and doesn't need frequent refills. These machines come with an initial charge of liquid helium and typically need refilling only once every 4–10 years. But newer machines will cost more. So expansion in smaller towns and rural areas could become a challenge.

In the long term, India will have to diversify its supply with multi-origin contracts, including from Russia, the US, and emerging suppliers like South Africa and Tanzania.

Because the reality is that, India doesn't have commercially viable helium reserves. While natural gas fields in West Bengal and Jharkhand have shown small traces of helium — below 0.2%, extracting it economically is still difficult. Domestic production could be 5–10 years away and very expensive, making its viability uncertain.

So for now, recycling and alternate supply routes are our only real options until Ras Laffan is fixed and the Strait of Hormuz reopens.

And when that will happen is anyone's guess.

Record 92.6% turnout in Phase 2 of West Bengal polls

- Hindu

The collage includes several news snippets from the Hindu newspaper:

- REGIONAL SECURITY:** India, China discuss I.A.C. over SCG sidelines (NEWS | PAGE 4)
- PM eally Gange:** Expressway identity of 'new UP' (NEWS | PAGE 7)
- DRINKING AVAILABILITY:** Increased imports buoy natural gas stock (BUSINESS | PAGE 12)
- LOANS TO GO:** Tamil Nadu's growth record (BUSINESS | PAGE 1)
- CLINICAL CARE:** Sunrivers Hyderabad routs Mumbai Indians (SPORT | PAGE 16)

The main article is titled **Heavy polling in Bengal Phase 2**. It reports a record 92.6% turnout in the second phase of West Bengal elections. The BJP secured a strong mandate, winning 142 out of 142 constituencies. The Trinamool Congress (TMC) won 100 seats, and the Indian National Congress (INC) won 20 seats. The article also mentions that Mamata Banerjee accused the BJP of trying to 'wig' poll at her Khatunpur seat.

What exit polls say

Party	Seats	Percentage
BJP	142	92.6%
TMC	100	63.7%
INC	20	12.9%

Strong mandate

The BJP's strong mandate is highlighted by its 100% success rate in the second phase of polling. This is a significant achievement for the party, especially in a state where the TMC has traditionally been the dominant force.

There was a record turnout of 92.6% in the second and final phase of polling for the West Bengal Assembly election on Wednesday, amidst isolated incidents of unrest and violence. This is in tune with the record turnout in the first phase, where 93.19% of the electorate cast their votes in 152 seats on April 23.

“The total turnout across the two phases stands at 92.9%, the highest in any West Bengal Assembly election since Independence. This was a critical election, so the space above the fold on our front page was reserved for this story,” says Suresh Nambath, Editor, The Hindu. “But it is also important to read these unprecedented polling percentages in the context of the SIR’s impact on the State, as we pointed out in a recent editorial. Given that almost 13% of the West Bengal electorate was deleted from the voter lists, a record turnout loses some of its lustre.” In the second phase, polling was held in 142 Assembly seats spread across seven districts. The highest polling rates were recorded in the rural-dominated areas of Purba Bardhaman (93.83%), followed by South 24 Parganas (93.48%), North 24 Parganas (92.92%), Howrah (92.59%), and Nadia (92.14%), districts.

The lowest turnout was in the Kolkata South administrative district, where 87.84% of voters exercised their franchise. The adjoining Kolkata North administrative district recorded an 89.36% turnout, while the Hooghly (91.98%) saw a turnout of 92.35%. The polling rate is expected to rise as the final figures are yet to be released by the Election Commission at the time of publication.

The Election Commission has decided to retain 700 companies of the Central forces in the State even after the polling concluded on Wednesday evening.

The Bhabanipur constituency, which has been the epicentre of the electoral contest with Chief Minister and Trinamool Congress leader Mamata Banerjee defending the seat against Bharatiya Janata Party leader Suwendu Adhikari, witnessed dramatic moments when Ms. Banerjee started visiting polling booths, accusing Central forces and observers of working on the instructions of the BJP. “People are supposed to cast their votes, not the police... Can voting take place like this?” Ms. Banerjee asked, alleging that there were attempts to rig the elections at the behest of the BJP.

Tensions escalated when Mr. Adhikari arrived in the constituency. The BJP candidate was surrounded by Trinamool supporters, who raised “Joy Bangla” slogans. The commotion continued for several minutes as the BJP candidate, surrounded by a posse of security personnel, went from one booth to another. At one point, Mr. Adhikari was seen running on the streets of Bhabanipur. A similar situation erupted when the BJP leader visited the Kolkata Port Assembly seat as well.

SOLUTIONS:

KAKURO

		30	11	
	7	6	1	4
18	7	8	2	1
24	9	7	5	3
	12	9	3	

SUDOKU

1	4	8	7	9	6	2	3	5
5	6	3	2	8	1	9	7	4
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8	1	5	6	7	4	3	2	9
6	8	2	9	5	7	1	4	3
3	5	1	4	6	2	7	9	8
4	9	7	3	1	8	5	6	2