

Why France is bolstering military presence in West Asia

SYLVIE CORBET

FRANCE's government is bolstering the country's military presence in the Middle East, dispatching its aircraft carrier and other warships, while President Emmanuel Macron engages with key players in the conflict, including Iran, in a bid to position Paris for future diplomatic talks.

Macron said that France's military involvement is strictly "defensive" and aims to avoid making the country a party to the war.

He reaffirmed that position after one French soldier was killed Thursday in a drone attack in Iraq. "We are not at war with anyone," Macron said.

Still, the large-scale deployment of the French navy — which he described as "unprecedented" — has made France the European nation with the most prominent presence in the region. Visiting the Charles de Gaulle aircraft carrier last week, Macron said that its presence in the Mediterranean demonstrates "France's strength: a balancing power, a force for peace."

Here's what to know about Macron's strategy.

France's large naval deployment

Macron announced the

deployment to the eastern Mediterranean and the wider Middle East of eight warships, two helicopter carriers and the nuclear-powered aircraft carrier Charles de Gaulle with its 20 Rafale fighter jets.

The French frigate Languedoc arrived off Cyprus, a fellow European Union member, to bolster anti-drone and anti-missile defenses. Cyprus and France signed a new strategic partnership in December. Macron also said that two French frigates have been dispatched to the Red Sea to help ensure maritime security and freedom of navigation.

Macron said that the warship deployment is intended to allow France "to respond to emergency situations" and evacuate French nationals if necessary. France has more than 400,000 citizens in the Middle East — more than any other European country — including more than half in Israel and over 60,000 in the United Arab Emirates.

Other European nations, including Spain, Italy, the Netherlands and Greece, have deployed frigates in the region.

The French navy's swift deployment contrasts with the United Kingdom's delay

in sending the HMS Dragon destroyer, which left Portsmouth, England, on March 10.

UK opposition parties have accused Prime Minister Keir Starmer's government of moving too slowly to protect British bases in Cyprus and allies in the Middle East. The U.K. government also has sent Typhoon and F-35 fighter jets, helicopters and air defense systems to the region to help intercept Iranian missiles and drones.

Defending Gulf allies

France has key defence agreements with several countries in the region, including Qatar, Kuwait and the UAE, where it maintains a permanent base in Abu Dhabi. France's military, which has air and naval forces there, doubled the number of Rafale fighter jets stationed on site to 12.

French authorities acknowledged that Rafale jets intercepted drones targeting the UAE since the beginning of the war. "We stand by the side of our allies and our friends," Macron said during his visit to the Charles de Gaulle. "There have been some interceptions that have continued in recent days. We do so within the framework of our partnerships," he said, without providing further details.



French forces are also deployed in Jordan and Iraq

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On Thursday, one French soldier was killed and several others injured in a drone attack in the region of Irbil, in northern Iraq. They were training Iraqi units as part of a multinational counterterrorism mission in the country.

Former President François Hollande, who led France from 2012 to 2017, said that it was important for France to show it can protect its nationals and reassure its partners, but warned of the risks.

"We must be careful — it's always a risky operation —

tacked, we have to fire back." Historic ties with Lebanon

Macron is leading a diplomatic effort to try to halt the conflict in Lebanon, where at least 850 people have been killed and hundreds of thousands displaced as the Hezbollah militant group entered a new round of fighting with Israel. Macron urged Hezbollah to stop fighting and called on Israel to renounce any ground offensive.

France supports the Lebanese military as authorities have pledged to "take control" of positions held by Hezbollah and assume full responsibility for security in the country, Macron said.

Hezbollah's arsenal notably includes exploding drones, similar to the ones used by Iran.

France has traditionally been a key supporter of Lebanon, a former French protectorate, and maintains 800 troops in the U.N. peacekeeping force there. The French government provided the country with armored vehicles and operational military support.

France sent 60 tons of emergency aid to Lebanon last week on a humanitarian flight to Beirut, authorities said. The shipment included medicines, medical equipment, a mobile health unit, shelter materials, basic necessities and infant formula.

Maintaining contact with Iran

Macron was the first Western leader to speak with Iranian President Masoud Pezeshkian since the war began. He said he urged Iran to halt strikes against countries in the region. Since the phone call on March 8, this appeal had gone unanswered.

Macron stressed that "a diplomatic solution" is needed to end the escalation and said that he and Pezeshkian agreed to remain in contact.

Macron also spoke with Israeli Prime Minister Benjamin Netanyahu and U.S.

President Donald Trump, though there were no signs of de-escalation.

France hopes diplomatic efforts could bear fruit once the most intense phase of the conflict subsides, which could take weeks or months.

Macron is also promoting an international effort to secure the Strait of Hormuz, a key energy corridor, so oil, gas and goods can flow freely again "when circumstances permit." He has suggested countries could use warships to escort tankers and container ships once fighting eases.

Political analyst Bertrand Badie, an international relations professor at Sciences Po Paris, said Macron has long sought to assert France's role on the global stage.

With low approval ratings at home and about a year left in his term, Macron may have the most to gain among European leaders by pursuing diplomacy, Badie said. "At this point, we are forced to scale back our expectations — drastically," he said. "From a diplomatic standpoint, what leverage does France really have?"

"My assessment is that this crisis cannot be resolved by French remedies," Badie said. "There is no point in having any illusions."

Parkinson's symptoms differ between men and women, says study report



LYNDSY COLLINS-PRAINO

PARKINSON'S disease is the fastest growing neurological disorder, with over 10 million cases worldwide. Up to 150,000 Australians currently live with the disease and 50 new cases are diagnosed each day.

The number of people living with Parkinson's is projected to more than triple between 2020 and 2050.

Yet despite the immense impact on those living with Parkinson's and their loved ones, and the staggering cost to our economy — at least AUD 10 billion a year — there is still a lot we don't know about how this disease presents and progresses.

A recent large-scale study of nearly 11,000 Australians living with Parkinson's disease provides some critical insights into symptoms, risk factors and how these affect men and women differently. Let's take a look.

What is Parkinson's disease? Parkinson's is a progressive disease in which cells that produce the chemical messenger dopamine in a part of the brain called the "substantia nigra" begin to die. This is accompanied by multiple other brain changes.

It is usually considered a movement disorder. Common motor symptoms include a resting tremor, slowed movement (bradykinesia), muscle stiffness and balance issues.

But Parkinson's also involves a variety of lesser known non-motor symptoms. These may include:

- Mood changes
- Difficulties with memory and cognition (including slower thinking, challenges with
- Planning or multitasking and difficulty paying attention or concentrating)
- Sleep disturbances
- Autonomic dysfunction (such as constipation, low blood pressure and urinary problems).

While these are sometimes referred to as the "invisible" symptoms of Parkinson's, they often have a greater negative impact on quality of life than motor symptoms.

What does the new research tell us?

The study used data collected as part of the Austral-

The study also provided insights into what can influence Parkinson's risk. This is important because we don't completely understand what causes the dopamine producing cells in the substantia nigra to die in the first place. Age is the primary risk factor for Parkinson's

ian Parkinson's Genetics Study led by the QIMR Berghofer Medical Research Institute. After a pilot study in 2020, it was launched as an ongoing, nationwide research project in 2022.

Some 10,929 Australians with Parkinson's were surveyed and provided saliva samples for genetic analysis. This is the largest Parkinson's cohort studied in Australia and the largest active cohort worldwide. There were several key initial findings.

Non-motor symptoms are common: The study reinforced how common non-motor symptoms are, with loss of smell (52 per cent), changes in memory (65 per cent), pain (66 per cent) and dizziness (66 per cent) all commonly reported.

Notably, 96 per cent of participants experienced sleep disturbances, such as insomnia and daytime sleepiness.

A better picture of risk factors: The study also provided insights into what can influence Parkinson's risk. This is important because we don't completely understand what causes the dopamine producing cells in the substantia nigra to die in the first place. Age is the primary risk factor for Parkinson's. The new study found the average age for symptom onset was 64, and for diagnosis, 68. Genes and environment both play a role: In the recent study, one in four people (25 per cent) had a family history of Parkinson's. But only 10–15 per cent of Parkinson's cases are caused by — or strongly linked to — mutations in specific genes. It's important to remember that families don't only share genes but often their environment.

(Author is from Adelaide University)

Despite Iran war, Gulf investors likely to continue funding Africa's renewable energy projects

ALLAN OLINGO

MIDDLE Eastern sovereign wealth funds and state-backed companies are unlikely to scale back renewable energy investments in Africa despite disruptions from the Iran war, analysts say, given the strong long-term economic and strategic reasons driving such funding.

Investors made wealthy by the Gulf region's abundant oil and gas increasingly are turning to Africa's clean energy sector, attracted by rising electricity demand, rapid urbanisation and the continent's growing role in global supply chains tied to critical minerals and manufacturing. A report released last month by the Clean Air Task Force found that more than \$101.9 billion had flowed into Africa's renewable energy sector from Gulf countries by end of 2024, led by the United Arab Emirates, Saudi Arabia, Qatar, Kuwait and Bahrain. Much of the investment has been concentrated in North Africa, Southern Africa and parts of East Africa, while West Africa has attracted relatively limited funding.

"Africa remains one of the few regions where demand growth is un-

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equivocal," said Matthew Tilleard, chief executive of CrossBoundary Energy, a Nairobi-based firm that develops and operates renewable energy projects. "Short-term shocks may delay individual transactions, but the biggest infrastructure opportunities require a long-term view of risk and value."

Africa faces one of the world's largest electricity gaps. About 600 million people across the continent still lack access to power and many more face unreliable supplies. Gov-



ernments have increasingly turned to private investors to help finance solar, wind and hybrid power projects to expand generation capacity without overstretching public finances.

That gap has created opportunities for Gulf investors looking to diversify beyond oil and gas.

"Ultimately, Gulf investments in Africa tend to be driven by pragmatic national interests and strategic returns," said Louw Nelson, a political analyst at Oxford Economics. "There is currently a significant amount of energy investment underway across Africa, which are long-term projects that have been years in the making,

so we don't anticipate major disruptions."

Overseas investments in renewable energy form part of broader strategies among Middle Eastern countries to diversify their economies and adapt to a global shift toward cleaner energy.

Joel Okanda, an energy and development analyst, said the disruptions to oil and gas shipments due to the war with Iran may strengthen the case for renewable energy investment since they show how vulnerable such supply routes can be.

"These companies, many of them state-owned, hold significant capital but also understand that the world

is gradually transitioning away from fossil fuels," Okanda said. "Investing in renewable energy allows them to diversify their portfolios and position themselves for the energy systems of the future."

Africa's energy sector sits at the center of several global economic shifts, including the energy transition and the soaring demand for minerals such as cobalt and gold that are used in many high-tech products.

"For investors, renewable power projects can provide strategic access to industries beyond electricity generation," Tilleard said. "Power plants built to supply mines, or large industrial operations can position Arab investors close to supply chains for minerals used in batteries and other technologies."

Okanda said perceived risks, including currency volatility and policy uncertainty especially in West Africa, continue to shape where such investors invest. "Generating power is only one part of the equation," Okanda said. "You also need transmission systems and a functioning electricity market where the electricity can actually be sold and paid for."

Antarctic microbes 'eat' air to survive extreme cold

Aerotrophy allows soil bacteria to generate energy year-round without sunlight or liquid water

RY HOLLAND

WINTER in Antarctica is long and dark. Temperatures remain well below freezing. In many places, the Sun sets in April and does not rise above the horizon again until August. Without sunlight, photosynthetic life such as plants, mosses and algae cannot make energy. But that's not to say all life stops. In a new study published in The ISME Journal, my colleagues and I show that Antarctic microbes make energy from the air at temperatures as low as 20°C. This finding improves our understanding of how life survives at temperature extremes in Antarctica

and how climate change will affect this important process.

How to make energy from air

In 2017, scientists showed that a large number of Antarctic microbes can generate energy from atmospheric gases present at very low concentrations. This process is called "aerotrophy". By using enzymes that are very finely tuned to "sniff out" the hydrogen and carbon monoxide in the atmosphere, these microbes have found a

way to make energy from the air itself a huge advantage in Antarctica's nutrient-poor desert soils. What remained unknown until now was the temperature limits of this process. Could aerotrophy be a way to power the continent's soil communities through the winter?

Taking the lab down south

Measuring how quickly these microbes consume such a small amount of fuel can be difficult. From 2022–24, we collected surface soil samples from different areas across East Antarctica and analysed them in our lab. We measured how quickly they can use the atmospheric gases. We also extracted all the DNA from the soil microbes and sequenced it. This tells us what microbes are present, what genes they have, and what they are capable of using as energy sources. We showed aerotrophy happening in the lab at representative summer (4°C) and winter (20°C) temperatures. This means hydrogen and carbon monoxide are a viable food source not just over the summer months, but year-round. What was even more surprising though, was



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the upper temperature limit. Soil temperatures in Antarctica rarely rise above 20°C. Yet we found microbes in these soils that continued to generate energy from hydrogen up to a staggering 75°C. It seems as though microbes in Antarctic soils are well adapted to the continent's cold temperatures, but not restricted to them. It's a bit like seeing a penguin thrive

in a tropical jungle. We also wanted to see this process occurring in Antarctica itself, so two years ago we brought the lab down south. We collected fresh soil samples, sealed them in the glass vials, and took gas samples. For the first time, it was clear that under real-world conditions these soil microbes were still munching their way through hydrogen.

The primary producers of Antarctica

DNA sequencing has showed us that the vast majority of microbes in Antarctic soils encode the genes to gain energy from hydrogen. Many of these bacteria also have genes to take carbon from the atmosphere. These aerotrophs are "primary producers", generating new biomass from the air itself. In most land-based ecosystems, photosynthesis is thought to be the bottom of the food chain. Photosynthesis takes energy from sunlight and carbon from the atmosphere and turns it into yummy organic compounds. It's what makes plants grow. Plants are primary producers that are eaten by herbivores, which are then eaten by carnivores. In Antarctica's desert soils, photosynthesis is relatively rare. Instead, we hypothesise that aerotrophy fulfils the primary producer role in many places. This makes sense because, unlike sunlight-dependent photosynthesis, we now know that aerotrophy can happen year-round. Another benefit is that it doesn't require liquid water, whereas photosynthesis does.

Hydrogen in a heating world

Aerotrophy clearly has an

(The writer is a Research Fellow at the Monash University, Australia)