AMID CEASEFIRE, FIRST SET OF INDIANS LEAVES WAR-BATTERED SUDAN

Rescue route: Indians queuing up to board Navy ship INS Sumedha at Port Sudan on Tuesday. PTI

The group of 278 people was among the first to reach Port Sudan for evacuation; more measures are being taken to broaden Operation Kaveri

The first batch of Indians stranded in conflict-torn Sudan was evacuated as part of Operation Kaveri on board INS Sumedha from Port Sudan on Tuesday.

The group of 278 people were among the first to reach Port Sudan during the 72-hour ceasefire that took effect from Monday midnight. They are expected to reach the Saudi port of Jeddah within a day.

The Ministry of External Affairs said on Tuesday that additional measures are being taken to broaden the operation.

"INS Teg joins Operation Kaveri. Arrives at Port Sudan with additional officials and essential relief supplies for stranded Indians. Will boost ongoing evacuation efforts by Embassy Camp Office at Port Sudan," MEA Spokesperson Arindam Bagchi announced.

Indian citizens at the Sudanese port told The Hindu that the Indian embassy had begun coordinating over the past four days for possible evacuation from Khartoum, Omdurman and other crisis-hit areas.

However, the actual operation took time to begin because it took time for the ceasefire to come into effect and also because the civilian infrastructure on the ground had come to a halt.

Banking hit

The worst affected is Sudan's banking sector as banks have stopped working, adding to peoples' misery.

Speaking to The Hindu, Batuk Harkisandas, secretary of the Indian Association in Port Sudan, said neither banks nor petrol pumps were working in Sudan, which had made movement and transactions nearly impossible. "We had a digital cash system in Sudan which stopped functioning as soon as the war began. Sometimes we manage to transfer cash digitally and sometimes we cannot. There is a scarcity of diesel and it was with great difficulty that we found diesel for our buses," he said.

Due to the collapse of the digital banking system, Indians had to use whatever hard currency they had in hand to get out of the crisis-hit areas, he said. The season of Id had also added to the difficulty as Sudanese transporters usually take their buses to village homes during Id. "They had to pay extra to convince the drivers to come to Port Sudan," Mr. Harkisandas explained.

Indians are among the largest Asian communities in Sudan and are scattered in its big cities badly affected by the war between the Rapid Support Forces (RSF) and the Sudanese Armed Forces (SAF). An Indian citizen who was evacuated from Khartoum told The Hindu that buses had to travel nearly 800 km from Khartoum to Port Sudan to bring them to the point of extraction where INS Sumedha was waiting. Upon reaching Port Sudan, the Indians were housed in a school building where the local Indian community is volunteering to look after the requirements.

"We are a community of 35 to 40 Indians in Port Sudan and we are trying our best as our brothers and sisters are coming from Khartoum and Omdurman," Mr. Harkisandas said. He said they have very little resource at hand to cater to the hundreds of Indians gathering in Port Sudan. According to available information, the total number of Indians in Sudan is around 3,000.

Indian nationals who are being evacuated said the fighting is fierce in Khartoum but the situation in Port Sudan is safe as they did not witness any fighting in the port city so far. However, Indians who came in buses were stopped at multiple checkpoints that were manned by the forces belonging to rival factions of the RSF and the SAF.

'OIL PRICES, EL NINO KEY RISKS TO INFLATION, GROWTH OUTLOOK'

Downside risks to the official 6.5% GDP growth projection for this fiscal dominate, Ministry says in monthly report; flags milk, wheat and crude oil prices as posing risks to the outlook on inflation

The Finance Ministry on Tuesday warned that downside risks to the official 6.5% GDP growth projection for this year could dominate, as the prospect of El Nino conditions triggering a drought, along with geopolitical developments and concerns about global financial stability could affect the "favourable combination of growth and inflation outcomes currently anticipated".

The OPEC+ grouping's surprise production cut has seen oil prices rise in April, off their lows of low $70s per barrel in March, the Ministry said in its monthly economic review. "Further troubles in the financial sector in advanced nations can increase risk aversion in financial markets and impede capital flows. Forecasts of El Nino... have elevated the risks to Indian monsoon rains," it noted, stressing the need to be vigilant on these potential risks.

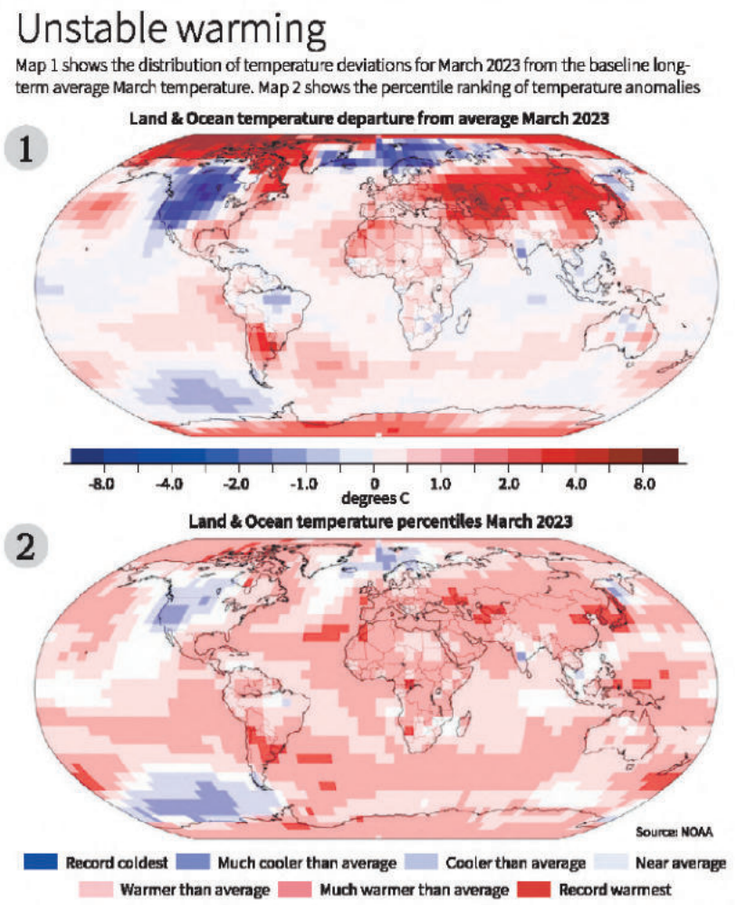
Highlighting the easing of inflationary pressures, the Ministry however cautioned that volatile oil prices and constrained supplies of milk, hit by disease affecting millions of cattle, and wheat may affect the inflation trajectory.

Headwinds ahead

Downside risks dominate the upside risks to the outlook for growth and inflation this year, Finance Ministry cautions

- **Flags increase in oil prices following surprise production cut by OPEC+, elevation of risks to monsoon on El Nino forecast s as key concerns**
- **Further financial troubles in advanced nations could impede capital flows**
- **Constrained supplies of wheat and milk, hit by disease afflicting millions of cattle, may affect inflation trajectory**

UNDERSTANDING TEMPERATURE ANOMALIES



Global warming does not mean that each month or each year will be warmer than the previous month or the previous year. The global distribution of temperature anomalies is due to land-ocean-atmosphere processes that dynamically determine the weather and climate

The story so far:

There was news recently that March 2023 was the second warmest March on record. What does this actually mean in terms of impact on the planet, on the local weather, and on the human psyche? Do such headlines help or are they likely to render people numb to the idea of global warming by normalising the warming as a part of everyday life? The monthly report and the subsequent end-of-the-year annual summary by the U.S. National Oceanic and Atmospheric Administration (NOAA) serves as an excellent resource to contextualise the individual month's ranking by temperature anomalies.

Why was March 2023 the second warmest?

March 2023 was indeed the second warmest in the instrumental record. The warmest March occurred just a few years ago in 2016, when the biggest El Niño of the 21st century triggered a 'mini' global warming. But the January-to-March average temperature anomaly ranks 2023 as the fourth warmest such period on record. This raises some obvious questions. Why was March 2023 the second warmest and not the warmest?

As seen in the figure below, each year's March can be warmer or cooler than the March of the year before. Natural climate variability, including events like El Niño, can temporarily spike temperatures. The old adage (often mistakenly attributed to Mark Twain) says that climate is what we expect and weather is what we get. In India, we expect March to be the beginning of the scorching summer season. But a particular year's March may be cooler due to some other climate factors, such as a La Niña, and especially when averaged over a region as large as India or even an Indian State.

A year is an 'El Niño year' if warmer water spreads in a band from west to east over the equatorial Pacific Ocean. In a 'La Niña year', cooler water spreads east to west in the same region. Both phenomena have distinct and significant effects on the global climate. (Global mean temperatures themselves represent the increasing amount of additional energy we are trapping in the earth system and preventing its escape to space by, among other things, increasing the atmospheric concentration of heat-trapping greenhouse gases.)

Why is context important?

The distribution of temperature deviations for March 2023 from the baseline long-term average March temperature is visible in the global map of temperature anomalies (Map 1). The monstrous warming to the west to north of India begins to tell the story of the weather anomalies that rendered a cooler March over Mumbai, excess pre-monsoon rains over the northwest, and scorching heatwaves in Kerala and Odisha. The Arabian Sea has also warmed more than expected this March. We must watch carefully if this continues: it can favour a stronger monsoon but may also enhance cyclogenesis (i.e. birth of cyclonic circulation) over the Arabian Sea.

The global distribution of temperature anomalies is due to land-ocean-atmosphere processes that dynamically determine the weather and climate. Global warming does not mean each month or each year will be warmer than the previous month or the previous year. Instead, a better place to begin would be by averaging the weather over a decade. Decade-to-decade warming clearly shows that humans are now ensuring each decade is warmer than the one before.

As with the temperature, precipitation anomalies for March 2023 show the impact of a warm March over Eurasia in the form of below-normal precipitation. We know that reduced snowfall over the Eurasian landmass has historically tended to favour a stronger monsoon. As it happens, 2023 is expected to be an El Niño year, and El Niños tend to produce weaker monsoons. So this summer's El Niño effect could be blunted by the lower snow cover over Eurasia.

In sum, climate scientists need to provide the proper context when they compare and rank individual months against each other. This will help the people at large better understand global warming as well as its cascading effects on the weather they experience every day. All global warming is local; nobody lives in the global mean temperature. And the better people understand the impact of global warming in their backyard, the likelier they can be engaged in climate action.

GENOME SEQUENCING AND THE GENOME INDIA PROJECT

Why is the Genome India Project important? What is the significance of genome sequencing?

The story so far:

The Department of Biotechnology recently said that the exercise to sequence 10,000 Indian human genomes and create a database under the Centre-backed Genome India Project is about two-thirds complete. About 7,000 Indian genomes have already been sequenced of which 3,000 are available for public access to researchers.

What is genome sequencing?

The human genome is the entire set of deoxyribonucleic acid (DNA) residing in the nucleus of every cell of the human body. It carries the complete genetic information responsible for the development and functioning of an organism. The DNA consists of a double-stranded molecule built up by four bases. While the sequence of base pairs is identical in all humans, there are differences in the genome of every human being that makes them unique. The process of deciphering the order of base pairs, to decode the genetic fingerprint of a human is called genome sequencing.

In 1990, a group of scientists began to work on determining the whole sequence of the human genome under the Human Genome Project. The Project released its latest version of the complete human genome in 2023, with a 0.3% error margin. This shows that genomic sequencing has now evolved to a stage where large sequencers can process thousands of samples simultaneously. There are several approaches to genome sequencing, including whole genome sequencing. The process of whole-genome sequencing, made possible by the Human Genome Project, now facilitates the reading of a person's individual genome to identify differences from the average human genome.

What are applications of sequencing?

Genome sequencing has been used to evaluate rare disorders, preconditions for disorders and even cancer from the viewpoint of genetics, rather than as diseases of certain organs. Nearly 10,000 diseases — including cystic fibrosis and thalassemia — are known to be the result of a single gene malfunctioning. In public health, however, sequencing has been used to read the codes of viruses. One of its first practical usages was in 2014, when a group of scientists from M.I.T and Harvard sequenced samples of Ebola from infected African patients to show how genomic data of viruses could reveal hidden pathways of transmission.

How did it help during the pandemic?

In January 2020, at the start of the pandemic,Chinese scientist Yong-Zhen Zhang, sequenced the genome of a novel pathogen causing infections in the city of Wuhan. Mr. Zhang then shared it with his virologist friend Edward Holmes in Australia, who published the genomic code online. It was after this that virologists began evaluating the sequence to try and understand how to combat the virus, track the mutating variants and their intensity and spread, and to come up with a vaccine.

To enable an effective response against COVID-19, researchers kept track of emerging variants, conducting further studies about their transmissibility, immune escape and potential to cause severe disease. Genomic sequencing became one of the first steps in this important process. Here, the purpose of genome sequencing was to understand the role of certain mutations in increasing the virus's infectivity.

India also put in place a sequencing framework — the Indian SARS-COV-2 Genomics Consortia (INSACOG). This consortium of labs across the country, was tasked with scanning coronavirus samples from patients and flagging the presence of variants known to have spiked transmission internationally. As of early December 2021, INSACOG had sequenced about 1,00,000 samples.

What is the Genome India Project?

India's 1.3 billion-strong population consists of over 4,600 population groups, many of which are endogamous. Thus, the Indian population harbours distinct variations, with disease-causing mutations often amplified within some of these groups. But despite being a large population with diverse ethnic groups, India lacks a comprehensive catalogue of genetic variations.

Creating a database of Indian genomes allows researchers to learn about genetic variants unique to India's population groups and use that to customise drugs. About 20 institutions across India are involved in the Project.

SVB-TYPE BANK COLLAPSE UNLIKELY IN INDIA: FINMIN

Indian banks appear well-placed to handle any stress arising from the global monetary tightening cycle that has led to the collapse of a few banks in the U.S., including the Silicon Valley Bank, and triggered UBS's takeover of troubled Credit Suisse Bank, the Finance Ministry said on Tuesday.

Apart from measures taken since the 2008 global financial crisis to enhance banks' risk absorption capacity, the Ministry cited six important factors to buttress the stability of India's banking system. It also noted that investment fluctuation reserve buffers have helped banks absorb losses due to rising yields on government securities.

The Ministry's monthly economic review pointed to certain systemic characteristics that will help "reduce the probability of an SVB-like incident occurring in India". For one, 60.1% of total deposits are with public sector banks, while 63% of those deposits are held by households which are considered "sticky retail" customers. Hence, deposit withdrawals in this category will remain limited, it argued.

Moreover, Indian banks hold most of their assets in loans rather than bonds, making them "more immune to the rising interest rate cycle". The build-up of asset-liability mismatch threats triggered by rate increases, is not an "onerous issue" in the Indian banking system, it said.

RESCUE SERVICE

The Sudan evacuation highlights challenges India faces in conflict

As India's "Operation Kaveri", launched to evacuate Indians stuck inside war-torn Sudan is underway, the government is making the most of a 72-hour ceasefire window to bring out about 3,000 civilians. The operation, which involves the Indian Air Force and the Indian Navy, is being coordinated by the Ministry of External Affairs. Given the heavy fighting in Khartoum between forces loyal to the head of the ruling council, General Abdel-Fattah al-Burhan, who also heads the Sudanese Armed Forces, and his former deputy, Gen. Mohammed "Hemeti" Hamdan Dagalo of the paramilitary group, RSF, most civilians are being brought by road to Port Sudan, a perilous journey, to be evacuated by air and sea. India has been coordinating efforts with other countries that have the most civilians and resources in Sudan, including the U.S., the U.K., the UAE and Saudi Arabia, on logistics, timing the evacuation operations, and even using Saudi and French planes. En route to the Caribbean for a scheduled visit, External Affairs Minister S. Jaishankar also met with the UN Secretary General in New York to seek help. It is clear that military personnel, officials and diplomats will have a difficult few days ahead given that even humanitarian workers and ambulances have been attacked. They have no doubt been assisted by the cumulative experience of similar operations over the decades, beginning with the largest such single civilian evacuation during the Gulf war, in 1991.

The Sudan evacuation brings once more into focus the particular challenges that India faces in any conflict. With about 14 million non-resident Indians and more than seven million tourists and travellers each year, there is practically no conflict today that does not affect an Indian citizen. Given that many work in the most dangerous environments — examples being students in Ukraine, nurses in Iraq or Yemen, or labourers in Libya, Syria and Lebanon — the responsibility of the government to help those without the means to return to safety is greater. As a result, a standard operating procedure, and even possibly a special force to deal with such crises — as recommended by the Parliamentary Standing Committee for External Affairs, in 2022 — must be considered by the government. It is also essential that such crises be devoid of political grand-standing or finger-pointing, and that unseemly public spats over the evacuation, or unnecessary controversies over garnering domestic political mileage be avoided. India is admired for its reputation and ability to harness all its resources in rescuing every single citizen in any corner of the world, every time they are in need. That reputation must remain intact.

THE RIGHT TO LITIGATE

Use of legal remedies to limit nature's exploitation is at the core of democracy

The Central Bureau of Investigation (CBI) seems to have been overzealous in registering a case against environmental lawyer Ritwick Dutta and his organisation, Legal Initiative for Forest and Environment, for violating Foreign Contribution (Regulation) Act (FCRA) provisions. The gist of the allegations is their using foreign funds to encourage litigation that will stall existing and prospective coal-fired plants in India. While the sourcing of foreign funds and use is certainly something to keep an eye on, any criminalising of the act of opposition to coal plants, when pursued via legal means, is an absurd stance for a government to adopt. As a signatory to the UN Framework Convention on Climate Change and various key agreements, India has undertaken to gradually reduce its reliance on fossil fuel sources and be 'net zero', or source almost all power from non-fossil fuel sources by 2070. India has also consistently endorsed reports by the Intergovernmental Panel on Climate Change (IPCC) that speak of the urgency of ensuring global temperatures do not exceed 1.5°C of pre-industrial times, necessitating that global net anthropogenic CO2 emissions decline by about 45% from 2010 levels by 2030. However, under principles of 'Common and Differentiated Responsibility', India has maintained its right to rely on coal plants in the interim as it is still a developing economy. The true cost of renewable sources (solar, wind and nuclear) remains much more than that of fossil-fuel power. The industrialised West, while slowing its fossil fuel consumption, continues to be reliant on natural gas and keeps falling short on its commitments to transfer technology and finance to developing countries to accelerate clean energy adoption. Thus, coal is a necessary evil, but still evil, and seeing it any other way belies scientific evidence.

India has 28.5 GW of coal power capacity planned and 32 GW of plants are under construction. The commissioning of many has been delayed due to insufficient environment clearances, land acquisition, and redevelopment and rehabilitation-related problems. These, however, follow from rulings by the National Green Tribunal or from a lack of adherence to norms prescribed mainly under provisions of the Environment Protection and related legislation. Funding for new coal plants is increasingly difficult with multilateral funding agencies refusing to fund such plants. Many coal plants run inefficiently and rely on lenient environmental curbs as they are critical to India's power needs. Using legal remedies to limit the industrial exploitation of nature and ensuring just compensation is at the core of a civilised democracy; and efforts at undermining such a fundamental compact bodes ill for India.

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