

KSG: NEWSPAPER CRUX

17TH SEPTEMBER 2022

NEWSPAPER HIGHLIGHT

Fifteen of India's 25 districts most vulnerable to climate change were in Assam, the State's Science, Technology and Climate Change Minister, Keshab Mahanta, told the 126 member Assembly. Of these 15 districts, Karimganj was the most vulnerable in the country, he said. The other two districts - Cachar and Hailakandi - were almost as vulnerable, the Minister said. Citing a 2021 report by the Council of Energy, Environment and Water, Mr. Mahanta said Assam had the highest overall vulnerability index in the country causing drastic change in the rainfall intensity.

Union Minister for Finance and Corporate Affairs Nirmala Sitharaman on Friday asked banks to be more digital savvy and give immediate priority to use Web3 and artificial intelligence technology in fraud detection and to generate early warning signs in case of an unforeseen event. She was addressing the 75th Annual General Meeting of Indian Banks' Association in Mumbai. Web3 (also known as Web 3.0) is an idea for a new iteration of the World Wide Web which incorporates concepts such as decentralization, blockchain technologies, and token-based economics. The term "Web3" was coined in 2014 by Ethereum co-founder Gavin Wood, and the idea gained interest in 2021 from cryptocurrency enthusiasts, large technology companies, and venture capital firms.

Better regional connectivity is only possible if members grant each other "full transit rights", Prime Minister Narendra Modi said on Friday, referring to the refusal by Pakistan to give India transit trade access by land to Afghanistan and Central Asia. Mr. Modi was speaking at the summit of the Shanghai Cooperation Organisation (SCO) Council of Heads of State in Samarkand.

Russia understands India's "concerns" over its war in Ukraine, Russian President Vladimir Putin told Prime Minister Narendra Modi, promising to try and end the nine-month old conflict and blaming the Ukrainian government for prolonging it, in the first meeting between the two leaders on the side-lines of the Shanghai Cooperation Organisation (SCO) summit here. Mr. Modi began his comments by telling Mr. Putin that the "era of war" is over, indicating India's discomfort with Russia's attack on Ukraine for the first time in public, although New

GREEN FINS HUB

1. The UN Environmental Programme (UNEP), along with the Reef-World Foundation, launched the Green Fins Hub. The Green Fins Hub is the first-ever global marine tourism industry platform for diving and snorkelling operators worldwide. It was developed by The Reef-World Foundation in partnership with the United Nations Environment Programme (UNEP).

2. This industry-backed platform would give a 'major boost' to sustainable marine tourism. Purpose - The platform will help diving and snorkelling operators to make simple, cost-efficient changes to their daily practices by utilising tried and tested solutions. It would also help them keep track of their annual improvements and communicate with their communities and customers.

3. Membership - The Green Fins Hub hosts two types of membership Digital membership, Green Fins Certified Members. Digital membership that will be available to dive, snorkel and liveaboard operations globally. Throughout every year of membership, operators will receive environmental scores based on a detailed online self-evaluation and progress made on their action plans.

4. Green Fins Certified Members will continue to be assessed annually and trained in person at their operation. The assessment process will continue to be based on set criteria using a scoring system (0-330 point system, with a low score implying low impact of a business on coral reefs). There will be a minimum threshold (>200 of a maximum environmental impact score) for becoming a Green Fins Certified Member. A ranking of bronze, silver or gold certified members will be given according to performance.

5. Other features - The Green Fins Community Forum will be for operators around the world to Raise industry needs, Discuss environmental issues and Share lessons and ideas with like-minded industry leaders, non-profits and governments.

6. The Green Fins Solutions Library will give access to over 100 proven environmental solutions to common daily operational challenges. The Action Plan Tracker will enable members to receive an annual sustainability action plan with set goals.

ATOMIC CLOCKS

1. Previous generation of clocks that consisted of a quartz crystal oscillator would be late by a nanosecond after an hour of efficient performance. Atomic clocks combine a quartz crystal oscillator with an ensemble of atoms (usually cesium or calcium or rubidium) to achieve greater stability, and keep time with extreme accuracy. They contain an element like cesium or calcium and a source of microwave electromagnetic radiation.

2. **Working - The nucleus of an atom is surrounded by a cloud of electrons, which occupy discrete energy levels or states. When excited by a microwave, the electron can absorb some of the incident radiation and get excited to a higher state.** For this to happen, the incident microwave radiation has to match the characteristic frequency of the cesium or calcium atom. By tuning the microwave source and observing at what frequency the transition takes place, the exact value of the characteristic frequency is calculated. Frequency refers to the number of waves that cross a particular point in time in one unit of time.

3. By counting the number of waves (i.e., frequency), the time can be measured accurately. Present Models - NASA's Deep Space Atomic Clock misses a second once in 10 million years. The official definition of a second today is given by the frequency needed to make electrons transition between two levels in a cesium atom. However, the state of the art is a strontium clock that loses 3.5 beats only once in 10 quintillion beats (a quintillion in one followed by 19 zeros).

SHALLOW-WATER MINING

1. A new study by the University of Helsinki points out shallow-water mining is not a 'silver bullet' to resolve growing global need for metals. In 'shallow-water mining', metals such as gold, cobalt

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Delhi has not criticised Russia for its action thus far.

As part of efforts to reduce its carbon footprint, the Indian Air Force (IAF) is looking to fly an AN32 transport aircraft modified to operate on 10% blended biodiesel for 200 flight hours in the next six months.

Despite sanctioning record numbers of Eklavya model residential schools for tribal students since 2014 and setting up of the National Education Society for Tribal Students (NESTS) to manage these schools in 2018, the Ministry of Tribal Affairs has so far been unable to fix the teacher shortage faced across 378 of such schools that are currently functional.

China's President Xi Jinping called upon members of the Shanghai Cooperation Organisation (SCO) grouping, which includes India and Russia, to "guard against attempts by external forces" to instigate "colour revolutions" or interfere in their affairs, in a veiled criticism of the West. Addressing the SCO summit in Samarkand, Mr. Xi hit out at "obsession with forming a small circle" — the U.S., India, Australia, Japan Quad is among groups labelled as such by Beijing — and called on the SCO group to work together to make a more just international order.

The Reserve Bank of India will have to frontload its monetary policy to fight stubborn inflation and shield medium term growth, RBI officials wrote in an article in the bank's monthly bulletin. Inflation has remained above the RBI's tolerance level since January, prompting it to raise interest rates by a total of 140 basis points in the current cycle. The bank is widely expected to raise by another 25 to 50 basis points at its next meeting at the end of this month. "At this critical juncture, monetary policy has to perform the role of nominal anchor for the economy as it charts a new growth trajectory," the officials led by Deputy Governor Michael D. Patra wrote in the article on the 'State of the Economy'.

India, with its deep pool of talent, proven ability to leapfrog existing digital technologies and extensive manufacturing expertise, has a unique role to play in the global economy, said Judith McKenna,

and copper are mined from depths of 200 m below the sea. In 'deep-sea mining', valuable minerals are mined from ocean depths greater than 200 m.

2. Deep-sea mining has not been implemented yet due to concerns over the environmental impacts of mining activities. Generally, shallow-water mining is considered a relatively low-risk and low-cost option to satisfy the demand for metals and minerals. But, a new study has highlighted that the shallow-water mining also could trigger local extinctions of marine species.

3. This is because extracting minerals from the shallow-water ocean floor requires dredging large amounts of sediment. Removing this sediment, which takes thousands of years to accumulate, means removing the organisms that call it home. Shallow-water Mining Projects Namibia has been mining diamonds off its coast in depths of upto 130 m.

4. Indonesia has been extracting placer deposits - sediments containing gold, silver, tin, and platinum. Mexico is considering mining marine phosphorites, phosphate-rich nodules used in fertiliser and industrial chemicals, in water depths of 50-100 m.

5. Sweden is considering mining the shallow waters (60-150 m) of the Bothnian Sea for polymetallic nodules, mineral deposits containing nickel, cobalt, copper, titanium and rare earth elements. However, New Zealand dropped the project due to environmental concerns.

POWER FINANCE CORPORATION TO BE A DFI

1. The Union Ministry of Power has sought the status of Development Financial Institution (DFI) for the Power Finance Corporation (PFC) and Rural Electrification Corporation (subsidiary of PFC). The Power Ministry has sought the DFI status for PFC from the Reserve Bank of India (RBI) under the National Bank for Financing Infrastructure and Development (NaBFID) Act, 2021.

2. The DFI status helps a financial institution (FI) access foreign funding, grants and loans easily and in higher quantum, as compared to a public financial institution (PFI), which PFC already is. The objective behind this move is to enable PFC to steer global climate funding and net zero investment in the country. If the proposal is taken to its logical conclusion, PFC would be the first DFI for climate and energy transition in India.

3. NaBFID Act on DFIs NaBFID Act 2021 seeks to establish DFIs for providing long-term finance for such segments of the economy where the risks involved are beyond acceptable limits of commercial banks and other ordinary FIs. Unlike banks, DFIs do not accept deposits from people. They source funds from the market, government, as well as multilateral institutions, and are often supported through government guarantees, according to the Act.

4. Power Finance Corporation New Delhi-based Power Finance Corporation (PFC) is a financial institution under the Union Ministry of Power. Incorporated in 1986, the PFC is a leading Non-Banking Financial Corporation in the Country. Vision - To be the leading institutional partner for the power and allied infrastructure sectors in India and overseas across the value chain. In 2021, the PFC was conferred the title of a Schedule-A Maharatna CPSE. In 2010, it was classified as an Infrastructure Finance Company by the Reserve Bank of India.

5. Maharatna CPSEs-Bharat Heavy Electricals Limited, Bharat Petroleum Corporation Limited, Coal India Limited, GAIL (India) Limited, Hindustan Petroleum Corporation Limited, Indian Oil Corporation Limited, NTPC Limited, Oil & Natural Gas Corporation Limited, Power Grid Corporation of India Limited, Steel Authority of India Limited.

GHOST ISLANDS OF THE ARCTIC

1. A 'Ghost Island' Qeqertaq Avannarleq in the Arctic discovered in 2021 has been found to be a "dirty iceberg." 'Qeqertaq Avannarleq' - Greenlandic for "the northern most island" was small and gravelly island. It was previously thought to be the northernmost piece of land in the world. However, this island disappeared recently.

2. Just north of Cape Morris Jesup, several other small islands had been discovered over the decades, and then they

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President and CEO of Walmart International.

The Centre on Friday slashed the windfall tax levied on crude petroleum producers from ₹13,300 a tonne to ₹10,500 and cut the tax on exports of aviation turbine fuel to ₹5 per litre from ₹9. The levy on export of diesel was reduced to ₹10 per litre from ₹13.50. The changes take effect on September 17. A windfall tax is a higher tax rate on profits that result from a sudden windfall gain to a particular company or industry, often as the result of a geo-political disturbance, war or natural disaster that creates unusual spikes in demand and/or interruptions to supply.

disappeared.

3.Reason - A team of Swiss and Danish surveyors, who investigated the “ghost islands” phenomenon, found that these elusive islands are actually large icebergs grounded at the sea bottom. These icebergs likely came from a nearby glacier, where other newly calved icebergs, covered with gravel from landslides, were ready to float off.