

Japan is expected to start flushing 1.25 million tonnes of wastewater from the embattled Fukushima nuclear power plant into the Pacific Ocean this year, as part of a \$76 billion project to decommission the facility. The project received the Japanese cabinet's approval in 2021 and could take three decades to complete. The water that the Japanese government wants to flush from the plant was used to cool the reactors, rainwater, and groundwater.

It contains radioactive isotopes from the damaged reactors and is thus itself radioactive. It will release this water into the Pacific Ocean over the next 30 years. China, South Korea, and Taiwan have expressed concerns over Japan's plan. A representative of the Pacific Islands Forum, the bloc of Oceania countries including Australia, has called it "simply inconceivable" based on their experience with "nuclear contamination".

India is lagging behind in the targets to increase the number and quality of tree- and forest cover plantations set in the Green India Mission, according to data accessed through the Right to Information (RTI) Act. The National Mission for a Green India (GIM) is one of the eight missions under the National Action Plan on Climate Change. It aims at protecting, restoring, and enhancing India's forest cover and responding to climate change. The target under the Mission is 10 million hectares (mha) of forest and non-forest lands for increasing the forest and tree cover and improving the quality of existing forests. Improving tree cover is critical to sequester carbon and bolster India's carbon stocks as part of its international commitments to mitigate greenhouse gas emissions.

China has "exploited" the sense of alienation and insecurity among tribal communities along the India Myanmar border — who have been protesting against the fencing being undertaken along the border — in order to "cause insurgency and instability" in northeast India, according to a research paper. The paper was written by a police officer and submitted at a conference last week. It added that insurgents sourced their arms from China and brought them into India through Myanmar.

The drive for atmanirbharta or self-sufficiency in India's military strength and the key role of women in the armed forces were in the spotlight at the 74th Republic Day celebrations on Thursday, held at the renovated Kartavya Path, formerly Rajpath, in Delhi. This year's parade was the first with President Droupadi Murmu at the helm. The celebrations had a chief guest — Egyptian President Abdel Fattah elSisi — after two years without one owing to pandemic restrictions.

A circular issued by the Employees' Provident Fund Organisation (EPFO) on "re-examining" cases of higher pension for those who retired prior to September 1, 2014 has evoked concern among sections of such pensioners that they may lose the benefit they have been enjoying for the past five years or so. The EPFO, in the circular issued on

WHAT ARE MANDATORY MINIMUM SENTENCES

1. A CJI-led bench has decided to examine a petition challenging mandatory minimum sentencing in the case of gang rape of a minor below the age of 12. About Mandatory minimum sentences: As per the 2016 ruling in 'Mohd Hashim vs State of UP And Others'. The concept of mandatory minimum sentencing refers to "a sentence which must be imposed without leaving any discretion to the court.
2. It means a quantum of punishment that cannot be reduced below the period fixed, A concept that comes primarily from the Canadian and American legal systems; in India, such sentences are prescribed for all sexual offenses under the Prevention of Children from Sexual Offences (POCSO) Act except the offense of sexual harassment. What are the arguments for and against?
3. **For:** It limits the scope for judicial discretion and arbitrariness, thereby enhancing the cause of justice. It acts as a deterrent for serious or harsh offenses by ensuring that the perpetrator does not go unpunished.
4. **Against:** This leads to overcrowding of prisons and is unfair as the convict's mitigating circumstances, such as if they are a first-time offender or the sole breadwinner in the family, are often overlooked.

WHAT IS A LIVING WILL, AND THE NEW SUPREME COURT ORDER FOR SIMPLIFYING THE PASSIVE EUTHANASIA PROCEDURE

1. A five-judge SC bench decided to modify the existing rules for "living wills" as established in its 2018 decision allowing passive euthanasia, in order to make the process of passive euthanasia easier.
2. **Meaning of 'Living Will':** Living will be a person's right to make an advance directive about the course of his or her treatment, including the removal of life support, if such a situation arises.
3. Evolution of the concept of 'Living Will' in India: Law Commission of India (2006) in its 196th Report titled 'Medical Treatment to Terminally Ill Patients (Protection of Patients and Medical Practitioners)': A patient's decision to not receive medical treatment did not constitute an attempt to commit suicide under Section 309 IPC. Also, a doctor who obeys the instructions of a competent patient to withhold/withdraw medical treatment does not commit a breach of professional duty.
4. **Aruna Shanbaug case (2011):** The SC allowed passive euthanasia for the nurse lying in a vegetative state at a hospital in Mumbai. S. Puttaswamy case/ the Right to Privacy case (2017): – Article 21 includes the concept of individual dignity and thus allows passive euthanasia. Common Cause case (2018): The SC decided that passive euthanasia will be legally allowed henceforth in India and laid down guidelines for living wills. "We declare that an adult human being having the mental capacity to take an informed decision has the right to refuse medical treatment including withdrawal from life-saving devices. The right to die with dignity is a part of the right to live with dignity."
5. **Meaning of active and passive euthanasia:** Active euthanasia: involves an active intervention to end a person's life with substances or external force, such as administering a lethal injection. Passive or negative or non-aggressive euthanasia is the denial of medical care necessary for maintaining life, such as the denial of antibiotics when the patient is likely to die without them.

GOVERNMENT TO HAND OVER 1,000 MONUMENTS TO THE PRIVATE SECTOR UNDER MONUMENT MITRA SCHEME

1. The government will hand over around 1,000 monuments to the private sector for their upkeep under the Monument Mitra Scheme.
2. About Monument Mitra Scheme / Adopt A Heritage: The Scheme was started a few years back under the Ministry of Tourism. It is now transferred to the Ministry of Culture in respect of the monuments under the Archaeological Survey of India, the ASI. Applies to all Centrally protected heritage properties.
3. IAims at ensuring quality & inclusive provision of amenities and facilities across heritage, natural, & tourist sites through the active participation of private and public sector organizations and individuals. These organizations would be known as "Monument Mitras" for their collaboration initiative.

CAN INDIA'S BHAROS REPLACED ANDROID, iOS

1. Developed by an IIT Madras-incubated start-up, BharOS is being pitched as India's answer to the Google-owned Android and

Wednesday, said payment of higher pension should be stopped “from the month of January” for those who retired without exercising any option under paragraph 11(3) of the pre-amended Employees’ Pension Scheme, 1995, but were granted pension on higher wages.

33 percentage, the surge in the production of opium in Myanmar to 40,100 hectares since the military’s seizure of power, as eradication efforts have dropped off and the faltering economy has led more people towards the drug trade, according to a United Nations report. The overall value of the Myanmar opiate economy ranges between \$660 million and \$2 billion.

6.2 percentage increase in the number of people dying from cardiovascular diseases (CVD) in the U.S. during the first year of the COVID-19 pandemic, according to the heart disease and Stroke Statistics – 2023 Update. The rise in the number of CVD deaths in 2020, from 8.74 lakh deaths in 2019 to 9.28 lakh in 2020, shows the largest single year increase since 2015.

\$4.3 billion, the amount needed to fund its humanitarian activities in war-torn Yemen in 2023, the United Nations informed. The UN Office for the Coordination of Humanitarian Affairs said funds are required to help 17.3 million people. It plans to deliver “urgent lifesaving” assistance to 14 million people.

Over three weeks after the National Thermal Power Corporation (NTPC) was ordered to construct 2,000 temporary, pre-fabricated houses to rehabilitate the evacuated residents of Joshimath, the Himalayan pilgrim town which has been sinking, the power corporation has yet to take any action, a senior government official told The Hindu on Thursday. In an order issued on January 5, the Chamoli district administration had directed a halt on all construction activity on the NTPC’s power project and the Border Roads Organisation’s Helang Marwari bypass road, given the concerns that the two projects were worsening the land subsidence or sinking process.

India and Egypt on Thursday reiterated support for the Non-Aligned Movement. A joint statement issued after the bilateral engagements for President Abdel Fateh el-Sisi, who was the chief guest at the Republic Day parade here, said both countries expressed desire for exchange of technology between their defence industries. “The two countries reaffirmed their commitment to multilateralism, the principles of the United Nations Charter, international law, the founding values of the Non-Aligned Movement, and respect for the sovereignty and territorial integrity of all states,” the statement said.

Apple’s iOS, the two most dominant mobile operating systems in the world.

2. **BharOS?** How was it made? BharOS is an Android Open-Source Project and was developed by JandK Operations Private Limited, a non-profit organisation incubated at IIT Madras. Concerns existed with respect to the collection, storage, and usage of data that is generated by Indian smartphone users. BharOS tries to address these issues.
3. **How is BharOS different from Android?** BharOS uses AOSP or Android Open -Source Project, the functionalities, and the methodologies both OS use are essentially the same. What sets BharOS apart from Android, is that it is free from Google Services and Apps. It comes with no default app (NDA), which allows users to have more control over permissions that an app can have. Google has used its preinstalled apps and services to collect data, sometimes without explicitly asking a user. Similarly, other apps from Google’s Play Store share data with third-party services. BharOS does not come with any such preinstalled services or apps, and hence, is deemed to be more secure. It also comes with a native over-the-air update (NOTA) feature that keeps the devices safe and with organisation-specific Private App Store Services (PASS), the device gives access to only those apps which have been thoroughly verified by the organization.
4. **How will apps work on BharOS?** It will let users choose what apps they want to use for their own devices. Furthermore, it will have its own app store which will allow users to download and install apps, eliminating the need for the Google App Store. Users may be allowed to sideload apps in a much easier manner than Android allows. Barring a few essential apps, BharOS may favour indigenously developed apps or apps that have been designed with a particular focus on India and Indian The indigenously-built BharOS paves the way for Atmanirbhar Bharat & could help put a check on Big Tech and the duopoly of Google-Apple in the mobile ecosystem.

ARTIFICIAL SYNAPSE DEVELOPED FOR BRAIN-LIKE COMPUTING WITH INDUSTRY-COMPATIBLE NITRIDE SEMICONDUCTORS

1. A team of scientists from the Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR) have used scandium nitride (ScN) and Complementary Metal-Oxide-Semiconductor (CMOS) compatibility to develop brain-like computing. This invention can provide a new material for stable, CMOS-compatible optoelectronic synaptic functionalities at a relatively lower energy cost and hence has the potential to be translated into an industrial product.
2. **How it works:** The human brain is a supreme biological computer that is smaller and more efficient due to the presence of a synapse (the connection between two neurons) that plays the role of both processor and memory storage unit. In the current era of artificial intelligence, the brain-like computing approach can help meet the escalating computational demands.
3. Scientists used ScN to develop a device mimicking a synapse that controls the signal transmission as well as remembers the signal. An artificial optoelectronic synapse with ScN thin films that can mimic synaptic functionalities like short-term memory, long-term memory, the transition from short-term to long-term memory, learning–forgetting, frequency selective optical filtering, frequency-dependent potentiation, and depression, Hebbian learning, and logic-gate operations.
4. It can act as a platform for both excitatory and inhibitory functions. The industrial processing techniques of ScN are like the existing semiconductor fabrication infrastructure. Response to the optical stimuli also has the advantage of possible integration with photonic circuits known for higher speed and broader bandwidth than electronic circuits.



“Looking around for a clue to succeed is a waste of time. You already have what you need.”

DR. KHAN
(KSG)