

AUKUS PARTNERSHIP

Why in news?

- The United States, Australia and Britain unveiled details of a plan to provide Australia with **nuclear-powered attack submarines** from the early 2030s to counter China's ambitions in the Indo-Pacific.
- This agreement was finalised under the 2021 AUKUS partnership.

What is AUKUS partnership?

- Signed in September 2021, the new enhanced trilateral security partnership between **Australia, United Kingdom, and United States** is named as "AUKUS".
 - This is a trilateral defence deal for Indo-Pacific.
- The **first major initiative** of AUKUS would be to deliver a "**nuclear-powered**" submarine fleet for Australia.
- These countries, however, made it clear that their **aim is not to arm the new submarines with nuclear weapons**.
 - This is because Australia is a signatory to the Nuclear Non-proliferation Treaty (NPT) which bans it from acquiring or deploying nuclear weapons.

What is the significance of this deal?

- US has only shared nuclear submarine technology once before in 1958 with Great Britain.
- **For Indo-Pacific Region**
 - Under this partnership, technology, scientists, industries and defence forces of these three countries will work together to deliver a safer and more secure region.
 - Some analysts feel that this partnership will lead to intensified arms race in the region.
- **For Australia**
 - Australia never had nuclear-powered submarines.
 - Hence, this step will give Australia naval heft in the Pacific, where China has been particularly aggressive.
 - Critics, on the other hand, claim that this **deal would antagonise Beijing** which will not be good for Australia.

- Australia is now set to join **an elite group of only six countries** – India, US, UK, France, Russia and China – that operate nuclear-powered submarines.
- It will also be the only country to have such submarines without having a civilian nuclear power industry.
- **For India**
 - The new pact will add to the global efforts to balance China in the region.
 - It should be noted that Australia and India are close strategic partners in the Indo-Pacific region.
 - Australia is also a member of **QUAD group**. A stronger Australia would lead to further strengthening of QUAD.
- **For France**
 - France is not happy with the deal and has termed this deal a “stab in the back”.
 - Australia had signed a contract to buy 12 Attack-class submarines from France in 2016. The first submarine was expected to be operational around 2034.
 - As a result of the current deal, Australia ditched the contract.

How China views this agreement?

- China denounced a new Indo-Pacific security alliance saying such partnerships should not target third countries.
- It claims that the current cooperation would gravely undermine regional peace and stability, aggravate arms race and hurt the international non-proliferation efforts.
- China claimed that western powers are using **nuclear exports for geopolitical gaming tools**.

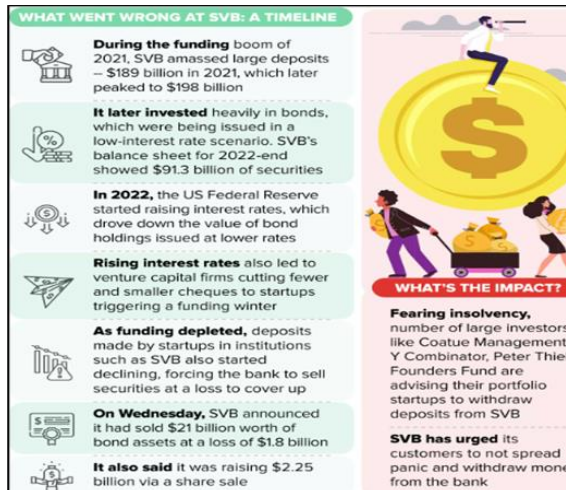
[SILICON VALLEY BANK CRISIS: IT MINISTRY LIKELY TO SEEK DOMESTIC LOANS FOR START-UPS](#)

Why in News?

- To address the liquidity issues of Indian start-ups impacted by the fallout of the events at Silicon Valley Bank (SVB), the Union Ministry of Electronics and Information Technology (MeitY) is likely to devise a plan.

What is the Background behind MeitY's move?

- The California-based SVB, a cornerstone of the US technology and startup industries, recently failed, **making it the biggest bank failure since the 2008 financial crisis.**
- SVB worked with companies that traditional banks normally avoid due to the perceived danger of failure, and it lent to start-ups when it was difficult to find other sources of funding.



- **A large number of Indian start-ups, especially in the SaaS (software as a service) sector** that services US clients, had accounts at the bank.
- SVB had also been an **important lender to several Indian start-ups** when the sector in India was starting to take shape around 2010-11.
- Among its most notable fundings was an investment of a **total of \$1.7 million in One97**

Communications, the parent company of Paytm.

- **Deposits up to \$250,000** are insured by the Federal government and anything above this is likely to be released in a phased manner.
- Many founders said that **not being able to take out more than \$250,000** from their accounts will hit them hard, as they used their SVB deposits for **payroll and other operational functions** and could lead to layoffs.
- Amid a **funding winter**, where availability of funds for start-ups is dwindling, this could also prove to be a **major roadblock, especially to young businesses.**

WHY DO LANDFILLS CATCH FIRE DURING SUMMERS?

Why in News?

- The Kochi landfill site around Brahmapuram that caught fire earlier this month is a stark reminder that Indian cities need to be prepared for more such incidents as summer approaches.

How do Landfills catch fire?

- India's Municipalities have been collecting more than 95% of the waste generated in cities but the efficiency of waste-processing is hardly 30-40%.
- **Municipal solid waste consists of about 60% biodegradable material, 25% non-biodegradable material and 15% inert materials**, like silt and stone.
- Municipalities are expected to process the wet and dry waste separately and to have the recovered by-products recycled.
- Unfortunately, the rate of processing in India's cities is far lower than the rate of waste generation. Hence, unprocessed waste remains in open landfills for long periods of time.
- **This openly disposed waste includes flammable material like low-quality plastics, which have a relatively higher calorific value of about 2,5003,000 kcal/kg, and rags and clothes.**
- In summer, the biodegradable fraction composts much faster, increasing the temperature of the heap to beyond 7080°C.
- **A higher temperature coupled with flammable materials is the perfect situation for a landfill to catch fire.** Some fires go on for months.

What is the Solution?

- There are two possible permanent solutions to manage landfill fires.
 - **The first solution is to completely cap the material using soil, and close landfills in a scientific manner.**
 - This solution is unsuitable in the Indian context, as the land can't be used again for other purposes.
 - Closed landfills have specific standard operating procedures, including managing the methane emissions.
 - **The second solution is to clear the piles of waste through bioremediation.**
 - Bioremediation is the use of either naturally occurring or deliberately introduced **microorganisms** to consume and break down environmental pollutants, in order to clean a polluted site.
 - However, **implementing a bioremediation project usually takes up to two or three years**, necessitating a short-term solution for summertime landfill fires.

What are some immediate Measures?

- Landfill sites span 2030 acres and have different kinds of waste.
- The first immediate action is to **divide a site into blocks depending on the nature of the waste.**
- At each site, blocks with fresh waste should be separated from blocks with flammable material.
- Blocks that have been capped using soil are less likely to catch fire, so portions like these should also be separated out.
- The **different blocks should ideally be separated using a drain or soil bund and a layer of soil should cap each block.**
- This reduces the chance of fires spreading across blocks within the same landfill.
- Next, the most vulnerable part of the landfill — the portion with lots of plastics and cloth — should be capped with soil.
- The fresh waste block shouldn't be capped but enough moisture should be provided by sprinkling water which will help cool the waste heap.
- Once a site has been divided into blocks, the landfill operator should classify incoming waste on arrival to the site, and dispose them in designated blocks rather than dumping mixed fractions.
- Already segregated nonrecyclable and nonbiodegradable waste should be sent to cement kilns instead of being allowed to accumulate.
- Dry grass material and dry trees from the site should also be cleared immediately.

BOLD KURUKSHETRA

Recently, the Singapore Army and Indian Army participated in Exercise Bold Kurukshetra which was held at Jodhpur Military Station, India.



About Bold Kurukshetra:

- It was the **13th edition** of Exercise Bold Kurukshetra, a bilateral military exercise between India and the Singapore army.
- For the first time in the exercise series, both armies participated in a **command post Exercise**, which involved Battalion and Brigade level planning elements and computer wargaming.

- Hosted by the Indian Army, the exercise involved soldiers from the 42nd Battalion, Singapore Armoured Regiment and an Armoured Brigade of the Indian Army.
- It involved an understanding of mechanised warfare in emerging threats and evolving technologies, developing inter-operability through a **computer simulation-based Wargame** using joint operational and tactical procedures controlled through a joint command post.
- **First conducted in 2005**, this exercise underscores the strong and long-standing bilateral defence relationship between both countries and enhances cooperation between the two armies.
- Both defence establishments also interact regularly through high-level visits, policy dialogues, courses and other professional exchanges.

INDIA'S FIRST INDIGENOUS QUADRUPED ROBOT AND EXOSKELETON

Hyderabad-based Svaya Robotics has developed India's first indigenous quadruped (four-legged) robot and exoskeleton for the defense sector as part of the Atmanirbhar Bharat initiative.



About India's first indigenous quadruped robot and exoskeleton:

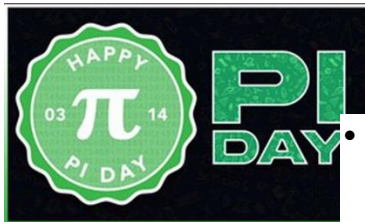
- The indigenous robots and wearable exoskeletons were developed by Hyderabad-based Svaya Robotics **in collaboration with the DRDO Labs**, Research and Development Establishment (R&DE), Pune, and the Defence Bioengineering and Electromedical Laboratory (DEBEL), Bengaluru, as **technology demonstrators** with their design inputs.
- Both are **dual-use robots** and have multiple use cases in both Industry and healthcare.
- **Quadruped robots:**
 - They are **four-legged robots** that can **walk or run on uneven and rough terrains**.
 - The robots **can carry 25 kg** in payload and **walk along with the soldier**.
 - It is made for **navigating in unstructured terrains** to provide **remote reconnaissance and inspection**, which otherwise are not safe for humans to operate in.

- **Exoskeleton:**

- It is developed to suit Indian soldiers' anthropometry and augment soldier strength for walking long distances.
 - These active exoskeletons, when worn by soldiers, can carry heavy loads without expending much effort.
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WHAT IS PI DAY?

Pi Day was recently celebrated worldwide to recognize the mathematical constant, Pi.



About Pi Day:

International Day of Mathematics, or Pi Day, is celebrated on March 14 every year to recognize the mathematical constant, Pi.

- The day is celebrated by mathematics enthusiasts and educators worldwide to recognize and appreciate the significance of mathematics in our lives.
- **Why March 14?**
 - The approximate value of Pi is 3.14.
 - The date, when written in the format of month/day (3/14), matches the first three digits of the mathematical constant.
- **History:**
 - The first Pi Day was celebrated in 1988 by physicist Larry Shaw at the San Francisco Exploratorium.
 - In 2009, the United States House of Representatives designated March 14 as Pi Day.
 - UNESCO marked Pi Day as the 'International Day of Mathematics' during its general conference in 2019.
 - Mathematician and physicist Albert Einstein, known for the "General Theory of Relativity," was born on Pi Day in 1879.

What is Pi (π)?

- Pi is a mathematical constant that **represents the ratio of the circumference of a circle to its diameter.**
- It is an **infinitely long, irrational number**, and its exact value cannot be known.
- Pi is **roughly equal to 3.14 or 22/7.**
- **History:**
 - Pi has been **known for nearly 4,000 years** and was **discovered by the ancient Babylonians.**
 - One of the **first calculations** of pi was carried out by **Greek mathematician Archimedes of Syracuse (287 B.C. to 212 B.C.)**
 - It also has a **symbol, ‘ π .’** The symbol π was **devised by British mathematician William Jones in 1706.**
- **Applications:** It is used in a wide variety of mathematical and scientific **calculations, including geometry, trigonometry, calculus, and more.**

[INDIAN POST PAYMENTS BANK \(IPPB\)](#)

MD and CEO of India Post Payments Bank (IPPB) recently said that IPPB wants to convert itself to a universal bank.



About Indian Post Payments Bank (IPPB):

- IPPB has been established under the Department of Posts, Ministry of Communication, with **100% equity owned by the Government of India.**
- IPPB was **launched on September 1, 2018.**
- **Vision:** To build the most **accessible, affordable, and trusted bank for the common man in India.**
- **Mandate:** To **remove barriers for the unbanked and under-banked** and reach the last mile **leveraging a network comprising 160,000 post offices (145,000 in rural areas) and 400,000 postal employees.**
- **Headquarters: New Delhi**
- **Functions:**

- It will accept deposits upto Rs 2 lakh, beyond which the account will be automatically converted into a post office savings account.
- The products and services of the bank will be made available through various mediums such as counter services, micro ATMs, mobile banking apps, messages, and interactive voice response.
- The IPPB will use Aadhaar to open accounts, and a QR card and biometrics will be used for authentication, transactions, and payments.

What are “Payments Banks”?

- A payments bank is like any other bank but operates on a smaller scale without involving any credit risk.
- It was set up on the recommendations of the Nachiket Mor Committee.
- **Objective: Widen the spread of payment and financial services to small businesses, low-income households, and migrant labor workforce in a secured technology-driven environment.**
- They are registered under the Companies Act 2013 but are governed by a host of legislations such as the Banking Regulation Act, 1949; RBI Act, 1934; Foreign Exchange Management Act, 1999, etc.
- It needs to have a minimum paid-up capital of Rs. 100,00,00,000.
- Activities that can be performed:
 - It can take deposits up to Rs. 2,00,000. It can accept demand deposits in the form of savings and current accounts.
 - The money received as deposits can be invested in secure government securities only in the form of Statutory Liquidity Ratio (SLR). This must amount to 75% of the demand deposit balance.
 - The remaining 25% is to be placed as time deposits with other scheduled commercial banks.
 - It can offer remittance services, mobile payments/transfers/purchases, and other banking services like ATM/debit cards, net banking, and third party fund transfers.
- **Activities that can be performed:**
 - It cannot issue loans and credit cards.

- It cannot accept time deposits or NRI deposits.
 - It cannot set up subsidiaries to undertake non-banking financial activities.
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WHAT IS THE INDIA-BHUTAN SATELLITE?

The ground station of the India-Bhutan Satellite, which has been built in Thimpu, was recently inaugurated.



About India-Bhutan Satellite:

- It is also known as the **ISRO Nano Satellite 2 for Bhutan (INS-2B)**.
 - It was **launched** as a payload on **ISRO's PSLV C54 rocket** on November 26, 2022.
 - It has been jointly **developed by scientists from both countries**.
 - The satellite **contains two payloads**:
 - **NanoMx multispectral optical imager**: It is developed by **India's Space Applications Centre (SAC)**. It will provide **high-resolution images** to **Bhutan for its natural resources management**.
 - **Automatic Packet Reporting System (APRS) repeater**: It is **jointly developed by Department of Information Technology and Telecom (DITT) Bhutan and ISRO's UR Rao Satellite Centre (URSC)** to serve the amateur radio community, **relaying realtime information about the region**.
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