

## Sustainable Cities Integrated Approach Pilot Project (SC-IAP)

### ❖ Context

- UN-Habitat has identified **multi-hazard vulnerabilities, urban sprawl, weak urban mobility** and “**green-blue disconnect**” as the pressing issues for Jaipur city, under one of the components of the **SC-IAP**.

### ❖ Key Highlights

- The component known as “**Sustainable Urban Planning And Management**” is being implemented in Rajasthan in collaboration with the Jaipur Development Authority and Jaipur Greater Municipal Corporation.

- Jaipur has received an overall sustainability rating of three on the **Urban Sustainability Assessment Framework (USAF)** under the component.

### ❖ About the SC-IAP

- It is an **integrated program** being financed by **Global Environment Facility (GEF)**.

- It consists of two tracks:

- **City-level projects in 27 cities across 11 countries**, with around US\$140 million in GEF grant funding. Each country is supported by one or several implementing agencies to manage the various projects in the participating cities.

- **The Global Platform for Sustainable Cities (GPSC)**, led by the World Bank with US\$10 million in GEF grant funding.

- The project addresses following key **sustainability issues** faced by cities:

- **High sprawl of urban areas** leading to severe environmental, social, and economic problems.
- **Limited efficiency of urban structure** with consequent economic losses.

- **Increased vehicles** in shrinking transportation networks, leading to pollution, and a waste of man-hours for commuting purposes.

- **Low environmental awareness** of urban population resulting in unsustainable lifestyle.

### ❖ Aim & Components:

- Its aim is to build the resilience of pilot cities through following components:

- **Integrated urban planning and management** - being spearheaded by UN Habitat.
- **Investment Projects and Technology Demonstration.**
- **Partnerships, Capacity Building and Knowledge Management.**

### ❖ Implementation in India:

- In India, it is being implemented by **United Nations Industrial Development Organisation (UNIDO)** with funding assistance from the **Global Environment Facility (GEF)** and in close cooperation with:

- Ministry of Housing and Urban Affairs (**MoHUA**).
- Municipal Corporations of **Jaipur, Bhopal, Mysuru, Vijayawada and Guntur.**
- State Governments of Rajasthan, Madhya Pradesh, Karnataka and Andhra Pradesh.

## IISC's TRNG



### ❖ Context

- A team at the Department of **Electrical Communication Engineering (ECE)**, Indian Institute of Science (IISc) has developed a **True Random Number Generator (TRNG)**.

### ❖ Background

- Encrypted information can be decoded only by authorised users who have access to a **cryptographic 'key'**.
- But the key needs to be **unpredictable** and, therefore, randomly generated to resist hacking. The **strength of the encryption depends on the quality of random number generation.**
- Cryptographic keys are typically generated in computers using **pseudorandom number generators**, which rely on mathematical formulae or pre-programmed tables to produce numbers that **appear random but are not.**

### ❖ About IISC's Device

- In IISC's TRNG device, **random numbers are generated using the random motion of electrons.**
- It consists of an **artificial electron trap** constructed by stacking atomically-thin layers of materials like **black phosphorus and graphene.**

- The current measured from the device increases when an electron is trapped, and decreases when it is released.

- **Since electrons move in and out of the trap in a random manner, the measured current also changes randomly.**

- The **timing of this change determines the generated random number as one cannot predict exactly at what time the electron is going to enter the trap.**

- **Min-entropy** is a parameter used to measure the performance of TRNGs. Its value ranges from 0 (completely predictable) to 1 (completely random). The device from the IISC's lab showed a record-high min-entropy of 0.98.

- The device can help improve data encryption and provide improved security for sensitive digital data such as credit card details, passwords and other personal information.

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## News in Between the Lines

### Jamui: India's Largest Gold Ore Reserve



#### ❖ Context

- The Bihar government has decided to accord permission for exploration of the "country's largest" gold ore reserve in Jamui district.

#### ❖ Key Highlights

- Around **222.88 million tonnes of gold ore reserves** are present in areas such as **Karmatia, Jhajha and Sono** of the district.
- As per the National Mineral Inventory, **the total resources of primary gold ore in the country as on 1.4.2015 are estimated at 501.83 million tonnes with 654.74 tonnes of pure gold metal.**
- Of this, **Bihar holds** the highest share of India's gold ore which amounts to **44%** containing **37.6 tonnes** of the gold metal.
- **India imported 651.24 tonnes of gold in the FY 2020-21.**
- The **USA** ranks first in the world in terms of gold reserves, followed by Germany and Italy. **China** is the largest producer of gold in the world.

### Rare Bacteria In Antarctica



#### ❖ Context

- Scientists at the **University of Chile** had collected several samples from the Antarctica Peninsula from 2017 to 2019.

#### ❖ Key Highlights

- They have found a bacteria with genes that give them **natural antibiotic and antimicrobial resistance** and have the **potential to spread out** of the polar regions.
- The **Pseudomonas bacteria** is one of the predominant bacteria groups in the Antarctic Peninsula.
- Though **not pathogenic**, they can be a source of '**resistance genes**', which are not stopped by common disinfectants such as copper, chlorine or quaternary ammonium.

### AKRUTI



#### ❖ Context

- The **Nuclear Power Corporation of India Limited (NPCIL)** is going to launch the initiative in the villages surrounding **Kudankulam Nuclear Power Project (KKNPP).**

#### ❖ Key Highlights

- The initiative was earlier introduced in 16 village panchayats near the **Tarapur Atomic Power Station (TAPS).**
- Under the **Advanced Knowledge and Rural Technology Implementation (AKRUTI)** programme, technologies are being taught to the younger generation and the **unemployed youth** to make them entrepreneurs.
- These new, user-friendly and cost-effective technologies are being devised by **Bhabha Atomic Research Centre (BARC)**, in the fields of nuclear science, radioisotopes, industry, health and agriculture.
- One of the AKRUTI's interesting technology transfers is the cost-effective **foldable dryer**, which can be used for drying fruits, vegetables and fish. Since the KKNPP is surrounded by **13 coastal hamlets**, this type of dryer may prove to be a boon to the fishermen.

### INS Gomati Decommissioned

#### ❖ Context:

- **INS Gomati** was decommissioned at the **Naval Dockyard in Mumbai** recently, in an **elegant, solemn and poignant** ceremony.

#### ❖ Key Highlights:

- INS Gomati derives her name from the **vibrant river Gomti** and was commissioned on 16 April 1988.
- The third ship of the Godavari class **guided-missile frigates, INS Gomati** was also the oldest warrior of the Western Fleet when decommissioned.

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- During her service, she participated in **Operations Cactus, Parakram and Rainbow**, and several bilateral and multinational naval exercises.
- For her remarkable spirit and stellar contribution to national maritime security, she was twice awarded the **coveted Unit Citation, once in 2007-08 and again in 2019-20.**
- After her decommissioning, the ship's legacy will be kept alive in an open air museum being set up on by the **picturesque banks of the eponymous river Gomti in Lucknow** where several of her combat systems will be displayed as military and war relics.

## Import Of Paper Under Compulsory Registration From October 1



### ❖ Context:

- The Government has brought the import of paper under compulsory registration from the 1<sup>st</sup> of October 2022.

### ❖ Key Highlights:

- The import policy of major paper products has been amended from 'Free' to **Free subject** to compulsory registration under **Paper Import Monitoring System**'.
- A notification to this effect has been issued by the **Directorate General of Free Trade** recently.
- This order shall be applicable on a range of paper products, such as **newsprint, handmade paper, wallpaper base, duplicating paper, coated paper, uncoated paper, Litho and offset paper.**
- All imports arriving on or after **1<sup>st</sup> of October** this year shall be governed by this policy.
- Paper products **like currency paper, bank bonds and cheque paper and security printing paper** have been excluded from this policy change.
- **Significance:** The move will also go a long way in promoting Make In India and Aatmanirbhar Bharat in this category.

## Jharkhand To Get Who Award For Tobacco Control



### ❖ Context:

- Recognising its efforts in controlling tobacco consumption, the **World Health Organization (WHO)** has selected Jharkhand for the **World No Tobacco Day (WNTD) Award-2022.**

### ❖ Key Highlights:

- Stata Tobacco Control Cell of the Health Department will receive the award on the occasion of **World No Tobacco Day in New Delhi on May 31.**
- **National Tobacco Control Programme (NTCP)** was launched in Jharkhand in 2012 when the tobacco prevalence rate in the State was **51.1 per cent**, of which 48 per cent were smokeless users, according to the Global Adult Tobacco Survey (GATS)-1 report.
- The GATS-2 report, which was published in 2018, said tobacco users came down to **38.9 per cent in the State, of which 35.4 % were smokeless users.**

## West Nile Virus



### ❖ Context:

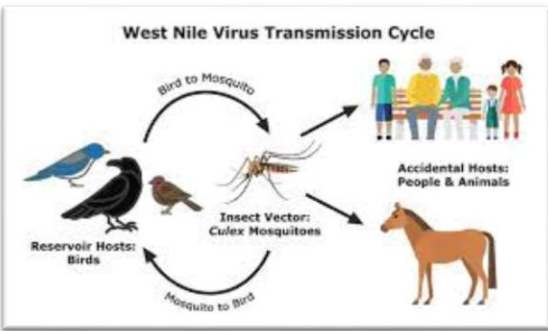
- The Kerala health department is on alert after the death of a 47-year-old from **Thrissur** due to the **West Nile Virus.**

### ❖ Key Highlights:

- The West Nile Virus is a mosquito-borne, **single-stranded RNA virus.**
- According to the WHO, it is "a member of the **flavivirus genus and belongs to the Japanese Encephalitis antigenic complex** of the family Flaviviridae".
- **Culex species** of mosquitoes act as the principal vectors for transmission.
- It is transmitted by infected mosquitoes between and among humans and animals, including birds, which are the reservoir host of the virus.
- WNV can also spread through **blood transfusion**, from an infected mother to her child, or through **exposure to the virus in laboratories.**
- It is not known to spread by contact with infected **humans or animals.**

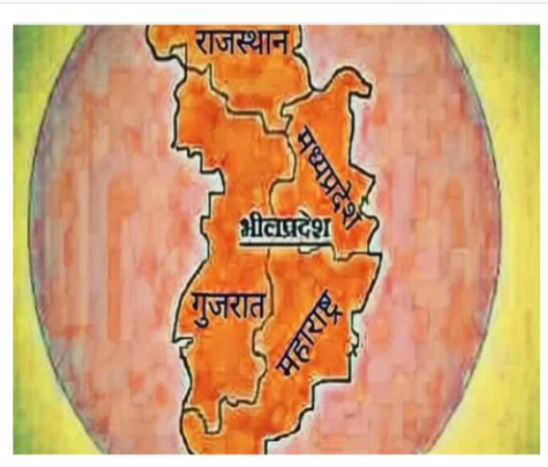
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- To date, **no human-to-human transmission** of WNV through casual contact has been documented, says the WHO.
- ❖ **Symptoms:**
  - The disease is asymptomatic in **80% of the infected people**.
  - In these 20% cases, the symptoms include fever, headache, fatigue, body aches, nausea, rash, and swollen glands.
  - Severe infection can lead to encephalitis, meningitis, paralysis, and even death.

## Bhil Pradesh



- ❖ **Context**
  - There is rising demand for a “**Bhil Pradesh**”, a separate state for tribal people in western India.
- ❖ **Key Highlights:**
  - The **Bharatiya Tribal Party (BTP)**, a political party based in Gujarat, envisions **Bhil Pradesh as a separate state** carved out of **39 districts** spread over four states: 16 in Gujarat, 10 in Rajasthan, 7 in Madhya Pradesh & 6 in Maharashtra.
  - Bhil social reformer** and spiritual leader **Govind Guru** first raised the demand for a separate state for tribals back in 1913 after the **Mangarh massacre**.
  - Concern:** After the division of states, tribals in the region got scattered and their voices suppressed, as a result, most schemes related to their development have not benefited them.
  - Bhils or Bheels** are an **Adivasi ethnic group** in West India.
  - Bhils are one of the **largest tribal group** in India.
  - They speak the **Bhil languages**.

## Bilateral Security And Defence Cooperation INDIA-JAPAN



- ❖ **Context**
  - India and Japan** agreed to further enhance **bilateral security and defence cooperation**, including in the area of **defence manufacturing**.
- ❖ **Key Highlights**
  - India highlighted the steps taken by it to improve **ease of doing business, logistics** through the ‘**Gati Shakti**’ initiative and urged Japan to support greater investments by Japanese companies in India.
  - Such investments would help in creating resilient **supply chains** and would be **mutually beneficial**.
  - India appreciated that Japanese companies are increasing their investments in India and that **24 Japanese companies** had successfully applied under the various **Production Linked Incentive schemes**.
  - Both Countries noted the progress in implementation of **Mumbai-Ahmedabad High Speed Rail project** and welcomed the signing of exchange of notes of the **3rd tranche of loan for this project**.
  - Also agreed to **deepen cooperation** in the area of **Clean Energy** including **green hydrogen**.
  - Concurred that the **India-Japan Act East Forum** was useful in prioritising development of India’s **North East Region**.
  - Agreed to encourage greater collaboration between **private sectors** of both sides in the development of **next generation communication technologies**.

## IAF Ranked Third In World Air Power Index-2022



- ❖ **Context**
  - The **World Air Power Index** ranks **India at the third position** after **US** and **Russia**. It has beaten the **Chinese Air force** and the **French Air force**.
- ❖ **Key Highlights:**
  - IAF** has achieved this position by beating all the countries of the world in terms of the **total combat capability of various air services**.
  - The ‘**TrueValue Rating**’ (TvR) helps **WDMMA** differentiate each power based on overall strength and factors such as **modernization, logistic support, and attack, and defence capabilities** from which **WDMMA** generates its report.

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