

Current affairs summary for prelims

## 23 January, 2024

### Pradhan Mantri Suryodaya Yojana

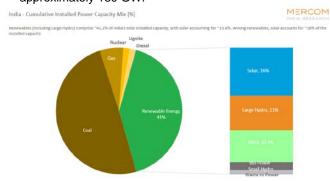
**Context:** On Monday, January 22, Prime Minister Narendra Modi unveiled the 'Pradhan Mantri Suryodaya Yojana,' a government initiative set to provide rooftop solar power systems to one crore households.

#### Pradhan Mantri Suryodaya Yojana Overview:

- The Pradhan Mantri Survodava Yoiana is a new initiative in India aimed at promoting rooftop solar power
- The objective is to install solar power systems on 1 crore (10 million) houses across the country.
- Prime Minister Modi announced the scheme during the auspicious occasion of the consecration of life in Ayodhya.
- The scheme intends to not only reduce electricity bills for the poor and middle class but also contribute to India's goal of achieving energy self-reliance.

#### **India's Current Solar Capacity:**

- As of August 2023, India's total solar power capacity has reached around 70.10 GW.
- The installed capacity for rooftop solar is approximately 10.4 GW as of November 2023.
- Solar power holds a significant share in India's overall renewable energy capacity, which stands at approximately 180 GW.



#### Importance of Expanding Solar Energy in India:

- India is expected to witness the largest energy demand growth globally over the next 30 years.
- To meet this demand and diversify the energy mix, India aims to achieve 500 GW of renewable energy capacity by 2030.
- Solar power capacity in the country has witnessed substantial growth, increasing from less than 10 MW in 2010 to 70.10 GW in 2023.

#### **Rooftop Solar Programme:**

- Launched in 2014, the Rooftop Solar Programme focuses on expanding rooftop solar capacity in the residential sector.
- The program provides Central Financial Assistance and incentives to distribution companies (DISCOMs).
- The goal of the program is to increase rooftop solar installed capacity to 40 GW by March 2026.
- Currently in its second phase, the program has contributed to the growth from 1.8 GW in March 2019 to 10.4 GW in November 2023.

#### Consumers can participate through DISCOM tendered projects or the National Portal (www.solarrooftop.gov.in).

- Consumers have the flexibility to choose vendors and equipment quality/efficiency.
- DISCOMs play a limited role, focusing on technical feasibility approval, net-meter installation, and system inspection.
- Subsidies are directly transferred to consumers' bank accounts after the installation and inspection of the solar power systems.
- Surplus solar power generated can be exported to the grid, and consumers receive monetary benefits based on prevailing regulations set by State Electricity Regulatory Commissions/Joint Electricity Regulatory Commission.

### BHISHM Cube

Context: The BHISHM Cube of Project Arogya Maitri, a cutting-edge mobile hospital deployed in Ayodhya, played a crucial role in saving the life of a 65-year-old individual through timely medical intervention.

#### **Project BHISHM:**

- "Project BHISHM" stands for Bharat Health Initiative for Sahyog, Hita, and Maitri.
- It is a comprehensive initiative designed to provide rapid and comprehensive care for up to 200 casualties during emergencies.

#### **Arogya Maitri Disaster Management Cube:**

- The Arogya Maitri Disaster Management Cube is a key component of Project BHISHM.
- It incorporates cutting-edge technology, including Artificial Intelligence (AI) and data analytics, for effective coordination and real-time monitoring.



#### **Rapid Deployment and Flexibility:**

- cube comprises 72 easily The transportable components, allowing swift deployment within 12 minutes.
- It can be transported by hand, cycle, or drone, providing unparalleled flexibility.
- This capability is crucial for bridging the time gap from primary care to definitive care during emergencies.

#### **Features of the Aid Cube:**

- Robust, waterproof, and lightweight design.
- Configurable for various emergency scenarios, from airdrops to ground transportation.









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#### Advanced medical equipment RFID-tagged for efficient repacking and redeployment.

 Integration of state-of-the-art BHISHM software for quick item location and monitoring.

#### World's First Portable Disaster Hospital:

- Developed in India, the portable disaster hospital, comprising "mini-cubes," is hailed as the world's first.
- Its readiness for global sharing is a significant milestone.

#### Lifesaving Capabilities:

- The portable hospital, part of Project BHISHMA, includes a fully equipped operation theatre, mini-ICUs, ventilators, blood-testing equipment, X-ray machine, and a cooking station for self-sufficiency.
- Capable of handling various injuries, including bullet, burn, head, spinal, and chest injuries, fractures, and major bleeding.

#### Modular Setup:

- Life-saving equipment is packed in "mini-cubes" carried in an "Aarogya Maitri Cube Cage."
- These cubes are used to set up a mobile hospital, offering flexibility in deployment based on space availability.
- Two 'Aarogya Maitri' mother cubes combine to form a complete kit, ensuring water- and corrosion-proof storage.

#### Global Humanitarian Efforts:

- Under Project BHISHMA, India aims to provide critical medical supplies to developing countries facing natural disasters or humanitarian emergencies.
- Deployments in Sri Lanka and Myanmar demonstrate India's commitment to global humanitarian efforts.
- Future Considerations: India is actively exploring deploying these mobile hospitals in remote tribal areas, showcasing the potential for broader applications in enhancing healthcare accessibility in challenging terrains.

## Pediatric and Adolescent Cancer in India

**Context:** Leukemias dominated cancer cases in the 0-19 age group, as per a January 2024 study in the India Pediatric journal.

#### Cancer Cases in India (2012-2019):

- Between 2012 and 2019, India reported 1,332,207 cancer cases based on data from 96 hospital cancer registries.
- 3.2% and 4.6% of these cases were in the age groups 0-14 years and 0-19 years, respectively.

#### **INDIA AMONG WORST HIT**

➤ In India, cancer is the **9th most common cause** for deaths among children between 5 & 14 years of age

Over 82% of children with cancer globally live in poorest countries
 Survival rate in low and middle income countries (LMIC) is around 35-40%, against 80% in high income countries

 Over 90% of children at risk of having cancer live in LMIC

➤ Globally, in **2017**, about **11.5 million** years of healthy life was lost due to childhood cancer

Cancer in children around 5% of total cancer burden in India Globally, 700

children are diagnosed

with cance

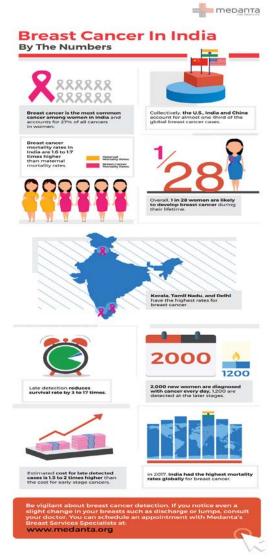
every day

### National Cancer Registry Programme (NCRP):

- The data is derived from the National Cancer Registry Programme (NCRP), established by the Indian Council of Medical Research in 1981.
- NCRP collects data through a network of 38 populationbased cancer registries and 246 hospital-based cancer registries.

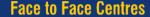
#### Largest Dataset on Childhood Cancers:

- The study, based on the largest dataset on childhood cancers in India, involves the analysis of 60,720 pediatric cancer cases.
- Paediatric oncologists from various cancer facilities across the country contributed to data collation and analysis.

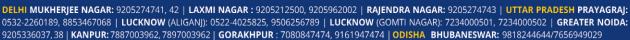


#### Prevalence of Leukemias:

- Leukemias were the most prevalent type of cancer in the 0-19 age group, constituting nearly half of all cancers in the 0-4 and 5-9 year age groups.
- Lymphoid leukemia, including acute lymphoblastic leukemia, was the most common type among children.









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Leading Cancers in 0-19 Age Group: Among the 0-19 age group, the four leading cancers were leukemia (36%), lymphoma (12%), bone (11%), and central nervous system tumors (10%).

#### **Gender Disparities:**

- More males were diagnosed with lymphomas (15% vs. 8%), while more females were diagnosed with carcinomas (5% vs. 7%) and germ cells (2% vs. 4%).
- The higher proportion of male children diagnosed with cancer in India is attributed to gender preferences and societal factors.

#### **Global Disparities and CNS Tumors:**

- Disparities in the distribution of CNS tumors were observed internationally, possibly due to differences in hospital referral practices and registry criteria.
- Non-Hodakin lymphomas increased particularly in males, influenced by hormonal and biological changes.

#### Clinical Trials and Research Initiatives:

- The Indian Pediatric Oncology Group (InPOG) was established in 2015 to develop multicenter childhood cancer clinical trials.
- In 2021, InPOG evolved into the Indian Pediatric Hematology Oncology Group (INPHOG) Research Foundation, aiming to increase access to multicenter clinical research.

#### **Challenges in Pediatric Cancer Research:**

- Low- and middle-income countries (LMICs) report 90% of the global pediatric cancer burden but receive less than 0.1% funding for research.
- In India, the concept of multi-center trials in childhood cancer is relatively new, with efforts to increase participation and access to research studies.

## **News in Between the Lines**

### **Parakram Diwas**



Today, the Prime Minister of India will participate in Parakram Diwas celebrations at Red Fort which will commemorate the legacy of Netaji Subhas Chandra Bose and the Azad Hind Fauj.

#### **About Parakram Diwas:**

- Parakram Diwas, also known as Bravery Day, is a national day in India celebrated on January 23rd.
- It marks the birth anniversary of Netaji Subhash Chandra Bose, a freedom fighter.
- The Indian government introduced the day in 2021, just before Bose's 125th birthday.
- The day is a celebration of Bose's legacy and his unwavering commitment to freedom.
- The theme for Parakram Diwas 2024 is "Netaji: The Inspiration for a New India".
- The theme of Parakram Diwas 2023 was Netaji Subhash Chandra Bose and his contribution to the freedom struggle.
- During the programme, Prime Minister will also launch Bharat Parv, which will be held from 23rd to 31st January.

#### **Synopsys**

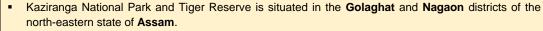


Union Minister of State for Electronics and IT, Skill Development and Entrepreneurship, and Jal Shakti, will inaugurate Synopsys' Chip Design Centre at DLF Tech Park in Noida today.

- Established in 1986, Synopsys widely commercialized logic synthesis, revolutionizing the creation of digital designs from language descriptions.
- It is the second-largest design center in India, with 27% of its global workforce, emphasizes confidence in Indian design talent.
- It plays a pivotal global role, with its Electronic Design Automation (EDA) and IP solutions integral to the success of major semiconductor company
- It contributes \$5.9 billion in revenue and holds a leading position in EDA tools and IPs.
- Aligned with PM Modi's vision, Synopsys actively supports "Design in India" through initiatives like SemiconIndia futureDESIGN and Digital India Risk-V (DIR-V) Program.

Recently, a female rhino was poached in Kaziranga National Park and Tiger Reserve.

#### **About Kaziranga National Park and Tiger Reserve:**



- It was formed in 1908 on the recommendation of Mary Curzon and gained UNESCO World Heritage Site status in 1985.
- It was declared a National Park in 1974.
- It was declared as Tiger Reserve in 2006.
- Flora: Kaziranga showcases four distinct types of vegetation due to variations in altitude, housing trees like Kumbhi, Indian gooseberry, cotton tree and elephant apple.
- Fauna: Besides the Indian rhinoceros, the park shelters tigers, leopards, elephants, gibbons, sloth bears and a multitude of migratory bird species.
- River: The Diphlu River also runs through the Kaziranga National Park in Assam.

## Kaziranga National Park and Tiger Reserve











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### **Phytocannabinoids**



Recently, the scientists at CSIR-Indian Institute of Integrative Medicine (IIIM), Jammu, have discovered that phytocannabinoids in the cannabis plant exhibit unexplored antibiotic properties.

#### **About Phytocannabinoids:**

- Phytocannabinoids are multi-ring phenolic compounds that are structurally related to Tetrahydrocannabi (THC).
- They can be found in other plants such as rhododendron, licorice and liverwort.
- They have the same mechanism of action as other cannabinoids, such as Delta-9tetrahydrocannabinol (Δ9-THC).
- However, they have a lower affinity for CB1 receptors, meaning that much higher doses are required to experience effects.
- Phytocannabinoids: Unraveling the Complex Chemistry and Pharmacology of Cannabis Sativa is a
  book that presents the current state of the art on phytocannabinoid chemistry and pharmacology.
- It was first published on January 24, 2017, and its editors include A. Douglas Kinghorn and Simon Gibbons.

Recently, a research revealed that more than 160 elephants and countless other wildlife species died in Zimbabwe in the last two months of 2023 due to a climate change-induced drought that has hit the southern African region.

TANZANIA

INDIAN OCEAN

MALAWI

ZAMBIA

HARARE

ZIMBABWE

MADAGASCAR

BOTSWANA

ATLANTIC

OCEAN

SOUTH

AFRICA

LESOTHO

**Place in News** 

**Zimbabwe** 

#### Zimbabwe (Capital: Harare)

Location: Zimbabwe, a landlocked country is located in southern Africa.

Boundaries: Zimbabwe shares its border with Mozambique (East), Botswana (West and southwest), Zambia (North) and South Africa (South).

#### **Physical Features:**

- Victoria Falls, one of the world's largest waterfalls on the Zambezi River, located on the border between Zambia and Zimbabwe.
- Zimbabwe has experienced two major post-Gondwana erosion cycles (known as African and post-African).
- Subtropical type of climate is found in Zimbabwe.

## **POINTS TO PONDER**

- With which Union Ministry is the Serious Fraud Investigation Office (SFIO) associated, making recent headlines? Ministry of Corporate
   Affairs
- Who authored the Tamil novel "Naanthaan Aurangzeb (Conversations with Aurangzeb)"? Charu Nivedita
- Which country has recently signed an agreement with the United States for the purchase of Tomahawk missiles? Japan
- Recently, which state initiated the 'My School-My Pride' campaign aimed at transforming education? Himachal Pradesh
- In which state is the Sultanpur Bird Sanctuary, recently in the news, located? Haryana

#### **Face to Face Centres**

