DAILY CURRENT AFFAIRS 04-11-2024

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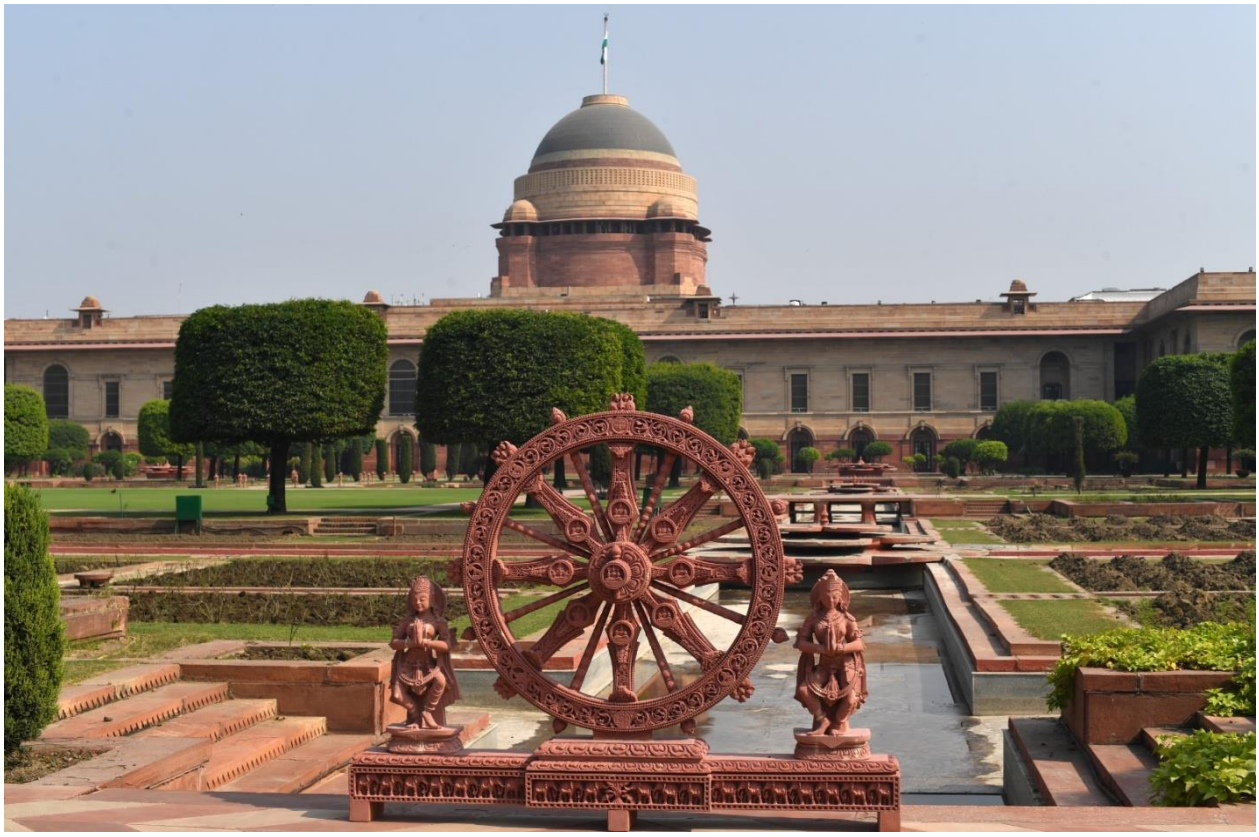
Konark Wheels

Syllabus: GS-1; Art & Culture

Context

- Four replicas of the Konark wheels, made of sandstone, have been installed at **Rashtrapati Bhavan Cultural Centre and Amrit Udyan.**
- Installation of Konark wheels aims to showcase and promote rich heritage of the country among visitors.
- This initiative is part of the several steps being taken to introduce traditional cultural and historical elements in Rashtrapati Bhavan.



About

- The Konark Wheels are an iconic architectural feature of the **Konark Sun Temple in Odisha, India, a UNESCO World Heritage site.**
- The temple, built in the 13th century by **King Narasimhadeva I of the Eastern Ganga dynasty,** is dedicated to the Sun God, Surya, and designed in the shape of a colossal chariot.

Historical Background

- **Construction and Patronage**:
  - The temple was commissioned by **King Narasimhadeva I** around 1244 CE to celebrate military victories and establish his power and devotion to Surya.
  - The Konark Sun Temple was strategically positioned near the coastline to serve as a navigational landmark for sailors and travelers due to its grandeur and architectural brilliance.
- **Cultural and Religious Context**:
  - The temple reflects the influence of Hinduism and Tantric practices prevalent in Odisha during that era.
  - Its layout and carvings embody the Sun God's journey across the sky on a celestial chariot drawn by seven horses, representing the seven days of the week.
  - Each of the temple's 24 wheels represents the hours of the day, divided into 8 spokes that symbolize the prahars, or traditional time divisions, of a day.
- **Architectural Evolution and Decline**:
  - Built in **the Kalinga architectural style,** the temple's grandeur was initially unmatched, with a shikhara (spire) that rose over 200 feet.
  - However, due to its proximity to the sea and structural challenges, the temple began to degrade over time.
  - The main sanctum's collapse in the 17th century led to parts of the temple being lost.
  - However, the base structure and the intricately carved wheels and chariot motifs remain intact and have become significant historical symbols.

Key Features of the Konark Wheels

- **Symbolism**: The wheels represent the 24 hours of a day, with each wheel featuring 8 spokes symbolizing the 8 prahars (periods) of a day.
- **Design and Intricacy**: Each wheel is intricately carved with scenes depicting daily life, animals, and mythological stories, showcasing advanced artistic and engineering skills.
- **Functionality as Sundials**: The wheels also serve as sundials. The time of day can be calculated based on the shadow cast by the spokes, demonstrating advanced astronomical knowledge.
- **Cultural Significance**: The Konark Wheels symbolize the passage of time and are associated with the Sun God's eternal journey across the heavens.
- **Architectural Genius**: The entire temple, including the wheels, is made from Khondalite rock, with detailed carvings representing Kalinga architecture.

These wheels are not only a marvel of medieval engineering but also a testament to the fusion of religion, art, and science in ancient India, reflecting the high cultural and intellectual achievements of that period.

What is DANA, the weather pattern which caused flash floods in Spain?

Syllabus: GS-1; Geography

Context

- Millions have been affected in southern and eastern Spain due to torrential rain.

Definition and Mechanism

- **DANA, or Depresión Aislada en Niveles Altos (Isolated Depression at High Levels),** commonly referred to as a cold drop, occurs when a pocket of cold air descends over the warm waters of the Mediterranean Sea.
- This interaction results in atmospheric instability, causing the warm, moist air above the sea surface to rise rapidly.
- The result is the formation of dense, towering cumulonimbus clouds within a short time, which can lead to heavy rainfall, particularly affecting parts of Spain.

Role of the Polar Jet Stream

- The phenomenon is closely linked to the **polar jet stream**, a high-altitude wind current that separates cold polar air from warm tropical air.
- Occasionally, a pocket of cold air detaches from the polar jet stream and moves southward, colliding with the **warmer Mediterranean air**, which triggers DANA conditions.

Recent Trends

- DANA events are typically seen in Spain during autumn and spring.
- However, recent trends indicate that these occurrences have become more frequent and intense.

- The geographical impact of these weather patterns has also expanded, with heavy rainfall affecting areas not traditionally associated with such events, including cities like Madrid.

Contributing Factors

- **Global Temperature Rise:** As global temperatures increase, warmer air can hold more moisture, leading to more intense rainfall during DANA events.
- **Mediterranean Sea Temperature:** The rise in sea surface temperatures—recorded at unprecedented highs—exacerbates the effects of cold drops, enhancing the thermal contrast that fuels these weather patterns.

Ayushman Vaya Vandana health cards

Syllabus: GS-2; Government polices & Interventions, Health

Context

- PM Narendra Modi announced the launch of the much-awaited Ayushman Bharat health insurance for all senior citizens aged 70 or above, regardless of economic status.
- These senior citizens will be eligible for free medical treatment up to Rs 5 lakh under this scheme.

About

- Ayushman Vaya Vandana Yojana is a government initiative aimed at providing financial support to senior citizens in India through health insurance.
- Launched in 2020, this scheme is part of the broader efforts to enhance the healthcare security of the elderly population, who are often more vulnerable to health risks.

Key Features

- **Target Beneficiaries:**
  - Primarily designed for senior citizens aged 60 years and above.
- **Health Coverage:**

- The scheme provides coverage for various health-related expenses, including hospitalization, surgeries, and certain pre- and post-hospitalization costs.
- Benefits include cashless treatment at empaneled hospitals under the scheme.

- **Health Cards:**
  - Beneficiaries are issued Ayushman Vaya Vandana health cards, which serve as proof of insurance and facilitate access to healthcare services.
  - These cards simplify the claim process and ensure that beneficiaries receive timely treatment without financial burden.
- **Financial Protection:**
  - The scheme covers up to ₹5 lakh per annum for secondary and tertiary hospitalization. This significantly reduces out-of-pocket expenses for elderly individuals and their families.
- **Premium and Enrollment:**
  - The premium for the scheme is relatively affordable, making it accessible for a larger number of senior citizens.
  - Enrollment can be done through various channels, including online applications and local insurance offices.
- **Integration with Other Schemes:**
  - The Ayushman Vaya Vandana Yojana complements other government health initiatives, such as Ayushman Bharat, thereby creating a more comprehensive health safety net for the elderly.
- **Awareness and Outreach:**
  - The government has undertaken various initiatives to raise awareness about the scheme, ensuring that eligible beneficiaries are informed about the benefits and how to enroll.

Significance

- **Healthcare Accessibility:** The scheme enhances the accessibility of quality healthcare services for senior citizens, reducing the financial strain on families.
- **Elderly Welfare:** It reflects the government's commitment to the welfare of the elderly population, promoting healthy aging.
- **Economic Impact:** By alleviating healthcare costs, the scheme allows senior citizens to use their pensions and savings for other essential needs, contributing positively to their quality of life.

Census in India

Syllabus: GS-2; Governance

Context

- The government is set to conduct the much-delayed Census next year, and to complete the process by 2026, with suggestions being taken on whether caste enumeration would be part of the exercise, as per sources.

Definition and Purpose:

- The Census is a systematic process of collecting, analyzing, and disseminating demographic, social, and economic data of the population.
- Its primary purpose is to gather reliable data that aids in planning and implementing government policies and programs, ensuring adequate resource allocation.

Historical Background:

- The first Census in India was conducted in **1871** during British rule.
- Subsequent censuses were conducted every ten years, making the Census exercise a significant historical and administrative event.

Legal Framework:

- The Census is governed by the **Census Act, 1948**, which provides the legal framework for conducting the Census.
- The act mandates the collection of demographic information and ensures confidentiality of the data collected.

Conducting Authority:

- The **Office of the Registrar General and Census Commissioner of India**, under the Ministry of Home Affairs, is responsible for the conduct of the Census.
- The census exercise involves multiple phases, including preparation, data collection, processing, and analysis.

Key Features:

- **Decennial Exercise**: The Census is conducted every ten years; the last Census was conducted in **2021**.

- **Comprehensive Data Collection**: The Census collects data on population size, gender, age, literacy, employment, migration, and housing conditions.
- **Enumeration Process**: Enumerators are trained personnel who visit households to collect data through structured questionnaires.

Recent Developments:

- The **2021 Census** was postponed due to the COVID-19 pandemic, and it is crucial to keep updated on the rescheduled dates and processes.
- The Census is increasingly incorporating technology, such as mobile apps for data collection and online responses.

Importance of Census Data:

- **Policy Formulation**: Helps in formulating socio-economic policies and programs targeted at different demographic segments.
- **Resource Allocation**: Aids in equitable distribution of resources and representation in legislative bodies.
- **Social Planning**: Essential for planning health, education, and infrastructure services.
- **Research and Analysis**: Provides data for researchers, NGOs, and academia to analyze demographic trends and issues.

Challenges:

- **Logistical Issues**: Conducting the Census in diverse terrains and regions can be challenging.
- **Data Accuracy**: Ensuring accurate data collection amidst reluctance or mistrust from the population.
- **Technological Barriers**: Ensuring the effective use of technology in remote and underdeveloped areas.

Related Constitutional Provisions:

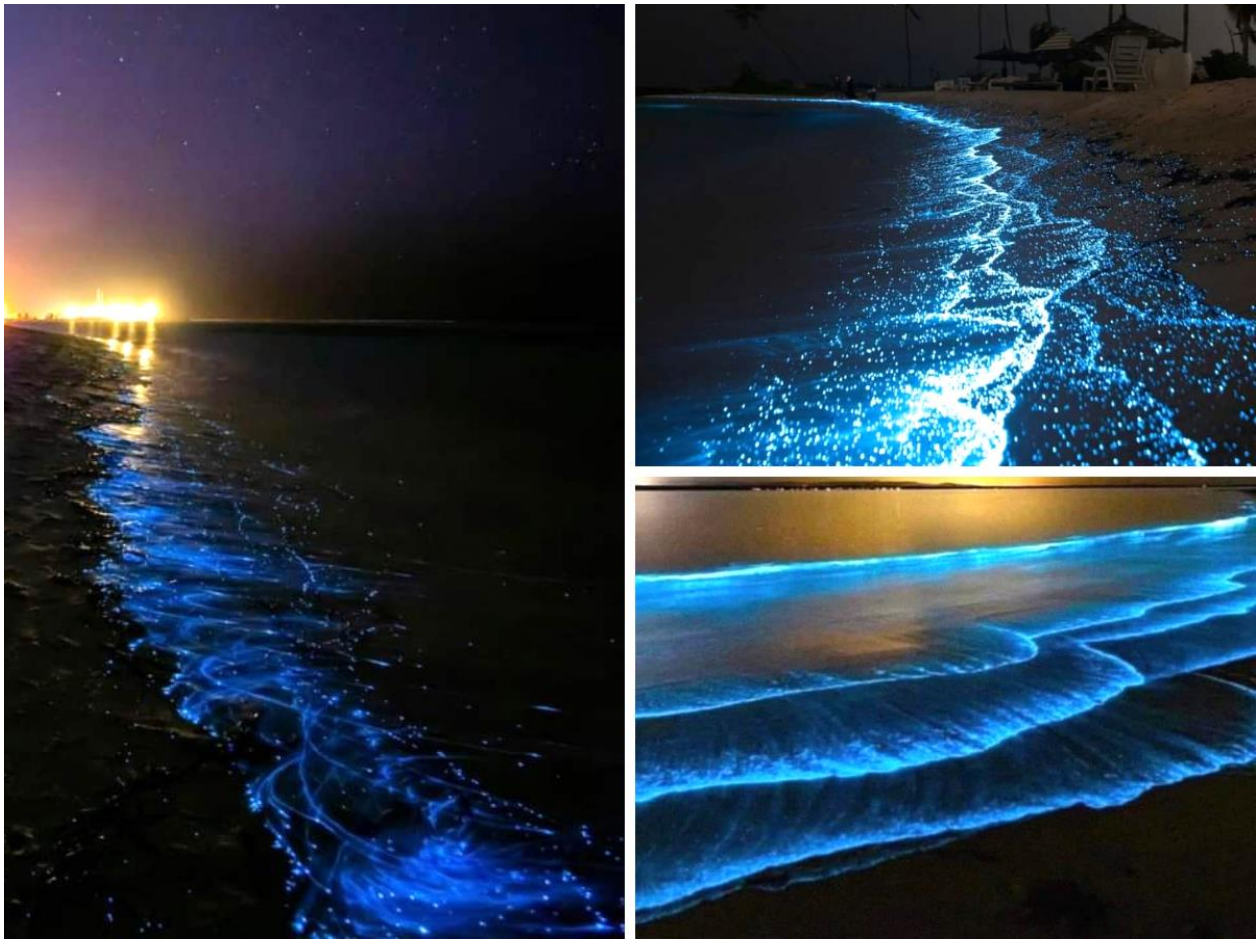
- Article 246 of the Indian Constitution mentions the Census as a matter under the **Concurrent List**, allowing both the Centre and States to legislate on the matter.

Bioluminescent Waves

Syllabus: GS-3; Science & Tech

Context

- Chennai's coastline recently dazzled locals with a rare natural phenomenon as bioluminescent waves lit up the night sky along the East Coast Road (ECR) beach.



About

- Bioluminescent waves are a natural phenomenon where **ocean waves emit a glowing, ethereal light, usually blue or green.**
- This mesmerizing effect is caused by bioluminescent organisms—typically tiny marine creatures like phytoplankton, especially a type called **dinoflagellates.**
- These organisms emit light as a defensive response to disturbances, like the motion of waves or passing boats, creating a sparkling effect along the shoreline or in the surf.

Key Facts about Bioluminescent Waves

- **Mechanism**: Bioluminescence is a chemical reaction within these organisms. A compound called luciferin reacts with oxygen, catalyzed by the enzyme luciferase, producing light without heat.
- **Dinoflagellates**: The most common bioluminescent organisms in the ocean are dinoflagellates. Species like *Noctiluca scintillans* and *Pyrocystis fusiformis* are well-known for producing bioluminescence. They typically thrive in nutrient-rich, warm waters, so bioluminescent waves are often seen in tropical and subtropical regions.
- **Triggered by Motion**: Bioluminescent waves light up when the water is agitated—by the movement of waves, swimming fish, or even a hand moving through the water. This light is thought to help dinoflagellates by startling or distracting predators.
- **Best Seen in Dark**: The effect is best observed at night, in areas with little to no artificial light. This is why many sightings of bioluminescent waves are recorded on remote beaches or during dark nights.

Environmental Factors

The intensity and frequency of bioluminescent waves depend on several factors:

- **Water Temperature**: Warmer water encourages the growth of bioluminescent organisms.
- **Nutrient Levels**: Nutrient-rich waters from upwelling or river runoffs can lead to dense populations of dinoflagellates.
- **Lunar Cycle**: New moon phases create darker skies, making bioluminescence more visible.