Yingkiong Dam

❖ Context

➢ Jal Shakti Minister said that India plans to construct the **country's second-largest dam** at Yingkiong in **Arunachal Pradesh** to counter China's ambitious water diversion scheme of the Brahmaputra river.

❖ Key Highlights

- The proposed dam in the upper reaches of Arunachal will be able to store around **10 billion cu. m (BCM) of water**.
- By storage, the **Indira Sagar dam (Narmada river, Khandwa, MP) is the largest in India at 12.2 BCM**.
- The proposed dam is expected to involve an **investment of around ₹50,000 crore** and is part of the proposed **Upper Siang multi-purpose storage project** that will also generate hydropower.

❖ Significance of the Project

- **China's 14th five-year plan** has proposed building a massive dam over the Brahmaputra river on the **Great Bend**, right above Indian territory, where the Brahmaputra takes a U-turn.
- **Water in the lean season** in the Brahmaputra comes from **melting snow** in the mountains on the Tibetan plateau.
- India's plan involves releasing water from the dam to **maintain water security** in case China builds structures to divert water.
- Also, in the case of China releasing water from its upper reaches, such a dam will also help in **storing water to prevent floods**.
- Of the eight river basins in Arunachal Pradesh, **Subansiri, Lohit, and Siang - three tributaries of Brahmaputra river - are of strategic importance** as they originate in China.
- Precipitation in China contributes only 7% to the flow of these three tributaries of the Brahmaputra.
- If **China constructs a dam and divert water in the non-monsoon seasons**, then it will have an impact from Arunachal Pradesh to Bangladesh.

❖ Background

- Of the **2,880km length** of the river Brahmaputra, **1,625km is in Tibet**, **918km in India**, and 337km in Bangladesh.
- Of the **total catchment area of 580,000 sq**. km, **50% lies in Tibet**, **34% in India**, and the balance in Bangladesh and Bhutan.
- Brahmaputra river has a huge quantum of **500 BCM (billion cubic metres**) of **water** flowing into it.
- Of this, more than **75% comes from India's catchment area**. That's why India is not affected by Chinese dams a lot.
- The **total hydropower generation** potential of India's **North-Eastern states**, and Bhutan, is about **58 gigawatt (GW)**. Of this, **Arunachal alone accounts for 50.328GW, the highest in India**.

Inauguration of Amenities at Kanheri Caves

❖ Context

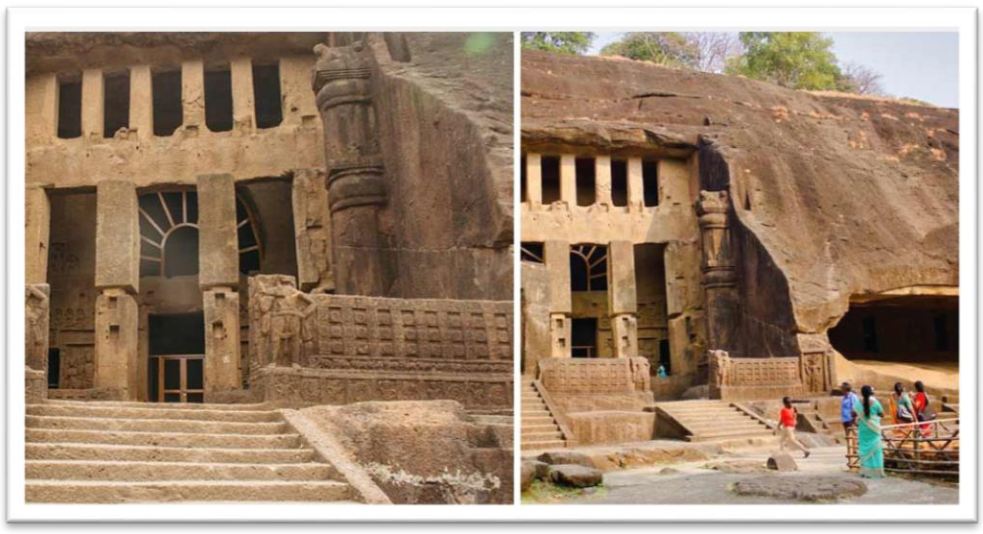
➢ Union Minister of Tourism, Culture and DoNER **inaugurated amenities at ancient Kanheri Caves** on the occasion of **Buddha Purnima.**

❖ About Kanheri Caves:

- The Kanheri caves comprise more than **110 different rock-cut monolithic excavations** and are one of the largest single excavations in the country.
- These excavations were primarily undertaken during the **Hinayana phase of Buddhism**.It also has several examples of the **Mahayana stylistic architecture** as well as few printings of the **Vajrayana order.**
- The name Kanheri is derived from **'Kanhagiri'** in Prakrit and occurs in the Nasik inscription of **the Satavahana ruler Vasisthiputra Pulumavi.**
- Kanheri flourished under the patronage of **Satavahana, Traikutakas, Vakatakas and Silaharas** and through donations made by the wealthy merchants of the region.

❖ Significance:

- Kanheri caves are part of our **ancient heritage** as they provide evidence of **evolution and our past.**
- Kanheri was mentioned in the travelogues of **foreign travellers**. The earliest reference of Kanheri is ascribed to **Fa-Hein who visited India during 399-411 CE** and later by several other travellers.
- It is the **only centre where a continuous progression of Buddhist faith and architecture is observed** as an unbroken legacy right from 2nd century CE (cave no. 2 stupa) to 9th century CE are observed here.



Srilanka's 21st Constitutional Amendment

❖ Context

➢ Srilanka's new PM has proposed to move the amendment with the cabinet's approval.

❖ Key Highlights

- It is expected to **annul the 20th Amendmen**t, which gave unfettered powers to the Srilanka's President after abolishing the 19th Amendment.
- It is likely to **reduce the Presidency to a ceremonial position**.
- While the powers of the President on all three armed forces may be retained but almost all other key powers pertaining to governance, and cabinet ministers may be transferred to the Prime Minister.
- Additionally, the **President would be required to act on the Prime Minister's advice** to determine the scope and functions of ministries and appoint ministers, deputy ministers and state ministers.
- The amendment will look to resolve the governance crisis in the country, where resentment against the President rises.

❖ 19th Amendment

- It had **removed the powers of the President to remove the Prime Minister at his discretion**.
- It **restricted the President's powers to dismiss cabinet ministers** as he was required to act on the advice of the Prime Minister.
- It ensured that the cabinet ministers could have been dismissed only if:
  - The Prime Minister ceased to hold office by death, resignation or otherwise, or
  - If the Parliament rejects a statement of government policy or the budget or
  - If the Parliament passes a vote of no confidence against the Government.
- The **19th amendment was overturned by the 20th amendment in 2019** and the executive powers of the President were increased.
- The **20th amendment also empowered the President to make key appointments to independent institutions** which led to the appointment of family members of the current ruling President of Srilanka.

Virus Like Particle (VLP) Vaccine

❖ Context

➢ The US National Institutes of Health has said that researchers have designed a virus-like particle (VLP) vaccine candidate for **eastern equine encephalitis virus (EEEV), western equine encephalitis virus (WEEV), and Venezuelan equine encephalitis virus (VEEV)**.

❖ Key Highlights

- VLPs **do not contain the genetic material** that the **viruses need to replicate inside cells**, so VLPs **cannot cause infection**.
- But as they are very **similar to real viral molecules**, introducing a VLP into the body will **trigger an immune response**.
- Once the body has an immune response to the VLP, it will recognize the virus and prevent infection in the future, giving people immunity to that particular virus.

❖ Characteristics

- A VLP consists of **one or more structural proteins** that can be arranged in multiple layers.
- They can also **contain an outer lipid envelope**, which is the outermost layer that covers a large number of different viruses. This outer layer protects the genetic material inside the virus particle.
- In some viruses, envelopes can contain material from the person that has been infected with the virus, which helps them to go undetected by the immune system.
- They are also **very small, with a particle radius of approximately 20 to 200 nm**. This means that they can **easily enter the lymph nodes**, where the immune system is activated in the case of an infection.

❖ About EEEV, WEEV & VEEV

- EEEV, WEEV and VEEV are **spread to humans through the bites of infected mosquitoes.**
- Horses are also susceptible to infection, but **horses cannot transmit the viruses directly to humans.**
- Infections in humans are **rare** but can lead to **flu-like symptoms** and, in some cases, severe **neurological damage or death.**

News in Between the Lines

Burning Cost	❖ **Context** ➢ **Insurance Regulatory and Development Authority of India (IRDAI)** has notified that 'Burning cost' **can't be quoted by general insurers as a 'mandated minimum rate'** to charge premiums to customers.

❖ **Key Highlights**

- Burning cost is defined as a **kind of break-even cost** where the higher claims in the portfolio will automatically lead to higher premiums to be collected in subsequent years.
- IRDAI had earlier asked insurers to stick to it to bring in **underwriting discipline and checking rampant under pricing** leading to underwriting losses in the Indian general insurance industry.
- The move will allow general insurers to **extend appropriate discounts to customers.**
- According to experts, burning cost was itself a fallacy as it ignores all kinds of exposures for the insurers and always the price needs to be greater than burning cost for long-term viability.

India International Centre for Buddhist Culture and Heritage

❖ **Context**

- Indian Prime Minister, along with Nepalese Prime Minister, performed the shilanyaas ceremony for construction of the India **International Centre for Buddhist Culture and Heritage in the Lumbini Monastic Zone, Lumbini, Nepa**l.

❖ **Key Highlights**

- The Centre will be constructed by the **International Buddhist Confederation (IBC)**, New Delhi, on a plot allocated to IBC by the Lumbini Development Trust (LDT), under an agreement between IBC and LDT signed in March 2022.
- Once completed, the Centre will be a world-class facility welcoming pilgrims and tourists from all over the world to enjoy the essence of spiritual aspects of Buddhism.

❖ **Mayadevi Temple**

- Before laying the foundation, the two PM's also visited the Mayadevi temple in Lumbini.
- There is a **marker stone** inside the temple premises, which **pinpoints the exact birth spot of Lord Buddha.**
- An **Ashoka Pillar**, erected in **249 BC** and **located adjacent to the temple**, bears the **first epigraphic evidence of Lumbini** being the **birthplace of Lord Buddha**.

India's First-ever Amrit Sarovar: Rampur(UP)

❖ **Context:**

- Recently Union Minister for Minority Affairs inaugurated India's first 'Amrit Sarovar' in Patwai, Rampur, Uttar Pradesh.

➢ **Key Highlights:**

- 75 ponds will be constructed in **every district** of the state and it is one of the ponds that the state government **plans to develop as Amrit Sarovar**.
- **The cost** to build this Amrit Sarovar was aprox**.RS 60 Lakhs**, according to Uttar Pradesh Jal Shakti Minister.
- "Amrit Sarovar" will not only help in protecting the environment and conserving water, it will also be an attraction for the people of nearby areas. In this "Amrit Sarovar" boating and various other entertainment facilities are available.

Biomaterial From Fungal Extract Helps Heal Wounds

❖ **Context:**

- Scientists have developed a new biomaterial that can be used to **disinfect wounds and hastens the process of healing.**

❖ **What is Pullulan Polymer?**

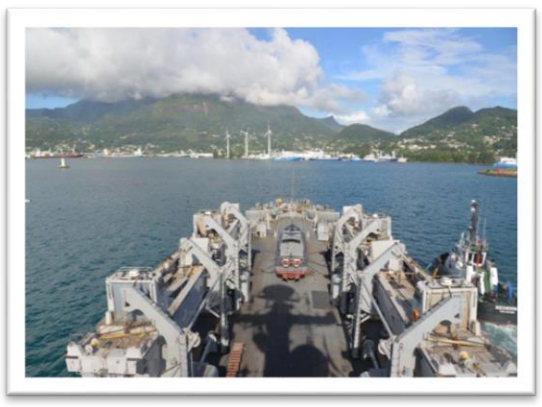
- The biomaterial is derived from the **polymer pullulan** which is secreted by the fungus **Aureobasidium pullulans**.
- It is an **exopolysaccharide,** that is, this polymer is secreted by the fungus itself into the **medium on which it is growing**.
- Pullulan as a biomaterial is already successful and widely used **commercially.**
- It is exploited in food, cosmetics and pharmaceutical industry because of **its non-toxic, non-mutagenic and non-immunogenic** properties. Further, its ease of manufacture has also added to its appeal.

- In the biomedicine sector, it has been used for **drug and gene delivery,** Its use as an antimicrobial biomaterial had not been explored, and that was **what got the group working on this aspect.**

❖ **Key Findings:**

- The group tested the efficacy of the material by **applying it directly** on to a full-**thickness wound on mice.**
- They found that the wounds got **disinfected and also the healing was faster.**
- The material could cause a **100% closure of wounds within 12 days, while in the absence of application of the material, closure was only 60%.**
- According to the researchers, within seven days, a thick **neo-epithelial** layer was formed well connected to wound edges along with hair follicles.
- A completely healed skin with more hair follicles under **the epithelial layer** and densely packed collagen was observed **by day 12.**

Deployment of INS Gharial to Seychelles: Mission Sagar IX



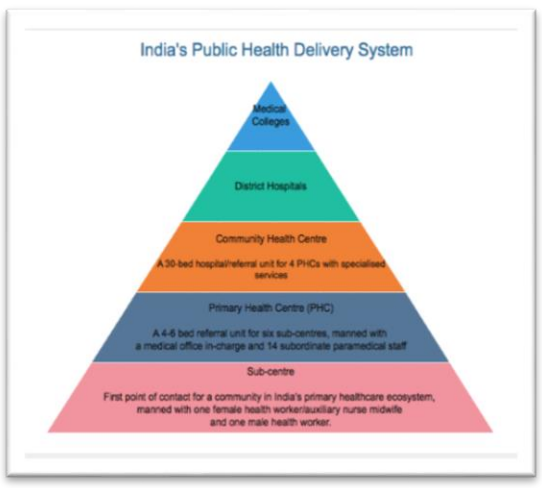
❖ **Context:**

- Following up on the proposal received from the **Govt of Seychelles earlier,** three **ceremonial Saluting Guns**, with ammunition, were delivered by the Ship to the Seychelles Defence Forces (SDF).

❖ **Mission Sagar:**

- Launched on **10 May 2020,** Mission Sagar was India's initiative to deliver Covid-19 related assistance to the countries in the Indian Ocean region.
- As part of this Mission, **INS Kesari successively** visited Maldives, Mauritius, Madagascar, Comoros and Seychelles **to deliver assistance to our maritime neighbours in dealing with the Covid crisis.**
- India's humanitarian assistance included supplies of essential food items, medicines, Ayurvedic medicines and deployment of Medical Assistance Teams (MAT) to Mauritius and Comoros.
- Mission SAGAR is a major milestone in India's engagement with the countries in the Indian Ocean Region, in line with Prime Minister's vision of **'SAGAR-**Security and Growth for All in the Region'.
- **INS Gharial** : It is a **Magar-class amphibious** warfare vessel of the Indian Navy.

Public Health Cadre for Medical Professionals



❖ **Context:**

- India to set up a public health cadre for medical professionals.The plan was approved by **Health Minister at the recent Chintan Shivir held in Gujarat.**

❖ **Key Highlights:**

- India will set up a central public health cadre for medical professionals along the lines of Central services officers recruited through the **Union Public Service Commission**.
- As part of the plan, all health professionals, including those **working for the directorate general of health services (DGHS),** will be recruited through **the permanent cadre** and help **the government implement healthcare policies**.
- The mechanism will decide who will be qualified to come **into public health.**
- It might be doctors, it might be from the **nurse's cadre,** or it might be from a non-medical group.
- The cadre should be the implementing arm of the public health policies. Hence, the framework is being constituted **within the health ministry.**

❖ **Significance:**

- It is very important for India because we are **dealing with a dense population** where we need public health cadre.
- The public health cadre will help the government in implementing **healthcare policies.**
- Covid has convinced policymakers that there is a need **for a public health cadre.**
- We do have public health doctors in the government of India and medical colleges. But it is very important to have them **at the field, state, district and sub-district levels.**

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