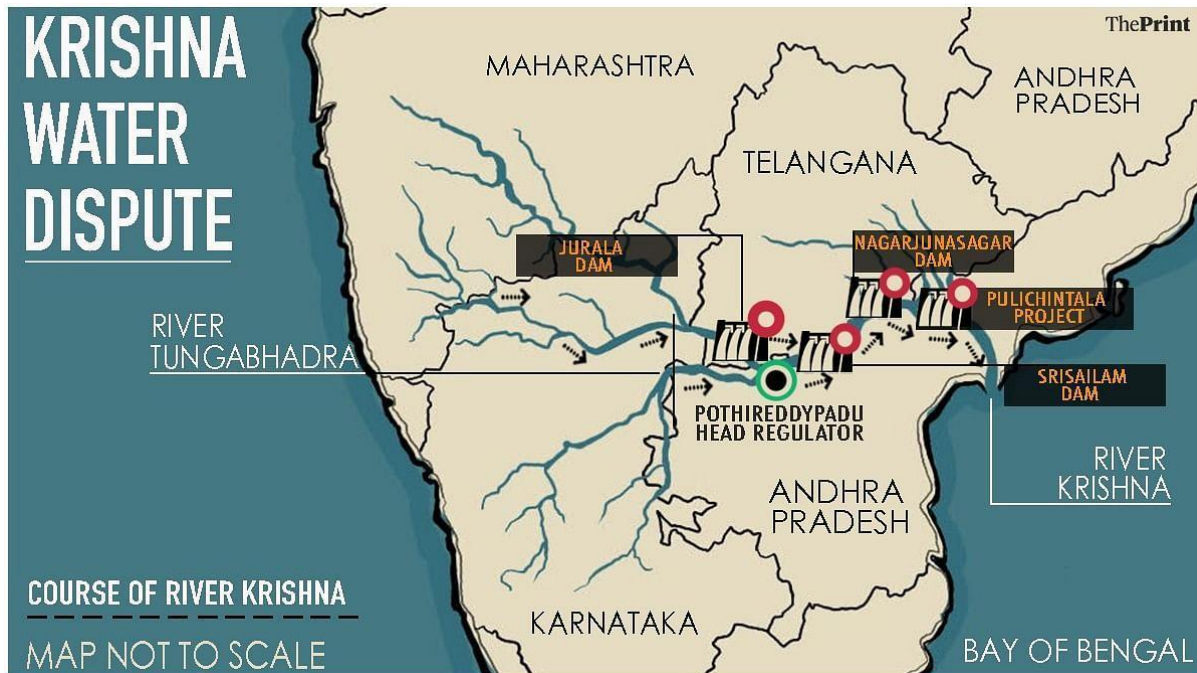


UPSC CURRENT AFFAIRS NOTES 05-10-2023

Cabinet approves Terms of Reference to Krishna Water Dispute Tribunal-II under Inter State River Water Disputes (ISRWD) Act, 1956 – request from State of Telangana

The Union Cabinet chaired by Prime Minister Shri Narendra Modi has approved the issue of further Terms of Reference (ToR) to the existing Krishna Water Disputes Tribunal-II (KWDT-II) under section 5(1) of the ISRWD Act for its adjudication between the States of Telangana and Andhra Pradesh (AP). This is based on receipt of the legal opinion and in light thereof on the issues raised by Government of Telangana (GoT) in their complaint under section (3) of the Inter State River Water Disputes (ISRWD) Act, 1956.



The resolution of dispute between the two States on the use, distribution or control of Krishna River waters will open new avenues of growth in both the States of Telangana and AP and will be beneficial for the people of both these States, thus helping in building our country stronger.

Krishna Water Disputes Tribunal-II was constituted by the Central Government on 02.04.2004 on requests made by the party States under Section 3 of the ISRWD Act, 1956. Subsequently, on 02.06.2014, Telangana, as a State of the Union of India, came into existence. As per section 89 of the Andhra Pradesh Reorganization Act (APRA), 2014, the tenure of the KWDT-II was extended to address the clauses (a) and (b) of the said section of APRA, 2014.

Subsequently, Government of Telangana (GoT) forwarded a complaint on 14.07.2014 to the Department of Water Resources, River Development & Ganga Rejuvenation (DoWR, RD & GR), Ministry of Jal Shakti (MoJS), Govt. of India, referring the dispute on the use, distribution or control of Krishna river waters. A Writ Petition was also filed in the matter by GoT in the Hon'ble Supreme Court (SC) in 2015. In 2018, GoT further requested DoWR, RD & GR, MoJS to refer the complaint to the existing KWDT-II by confining the scope of reference between the States of Telangana and Andhra Pradesh only. The matter was later discussed in the 2nd Apex Council meeting in 2020 held under the Hon'ble Minister (Jal Shakti). As discussed during the 2nd Apex Council meeting, GoT withdrew the said Writ Petition in 2021 and subsequently, legal opinion of Ministry of Law & Justice (MoL&J) was sought by DoWR, RD & GR in the matter.

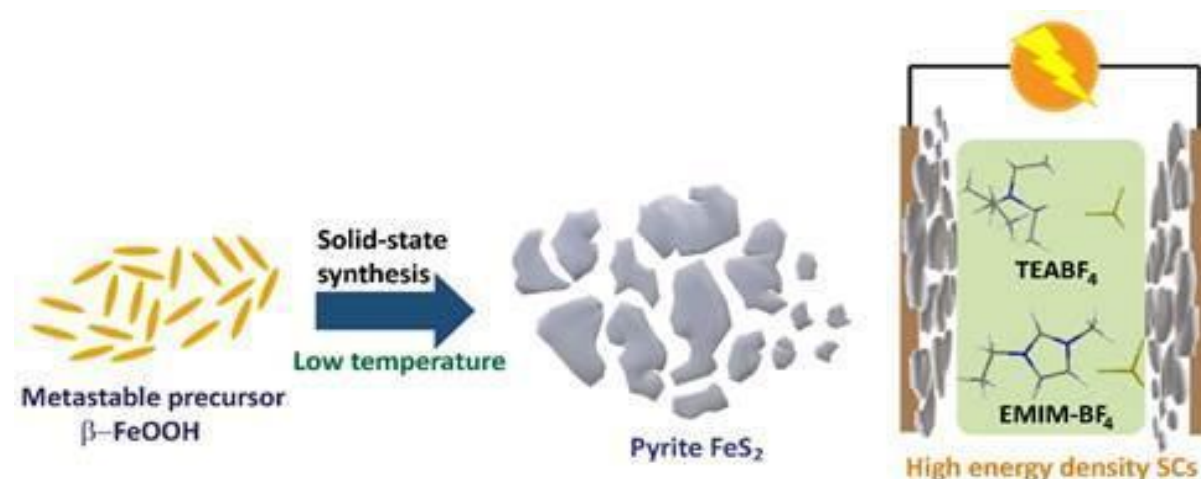
Cabinet approved Amendment to the Central Universities Act, 2009 for setting up of Sammakka Sarakka Central Tribal University in the State of Telangana

The Union Cabinet chaired by Prime Minister Shri Narendra Modi gave its approval for introduction in Parliament, a Bill, namely, the Central Universities (Amendment), Bill, 2023 further to amend the Central Universities Act, 2009 for setting up of Sammakka Sarakka Central Tribal University at Mulugu District in the State of Telangana as provided in the Thirteenth Schedule to the Andhra Pradesh Re-organisation Act, 2014 (no. 6 of 2014).



There would be provision of funds of Rs. 889.07 crore. The new university will not only increase access and improve the quality of higher education in the State but also promote avenues of higher education and advance knowledge by providing instructional and research facilities in tribal art, culture and traditional knowledge system for the benefit of the tribal population in the State. This new university will also create additional capacity and will strive to remove regional imbalances.

Researchers synthesize highly crystalline pyrite at low temperatures useful for fabricating high energy density supercapacitors



Researchers have synthesised highly crystalline pyrite FeS₂ at low temperatures and utilized them for fabricating electrochemical energy storage devices such as batteries and high energy density supercapacitors (SCs).

Transition metal sulfides (TMS) are an important class of inorganic materials and find applications in diverse fields including electrochemical energy storage devices such as batteries and supercapacitors (SCs). Solid-state synthetic methods are used to generate metal sulfides from the corresponding metal salts or their equivalent oxides usually by annealing at high temperatures.

However, the experiments carried out by Ms. Savithri Vishwanathan, under the supervision of Dr. H. S. S. Ramakrishna Matte at Centre for Nano and Soft Matter Sciences, Bengaluru, an autonomous institute under Department of Science & Technology (DST) demonstrated the low-temperature synthesis of crystalline pyrite FeS₂ through a solid-state synthesis route. They have utilized a metastable oxyhydroxide (FeOOH) precursor for this process.

The team reported stabilising this intermediate oxyhydroxide and utilizing it as a precursor for sulfidation, in the presence of H₂S gas, for the first time in their paper published in the journal Chemical Communications

Using a metastable precursor helped in lowering the annealing temperature, as FeOOH converted into pyrite FeS₂ with fairly good crystallinity at a low temperature. This synthetic route of obtaining sulfides from their corresponding metastable oxyhydroxides can be extended to other transition metals to obtain crystalline materials in an energy intensive way.

Electrodes for high-energy density SCs were fabricated from the as-synthesized FeS₂, resulting in superior performance in the presence of organic and ionic-liquid (IL)-based electrolytes. This could be attributed to the improved conductivity as a result of good crystallinity of the material as well as the significantly enhanced wettability of the FeS₂ electrode in the presence of the organic and IL-based electrolytes. The FeS₂ electrode exhibited high energy and power densities, clearly highlighting the role of the synthetic procedure employed for enhancing electrochemical properties.

Promulgation of (i) The Andaman and Nicobar Islands Tenancy Regulation, 2023 (ii) The Dadra and Nagar Haveli and Daman and Diu Tenancy Regulation, 2023 (iii) The Lakshadweep Tenancy Regulation, 2023

The Union Cabinet, chaired by the Prime Minister Shri Narendra Modi, has approved the proposal for promulgation of (i) The Andaman and Nicobar Islands Tenancy Regulation, 2023 (ii) The Dadra and Nagar Haveli and Daman and Diu Tenancy Regulation, 2023 (iii) The Lakshadweep Tenancy Regulation, 2023 under **Article 240 of the Constitution of India.**

The Andaman and Nicobar Islands Tenancy Regulation, 2023; the Dadra and Nagar Haveli and Daman and Diu Tenancy Regulation, 2023; and the Lakshadweep Tenancy Regulation, 2023 will provide a legal framework for creating an accountable and transparent ecosystem for renting premises in the Union territories of Andaman and Nicobar Islands; Dadra and Nagar Haveli and Daman and Diu; and Lakshadweep by balancing the interests and rights of both the landlord and tenant.

The Regulations will give a fillip to private investment and entrepreneurship in the rental market, create adequate rental housing stock for various income segments of society including migrants, formal and informal sector workers, professionals, students etc.; it will also help to increase access to quality rental accommodation; and lead to gradual formalisation of the rental housing market which will create a vibrant, sustainable and inclusive rental housing market in the Union territories of Andaman and Nicobar Islands, Dadra and Nagar Haveli and Daman and Diu and Lakshadweep.

Recently, the Manas National Park & Tiger Reserve announced that the population of swamp deer at the park has witnessed a rise.



The swamp deer (*Rucervus duvaucelii*) also called as barasingha is a deer species distributed in the Indian subcontinent.

It belongs to the family Cervidae (order Artiodactyla), found in open forests and grasslands of India and Nepal. It is now extinct in both Bangladesh, and in Pakistan.

There are three subspecies of swamp deer found in the Indian Subcontinent.

The western swamp deer (*Rucervus duvaucelii*) found in Nepal,

Southern swamp deer (*Rucervus duvaucelii branderi*) found in central and north India and Eastern swamp deer (*Rucervus duvaucelii ranjitsinhi*) found in the Kaziranga and Dudhwa National Parks.

Conservation status

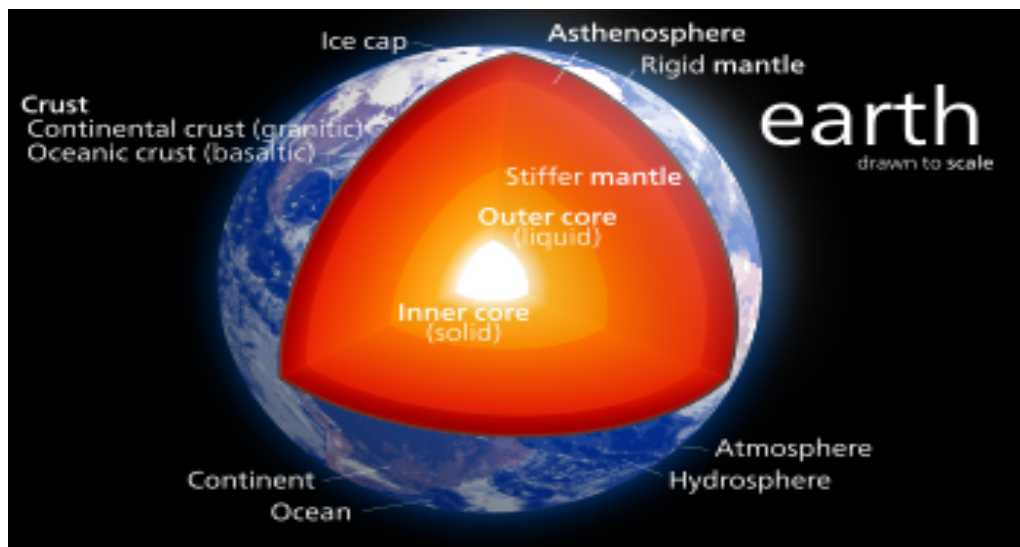
IUCN Red List: Vulnerable

CITES: Appendix I

The Wildlife Protection Act, 1972: Schedule I

Earth's Inner Core

A recent study has found that certain groupings of iron atoms in the Earth's inner core are able to move about rapidly, changing their places in a split second while maintaining the underlying metallic structure of the iron.



It is the **innermost layer of the Earth.**

Structure:

It is a solid metallic ball primarily composed of iron and nickel.

The inner core is solid due to the pressure caused by the weight put on it by the Earth's other top layers.

It is distinct from the outer core, which is a liquid.

Depth:

The inner core is located at the Earth's center, approximately 5,150 kilometers (3,219 miles) beneath the Earth's surface.

The boundary between the inner and outer cores is called the Lehman Seismic Discontinuity.

Radius: The inner core has an **average radius of 1220 km.**

Temperature:

Inner core temperatures reach extraordinary levels, estimated to be between 7,200–8,500°F (4,000–4,700°C).

The primary contributors to the inner core's heat are the decay of radioactive elements such as uranium, thorium, and potassium in Earth's crust and mantle, residual heat from planetary formation, and heat emitted by the solidification of the outer core.

Other Features:

It is predicted to have very high thermal and electrical conductivity.

The inner core generates its own magnetic field.

Despite its small volume (less than 1% of the Earth's volume), the Earth's inner core contains about 10% of the total magnetic field energy.

It plays a crucial role in outer core liquid motions and the geodynamo, which generates the Earth's magnetic field.

It rotates in the same direction as the surface of the planet but a bit faster than the rest of the planet.

What are the different layers of the Earth?

The earth is made up of three different layers: the crust, the mantle, and the core.

The crust: This is the outside layer of the earth and is made of solid rock, mostly basalt and granite.

The mantle:

It lies below the crust and is up to 2900 km thick.

It consists of hot, dense, iron and magnesium-rich solid rock.

The core:

It is the center of the earth and is made up of two parts: the liquid outer core and solid inner core.

The outer core is made of nickel, iron, and molten rock

IEA SUMMIT ON CLEAN ENERGY MINERALS

The first International Energy Agency (IEA) Critical Minerals and Clean Energy Summit, held in Paris on September 28, 2023, brought together key stakeholders including ministers, industry leaders, investors, international organizations, and civil societies from 50 countries.



The first International Energy Agency (IEA) Critical Minerals and Clean Energy Summit was held on 28 September 2023 in Paris, France. The summit brought together ministers, industry leaders, investors and civil society representatives from nearly 50 countries to discuss the role of critical minerals in clean energy transitions and how to ensure their secure, sustainable and responsible supply.

Critical minerals are raw materials that are essential for the production of clean energy technologies such as solar panels, wind turbines, batteries and electric vehicles. They include metals such as lithium, cobalt, nickel, copper, rare earth and platinum group metals. The demand for these minerals is expected to increase significantly in the coming years as countries pursue their net-zero emissions goals and accelerate their energy transitions.

However, the supply of critical minerals faces various challenges such as geopolitical risks, environmental and social impacts, market volatility, lack of transparency and innovation gaps. These challenges could pose threats to the affordability, reliability and sustainability of clean energy technologies and hamper global efforts to combat climate change.

The Summit aimed to build on the findings and recommendations of the report and foster a broader consensus among the participants on effective courses of action to address the critical mineral challenges.

Summit resulted in six key actions that were endorsed by the participants:

Advancing Diversified Mineral Supplies: Participants emphasized the need to accelerate progress towards diversified and sustainable supplies of critical



minerals. This action involved exploring investments, innovation, recycling, sustainability standards, and safety nets to secure these supplies.

Maximizing Technology and Recycling: Delegates recognized the importance of recycling and leveraging technology to their fullest extent. Utilizing innovative methods in extraction, processing, product design, and end-of-life processes was deemed essential to enhance resource efficiency and reduce supply constraints.

Fostering Market Transparency: Lack of transparency in pricing across mineral markets hampers new investments. To address this issue, the IEA committed to strengthening market monitoring capabilities, including supply and demand projections, in line with the G7 Five-Point Plan for Critical Minerals Security.

Improving Accessibility of Trustworthy Information: Providing accessible and reliable information about critical minerals was highlighted. This action aims to inform stakeholders, policymakers, and the public about the importance and availability of these minerals for the clean energy transition.

Establishing Incentives for Sustainable and Responsible Production: Recognizing the significance of rewarding environmental, social, and governance efforts, the leaders agreed to incentivize sustainable and responsible production of critical minerals. Approvals of new facilities would be expedited without compromising legal and regulatory protections.

Fostering International Cooperation: Participants acknowledged that no single nation or company could handle the growing demand for critical minerals alone. International cooperation was emphasized, encouraging collaborative efforts among nations, industries, and organizations to address the challenges associated with critical mineral supplies.

Recently, the National Investment and Infrastructure Fund has entered into a collaboration with Japan Bank for International Cooperation (JBIC) to unveil a \$600 million India-Japan Fund.



About National Investment and Infrastructure Fund:

It is an investor-owned fund manager, anchored by the Government of India (GoI) in collaboration with leading global and domestic institutional investors.

It is India's first-ever sovereign wealth fund (SWF) which was set up in the year 2015.

It is an institution for enhancing infrastructure financing by investing in greenfield (new), brownfield (existing) and stalled projects.

The primary goal of setting up NIIF was to optimise the economic impact largely through investing in infrastructure-related projects.

Types of NIIF Funds

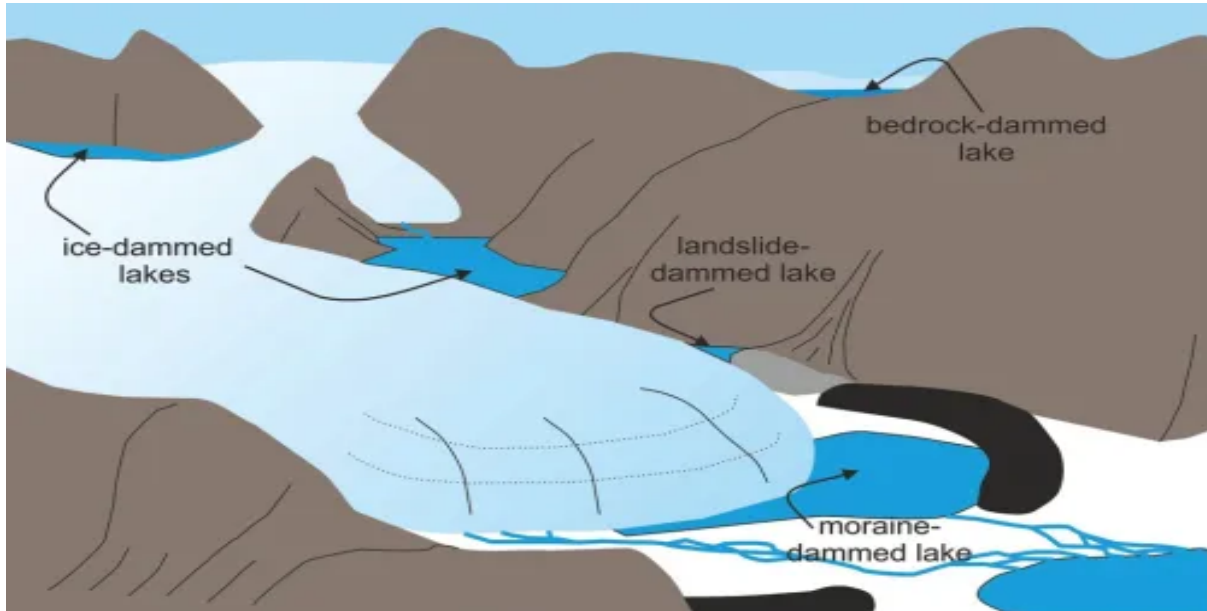
Master Fund: This fund primarily invests in infra-related projects such as roads, ports, airports, and power. Also, the master fund invests in well-established enterprises that are into a long-term agreement and are operating in a regulated environment with a good history.

Fund of Funds: It looks **to invest in funds managed by the renowned fund managers** having an excellent track record. The fund of funds invests as anchor investors, and this enables the fund managers to accumulate more funds from the institutional investors.

Strategic Fund: This **fund is registered as an Alternative Fund II** under the Securities and Exchange Board of India (SEBI) in India. Strategic funds invest primarily in equity and equity-linked instruments.

The funds are registered as Alternative Investment Fund (AIF) with the Securities and Exchange Board of India (SEBI).

Glacial Lake Outburst Flood



Recently, a glacial lake outburst flood in the South Lhonak Lake of Sikkim killed ten people and many Army personnel are missing.

Glacial lakes are large bodies of water that sit in front of, on top of, or beneath a melting glacier.

As they grow larger, they become more dangerous because glacial lakes are mostly dammed by unstable ice or sediment composed of loose rock and debris.

In case the boundary around them breaks, huge amounts of water rush down the side of the mountains, which could cause flooding in the downstream areas. This is called glacial lake outburst floods or GLOF.

It can be triggered by several reasons, including earthquakes, extremely heavy rains and ice avalanches

These lakes are also often found in steep, mountainous regions, which means landslides or ice avalanches can sometimes fall directly into the lakes and displace the water, causing it to over-top the natural dam and flood downstream

Key facts about South Lhonak Lake

This lake in northern Sikkim is situated about 5,200 metres above sea level.

It formed due to the melting of the glacier.

It is a moraine-dammed glacial lake at the snout of South Lhonak glacier, Sikkim Himalaya.

It has become the largest and fastest-growing glacial lake in the state, with a glacial retreat of almost two kilometres in 46 years between 1962 and 2008.

Bojjannakonda



Recently, the Central government has sanctioned 7.30 crore rupees for taking up landscaping and development of tourist amenities at Bojjannakonda site.

It is located in the state of Andhra Pradesh.

The site was excavated under the aegis of Alexander Rim in 1906.

It was originally known as 'Buddhuni konda' (hill of the Buddha), but it came to be known as 'Bojjannakonda' in the course of time.

Buddhist monks used to practice on the hill about 2,000 years ago.

A gold coin belonging to the Samudra Gupta period, copper coins of the Chalukya king Kubja Vishnu Vardhan, coins of Andhra Satavahanas and pottery were discovered at the site.

Features

An interesting feature of this site is that it shows features of all the three phases of Buddhism: Hinayana, Mahayana and Vajrayana.

A figure of 'Kalabhairava' with the head of Lord Ganesha wearing conch shells and the statue of a Buddhist monk, 'Harati', have also been found at the site.

There is a large double-storeyed cave on the hill.

The rectangular cave has a doorway and is flanked by 'dwarapalakas' on either side.

There is a rock-cut stupa, standing on a square platform, at the centre of the cave.

A series of rock-cut caves and monolithic structures standing on rock platforms are present on the northern side of the hill.

The upper cave has a rectangular doorway flanked by figures of the Buddha on either side.

The imposing figures of the Buddha, seated in meditation posture, and the stupa are the main attraction for tourists at Bojjannakonda.

On the top of the hill, there is a group of structural buildings and a vihara (monastery), which has been reduced to ruins.

To the west of Bojjannakonda, another hillock, Lingalakonda or Lingalamma, is present.

A number of monolithic and structural stupas can be seen on the top of this hillock.

The Buddhist temple at Barabodur in Java has been constructed on the lines of the structures on Lingalamma”.

The caves at Bojjannakonda and those in Takshasila are similar.

The word 'Sangrama' was in use at Takshasila but was never used in Andhra Pradesh. These two features suggest that Buddhist practices influenced Bojjannakonda in northern India.”

Enforcement Directorate

The Enforcement Directorate summoned actor Ranbir Kapoor in connection with the Mahadev online betting case.

He has been asked to appear before the ED for promoting illegal online betting and gaming platform.

Central laws related to Gambling/Betting (State subject, Public Gambling Act, 1867)

Should Gambling be Legalised (Arguments in Favour/Against Legalisation, Way Ahead)

Background:

According to the Enforcement Directorate, Mahadev Online Book provides online platforms for illegal betting in different live games such as poker and other card games, chance games, cricket, badminton, tennis, football and others.

It even provides an avenue to bet on different elections in India.

Its main promoters, originally from Chhattisgarh, are based out of Dubai, and may have amassed as much as Rs 5,000 crores through the platform.

Central Laws Related to Gambling/Betting in India:

Under the 7th Schedule of the Constitution, the state governments have the exclusive power to enact their own laws on Gambling/Betting for their own territory.

However, the Public Gambling Act, 1867, a colonial-era statute still in force, has been adopted by several states including Uttar Pradesh, Madhya Pradesh and Delhi.

Other states have enacted their own pieces of legislation to regulate Gambling/Betting related activities within their territories.

Should Gambling/Betting Be Legalised Across India?

Arguments in Favour of Legalisation –

Legalising gambling will not only help in breaking off sources of black money but it will also generate a good amount of revenue for the state exchequer.

The unaccounted money earned from gambling activities is managed by the criminal syndicates which are spent on nefarious activities like terror financing.

Legalising gambling will not only put a halt on it but also the money generated from betting and gambling can be used by the authorities for various constructive social schemes.

In a large country like India, a legal and effectively regulated gambling sector will generate large-scale employment opportunities.

In sports events like cricket, people tend to bet on it and the majority of time players go for fixing the matches, even though betting on it is illegal in India.

If betting gets a legal permit, then there will be more transparency in such activities and it will also curb fixing of the matches as it will create a sense of fear of getting caught among the players and bookies.

Arguments Against Legalisation –

Gambling is morally wrong and is not ethically correct in the Indian context.

It is one of the reasons for bankruptcy, addiction, loss of livelihood, divorce, crime.

Legalised gambling hurt and destroys those who are poor and disadvantaged people of the society.

If gambling were illegal, then it would be difficult for the gambling industries to openly promote their casinos, lotteries, or any other gambling activities and exploit these people.

Since gambling is portrayed as something clean and a way to earn money quickly, it attracts young people, who eventually become gambling addicts.

Way Ahead:

The 276th report of the Law Commission of India talked about the possibility of legalising gambling in the whole country with some rules and regulations.

But the legalisation of gambling in a large country like India is not an easy task.

The Government has to take certain measures before legalising Gambling in India:

State list to Concurrent list–

Firstly, there would be a need to make an amendment to the Constitution regarding gambling as it is under the purview of the state list.

So, it should firstly, be put under concurrent list so that the Parliament can legislate on the subject without facing any hindrances.

Restrict the Number of Transactions –

To protect the interest of people and to prevent any harm, the government should restrict the number of transactions that can be made in a specified period.

Also, there should be a check upon the stakes involved by linking the accounts with either PAN/AADHAAR card.

FDI in Gambling–

To prevent financial burdens on the states who wish to permit casinos and other gambling activities, the government should allow FDI in this sector.



So, that investments can be made in the respective states for the infrastructure etc.

Also, this will lead to growth in tourism and the states would be able to generate more employment and revenues.

Effective Implementation of Rules & Regulations –

Necessary infrastructure like police machinery and prosecutors or grievance redressal mechanisms should be set up at both state and national levels by the government to ensure that the rules and regulations are perfectly implemented and also to ensure that the perpetrators are punished.