

Latest developments Article 370



A Constitution bench of the Supreme Court of India is hearing a batch of petitions challenging the abrogation of Article 370 of the Constitution which conferred special status on the erstwhile State of Jammu and Kashmir.

Over 20 petitions are pending before the Supreme Court challenging the Central government's 2019 decision to abrogate Article 370 of the Constitution, which resulted in the revocation of Jammu and Kashmir's special status. The erstwhile State was subsequently bifurcated into two Union Territories.

On August 2, the top court began final hearings in the matter with a question to the petitioners about whether the Constitution makers and Article 370 itself envisaged the provision as a permanent or temporary one.

The Court sought to know whether the Article was envisaged as a permanent provision merely because the Constituent Assembly of Jammu and Kashmir (J&K), which was empowered to recommend the deletion of the provision, ceased to exist in 1957.

On August 4, the top court asked whether the Article would become part of the basic structure of the Constitution if it is accepted that Article 370 of the Constitution became permanent when the Constituent Assembly of Jammu and Kashmir was dissolved in 1957.

During the hearing of the matter on August 9, the Court said that in a Constitutional democracy like India, the opinion of people on public issues is sought through established institutions and not referendums as in the case of Brexit in the United Kingdom.

The top court, on August 10, remarked that in no way was the integration of Jammu and Kashmir with India in 1948 conditional. The integration was absolute and complete in every which way, remarked CJI Chandrachud.

Voyager 2 updates



The US space agency National Aeronautics and Space Administration has recently updated that its Voyager 2 probe has signalled it is in 'good health' after mission control mistakenly cut contact for several days.

The Voyager 2 probe, launched in 1977, is currently over 12.3 billion miles (19.9 billion kilometers) from our planet and is exploring interstellar space along with its twin, Voyager 1.

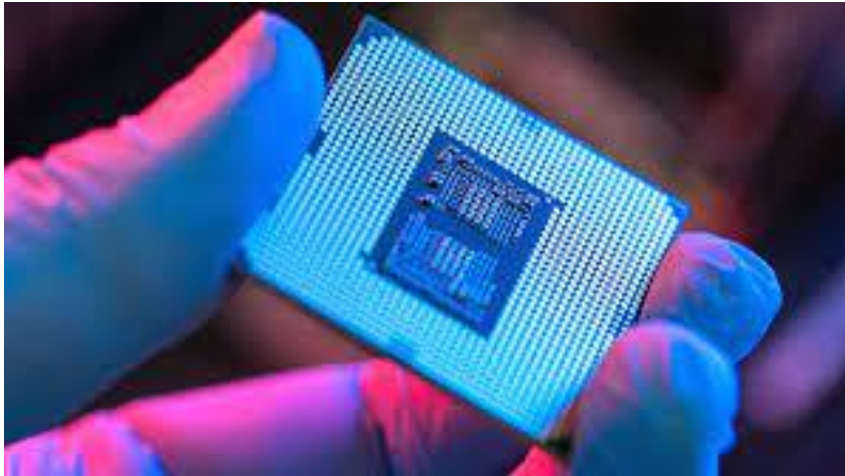
The missions are part of the NASA Heliophysics System Observatory, while NASA's Jet Propulsion Laboratory (JPL) built and operates the Voyager spacecraft.

In December 2018, Voyager 2 left the protective magnetic bubble provided by the Sun, called the heliosphere, and is currently traveling through the space between the stars.

Voyager 2 became the first and so far only spacecraft to have visited the outer planets Uranus and Neptune. While, Voyager 1 was humanity's first spacecraft to enter the interstellar medium in 2012, and is currently almost 15 billion miles from Earth.

Both Voyager spacecraft carry 'Golden Records -- 12-inch, gold-plated copper disks intended to convey the story of our world to extraterrestrials.

The US China chip war



According to the U.S. Geological Survey, China is responsible for the production of 98% of the global gallium supply, which is prime for the semiconductor industry. China has recently introduced a set of laws aimed at imposing restrictions on the export of several essential commodities that play a critical role in the domains of electric cars, renewable energy, semiconductors, and military technology. The implementation of these laws is a response to the actions taken by the United States, the Netherlands, and Japan to restrict the sale of advanced semiconductor tools to China. The export control legislation, which went into effect in the latter part of 2020, is limiting the supply of gallium from Beijing. The Chinese government has used legal measures to enforce limitations on the export of encryption technology and semiconductors, which serve as safeguards against data breaches. China has placed restrictions on the export of gallium to the United States and other countries.

Until relatively recently, the critical importance of semiconductors was not commonly known or realised outside the tech ecosystem and its enthusiasts. The coronavirus pandemic that broke out in early 2020, changed this. Lockdowns around the world brought the microchip industry to a standstill. Both the supply and demand of these chips were disrupted as factories shut, and the demand for laptops and computers shot up dramatically with people switching to work from home.

The shortage of semiconductors made both US and China realise their dependency on Taiwan, the world leader in manufacturing microchips. Taiwan produces more than 60 per cent of semiconductors globally, and more than 90 per cent of the most advanced ones. The US's share of the market is only around 12 per cent and European nations together account for just 9 per cent.

But Taiwan remains a hugely contested territory. Although it has been governed independently of China since 1949, Beijing sees it as a “renegade province”, and has vowed to unify it with the mainland, using force “if necessary”. America, quite apart from its perceived obligation to uphold the ideals of democracy everywhere, fears that if Beijing were to invade or blockade Taiwan in the near future, it would result in an immediate cutting-off of the supply of the bulk of the semiconductors used in products around the world.

Taiwan’s rise as a foremost semiconductor manufacturer is quite recent. Earlier, the US dominated the sector for decades after World War II. It was in the US that transistors, the key component in semiconductors, were developed. The US also pioneered the design and production of microchips by making them smaller, cheaper and more powerful.

Washington has resorted to various ways to choke the supply of semiconductors and related technology to Beijing. In January, after weeks of lobbying by the US, Japan and the Netherlands agreed to tighten shipments of their most high-tech machinery to China. Parallely, the US has stepped up its investments in semiconductor manufacturing facilities. In August 2022, it passed the landmark CHIPS and Science Act, providing \$280 billion in new funding for domestic research and manufacturing of semiconductors in the country.

Meanwhile, India has made an ambitious push to position itself as an alternative to China, announcing a \$10-billion incentive plan to boost semiconductor manufacturing in the country.

India’s Semiconductor Mission (ISM) aims to build a vibrant semiconductor and display ecosystem to enable India’s emergence as a global hub for electronics manufacturing and design. India’s production linked incentive scheme (PLI) has catalysed fast movement in the assembly of some high-end mobile phones. Much progress remains to be made in the earlier parts of the R&D, design and manufacturing stages and the broadening of assembly lines to servers, telecom boards and laptops.

Key Findings – Keeladi Excavation



Excavation work, during this season had yielded 5820 antiquities with enough cultural traits in the form of structural activity (brick structures, terracotta ring wells, fallen roofing tiles with double holes and deeply finger pressed grooves to draw rainwater).

Antiquities like few pieces of golden ornaments, broken portions, copper objects, iron implements, terracotta gamesmen (chessman), hop scotches, ear ornaments, spindle whorls, figurines, and portions besides beads of terracotta, glass, semi-precious stones (agate, carnelian, crystal, etc.).

Popular ceramic types like finer variety of Black and Red ware, Black ware, Black Polished ware, Red ware, Rouletted ware, few pieces of Arretine were also found. There are also enough numbers of graffiti sherds of both pre and post firing nature. A good number of Tamil Brahmi sherds also have been unearthed.

All these finds clearly indicate the cultural richness of the ancient civilization of the Tamils of this region having its proximity to the temple city Madurai.

Cooperative societies bill



Multi State Cooperative Societies Amendment Bill 2022

The Bill establishes the Co-operative Rehabilitation, Reconstruction and Development Fund for the revival of sick multi-state cooperative societies. As per the Bill, the central government will appoint one or more Cooperative Ombudsman with territorial jurisdiction.

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The Union Cabinet had, in October last year, approved the Multi-State Cooperative Societies (Amendment) Bill, 2022 to improve the ease of doing business, increase financial discipline and enable raising funds in the Multi-State Cooperative Societies.

The Multi-State Cooperative Societies Act, of 2002 was enacted with a view to facilitating the democratic functioning and autonomous working of multi-State co-operative societies in line with the established co-operative principles.

The government said there is a felt need to amend the Act to bring it in line with the 97th Constitutional Amendment and strengthen the cooperative movement in the multi-State Cooperative societies sector.

Mediation bill 2021



The Bill requires persons to try to settle civil or commercial disputes through mediation before approaching any court or tribunal. A party may withdraw from mediation after two mediation sessions. The mediation process must be completed within 180 days, which may be extended by another 180 days by the parties. The Bill provides for the setting up of The Mediation Council of India. Its functions will include registering mediators and recognizing mediation service providers and mediation institutes.

A significant feature of the bill is that a mediated settlement agreement, which has been duly signed by the parties and the mediator, will be final and binding on both the parties and therefore will be enforced in the same manner as if it were a judgement or a decree passed by a court.

The bill includes a provision for conducting mediation through online mode, aligning with the objective of enhancing cost-effectiveness in the process of justice

Previously, the timeline to complete a mediation was set at 180 days, extendable by an additional 180 days. The revised version of the bill reduces the time to 120 days, extendable by another 60 days. This effectively cuts the overall mediation duration from 360 days to 180 days.

Aditya L 1



Aditya L1 shall be the first space based Indian mission to study the Sun. The spacecraft shall be placed in a halo orbit around the Lagrange point 1 (L1) of the Sun-Earth system, which is about 1.5 million km from the Earth. A satellite placed in the halo orbit around the L1 point has the major advantage of continuously viewing the Sun without any occultation/eclipses. This will provide a greater advantage of observing the solar activities and its effect on space weather in real time. The spacecraft carries seven payloads to observe the photosphere, chromosphere and the outermost layers of the Sun (the corona) using electromagnetic and particle and magnetic field detectors. Using the special vantage point L1, four payloads directly view the Sun and the remaining three payloads carry out in-situ studies of particles and fields at the Lagrange point L1, thus providing important scientific studies of the propagatory effect of solar dynamics in the interplanetary medium

The major science objectives of Aditya-L1 mission are:

- Study of Solar upper atmospheric (chromosphere and corona) dynamics.
- Study of chromospheric and coronal heating, physics of the partially ionized plasma, initiation of the coronal mass ejections, and flares
- Observe the in-situ particle and plasma environment providing data for the study of particle dynamics from the Sun.
- Physics of solar corona and its heating mechanism.
- Diagnostics of the coronal and coronal loops plasma: Temperature, velocity and density.

- Development, dynamics and origin of CMEs.
- Identify the sequence of processes that occur at multiple layers (chromosphere, base and extended corona) which eventually leads to solar eruptive events.
- Magnetic field topology and magnetic field measurements in the solar corona .
- Drivers for space weather (origin, composition and dynamics of solar wind .

Why the caste survey matters?



The Patna high court (HC)'s decision to greenlight the caste-based survey in Bihar, dismissing petitions filed by group of individuals and organizations, is a clear boost for the state's ruling alliance of Mandal giants, Rashtriya Janata Dal and Janata Dal (United), as it gives them a lever to fashion an election strategy ahead of the 2024 polls. Though a long-standing demand by nonmarginalized caste groups—Independent India has never successfully counted its castes, and the sole 2011 attempt was abandoned due to alleged irregularities in data collection and management—the demand for a caste census has grown louder in recent years. This has been fueled by an Opposition plan of countering the Bharatiya Janata Party (BJP)'s model of welfare, nationalism and religious polarization through asocial churning over caste, in much the same way that heartland politics in the 1980s-90s were defined by polarization around the Ram Janmabhoomi movement and the agitation around the Mandal committee report. Implicit here is the desperation of the Opposition to win back a significant chunk of backward communities who have shifted to the BJP and have been instrumental in the ruling party's sweep of the heartland. In that sense, the Bihar survey and the demand for a nationwide survey is the second iteration of a stillborn attempt in 2019 to revive the Mandal coalition by the alliance of the Bahujan Samaj Party and Samajwadi Party.

The petitions before the HC sought to invalidate the survey on two main grounds—that only the Centre was competent to hold such a census-like exercise, and that the privacy of respondents was being violated by the survey as its results would be widely shared. On both counts, the HC sided with the state government, noting that it was satisfied with the safeguards announced by the administration, and the Centre’s decision to not carry out any caste-based enumeration did not preclude the state from initiating such an exercise. The court also affirmed the powers of the state government in ordering the survey.

The case is likely to end up before the Supreme Court, but for now, Bihar is likely to finish the contentious exercise even as opposition parties in other states demand a survey of their own. Since the exercise began in January, there have been shifts in the Opposition space; 26 parties have come together to form the INDIA alliance. So, if the social agenda of the National Democratic Alliance (NDA) has a push for the Uniform Civil Code (UCC) at its core, for INDIA, it’s the caste census. Both are far-reaching, both are politically volatile. In some measure, it could well be Mandal vs Kamandal again.

Expansion of BRICS



The five-member BRICS invited six more countries to join the alliance recently. BRICS consists of Brazil, Russia, India, China, and South Africa. In its latest summit at Johannesburg, South Africa, it has invited Iran, the United Arab Emirates, Saudi Arabia, Argentina, Egypt, and Ethiopia. Their membership will begin in January.

BRICS currently represents around 40% of the world's population and more than a quarter of the world's GDP. With the additions, it will represent almost half the world's population, and will include three of the world's biggest oil producers, Saudi Arabia, the UAE, and Iran.

The formation of BRICS in 2009 was driven by the idea that the four emerging markets of Brazil, Russia, India, and China would be the future economic powerhouses of the world. South Africa was added a year later.

The invitation to Iran, whose ties with the West are strained, seems to have a strong China-Russia imprint. The fact that regional rivals Saudi Arabia and Iran are part of the same grouping is remarkable. China happens to be the biggest buyer of Saudi Arabia's oil and had recently brokered a peace deal between Tehran and Riyadh. While Saudi Arabia has traditionally been a US ally, it has been increasingly striking out on its own, and the BRICS membership is in line with that.

India is also part of the Shanghai Cooperation Organisation (SCO), and despite problems, it has relations with Russia, with China. While China does want BRICS to be an anti-western group, the Indian view is that it is a "non-western" group and should stay that way.

Among the new members, while India looks at all of them as partnerships worth developing, concerns have been raised that the group could become more pro-China and sideline New Delhi's voice and interests.

GMP and pharma companies



The government recently directed all pharmaceutical companies in the country to implement the revised Good Manufacturing Practices (GMP), bringing their processes at par with global standards.

What was the need for the improved standards?

One, implementation of the new norms will bring the Indian industry on par with global standards.

Two, there have been a string of incidents where other countries have reported alleged contamination in India-manufactured syrups, eye-drops, and eye ointments. The deaths of 70 children in the Gambia, 18 children in Uzbekistan, three persons in the United States, and six deaths in the Cameroon have been linked to these products.

Three, a risk-based inspection of 162 manufacturing units by the government found several deficiencies — incoming raw materials not being tested before use, product quality not being reviewed, absence of quality failure investigation, infrastructure deficiency to prevent cross-contamination, faulty design of manufacturing and testing areas, missing qualified professionals, and poor documentation.

This is also important seeing only 2,000 of the 10,500 drug manufacturing units in the country at present meet global standards, being WHO-GMP certified.

The improved standards will ensure that pharmaceutical companies follow standard processes, quality control measures, and do not cut corners, improving quality of medicines available in India as well as sold in global market.

The revised GMP guidelines focus on quality control measures, proper documentation, and IT backing to maintain quality of medicines produced.

The new guideline introduces pharmaceutical quality system, quality risk management, product quality review, and validation of equipment. This will mean companies will have to carry out regular quality reviews of all its products, verify consistency of the quality and the processes, thorough investigation of any deviation or suspected defect, and implementation of any preventive actions. It also suggests a change control system to evaluate all changes that may affect the production or quality of the product.

What a US rate alteration means?



Fed's move on interest rates strongly influences the foreign capital inflow in India. When Fed raises rates, foreign investors pull money away from emerging markets as higher rates give a boost to the dollar which erodes the shine of riskier equities.

A pause by the US Federal Reserve in its rate hike cycle can have a beneficial impact on the Indian market. This halt indicates the Fed's comfort with the current rate levels, which subsequently makes Indian assets more attractive to investors due to their higher yield compared to US assets. This can drive up foreign investment in India, bolstering the Rupee and positively affecting the stock market. Moreover, if the Fed starts to cut rates, it can lead to lower borrowing costs in India, spurring business investments and overall economic growth

If the Fed starts to cut rates, it can lead to lower borrowing costs in India, spurring business investments and overall economic growth. A lower rupee could make Indian exports more expensive and imports cheaper, potentially impacting India's trade balance and a weaker US dollar could lead to higher commodity prices, which could impact India, a significant importer of commodities like oil.

In short

A US Fed rate hike can lead to a shift in market sentiment globally, including India. Generally, a rate hike indicates a tightening monetary policy, which can create a perception of reduced liquidity and higher borrowing costs. This can lead to a cautious approach by investors, potentially resulting in a decline in stock markets and increased volatility. It can

also affect consumer and business sentiment, impacting spending and investment decisions.

A US rate hike can trigger capital outflows from emerging markets, including India. When US interest rates rise, investors may find US dollar-denominated investments more attractive, leading to a movement of funds from other countries to the US. This can put pressure on emerging market currencies and create short-term volatility in exchange rates.

Higher US interest rates can make investments in the US more appealing to global investors. As a result, foreign portfolio investment in India may decrease as investors seek higher yields and lower risk in the US. This can impact the flow of funds into Indian stocks and bonds, potentially leading to a decline in foreign institutional investment.

The impact of US rate hikes on FDI in India can be less direct. Factors such as the overall economic conditions, policy stability, and long-term growth prospects play a more significant role in attracting FDI. While short-term capital flows may be affected by US rate hikes, the long-term investment decisions by multinational companies are influenced by various factors beyond interest rates.

E20 target for ethanol blending at risk amid rice ban.



The Union government's decision to stop the sale of surplus state-owned rice for ethanol-making, mainly to bolster food security, could impact India's ambitious push to achieve 20% ethanol blending with petrol by 2025-26, a target known as E20. The blending programme aims to reduce India's costly oil imports and enhance farmers' income.

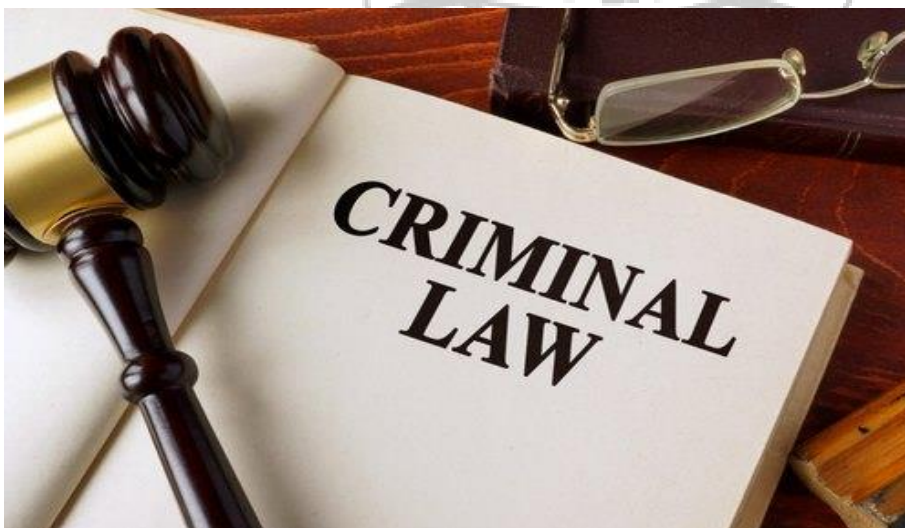
India is the third-largest oil consumer in the world after the US and China and its annual crude oil import bill is well over \$100 billion, which weighs heavily on the government's finances. Mixing of petrol with ethanol, which is made from molasses, a by-product of sugar, will help to lessen the amount of oil India imports. Ethanol is also produced from rice and maize.

To reach the E20 target, the Union government had mandated the sale of surplus grains held by the state-owned Food Corporation of India (FCI) at a subsidized rate of Rs 20 per kg.

According to India's fuel-blending programme for the E20 target, 5.5 billion litres of ethanol are to come from sugarcane and rest 4.6 billion litres from grains, totaling 10.1 billion litres of ethanol required to meet the target. India has some 100-grain based ethanol-making distilleries, while many sugarcane-based distilleries also have capabilities to use grains to make the organic alcohol compound.

Recently, India the largest rice exporter, banned overseas shipments of all grades of rice other than the premium basmati variety. The step came amid widespread torrential rains in July, which has delayed sowing of summer crops, and after Russia pulled out of the Black Sea grain deal, sparking global food security concerns. The El Nino weather pattern this year, which could roil crops, persists, and remains a global worry.

Overhauling criminal laws



Three bills introduced by the government are expected to bring far-reaching reforms to the criminal justice system in India, particularly the use of technology in police investigation and judicial process. The government maintains that the proposed legislations aim to not only

address the current challenges faced in the criminal justice system but also incorporate critical provisions on use of technology and forensic science, besides simplifying procedures, reducing pendency of court cases, strengthening prosecution, increasing fines upon conviction, reducing crowding in correctional homes, and expediting trials.

Several reports of the Law Commission of India and committees constituted by the government had recommended section-specific amendments to the three major criminal laws of the country—the Indian Penal Code (IPC), 1860; Code of Criminal Procedure (CrPC), 1973; and the Indian Evidence Act, 1872. Panels like the Bezbaruah Committee, Viswanathan Committee, Malimath Committee and Madhav Menon Committee had made recommendations and also called for general reforms in the criminal justice system.

Recommendations for a comprehensive review of the criminal justice system had also been made by the parliamentary standing committee on home affairs. Most of the committee reports pointed towards inordinate delays in investigation, inadequate use of forensics in investigation, overcrowding of prisons, poor use of technology in legal systems, complex legal procedures, huge pendency of cases, poor conviction rate, etc. These issues ultimately caused delays in providing justice.

A new definition of ‘electronic communication’ has been added in the Bharatiya Sakshya Bill to facilitate the use of technology in investigation, trial, court proceedings and other procedures. The proposed law has been made tech-friendly and several measures have been taken to facilitate the criminal justice system.

Now, the entire process, from filing of FIR to case diaries to charge-sheet to judgment, will be digitised. Technology will be used by the police while conducting search and seizure. The whole process of searching a place or taking possession of any property, including preparation of a seizure list and signing of the list by witnesses, shall be video graphed on an electronic device (including mobile phone) by the police. Such recordings shall be forwarded without delay to the concerned magistrate.

Experts say the proposed laws have given due importance to the use of forensic science in investigation. Unless forensics is used, it will not be possible to secure a conviction rate of more than 90 per cent in India. Due emphasis has also been given to strengthening forensic science infrastructure in all states and UTs. To improve the conviction rate, the use of forensic experts will be made compulsory in all cases where there is provision of jail term of seven or more years.

Global heating will hit world food supply before 1.5C- UN expert.



The world is likely to face major disruption to food supplies well before temperatures rise by the 1.5°C target, the president of the UN's desertification conference has warned as the impact of the climate crisis combine with water scarcity and poor farming practices to threaten global agriculture.

The 1.5° Celsius target is the global climate target that aims to limit warming to said level by 2100, to prevent the planet from slipping into further climate crises. It further argues that the world is likely to face major food supplies disruption even before the temperature rise touches 1.5°C.

Role of COPs



A conference of the parties (COP) is the supreme governing body of an international convention (treaty, written agreement between actors in international law). It is composed of

representatives of the member states of the convention and accredited observers. Scope of the COP is to review the "implementation of the Convention and any other legal instruments that the COP adopts and take decisions necessary to promote the effective implementation of the Convention".

Conventions with a COP include:

- Basel Convention
- Chemical Weapons Convention
- Convention on Biological Diversity
2012 Hyderabad Biodiversity Conference (COP11)
2022 United Nations Biodiversity Conference (COP15)
- Convention on the Conservation of Migratory Species of Wild Animals
- Convention on International Trade in Endangered Species of Wild Fauna and Flora
- Kyoto Protocol
- Minamata Convention on Mercury
- Ramsar Convention
- Rotterdam Convention
- Stockholm Convention on Persistent Organic Pollutants
- Treaty on the Non-Proliferation of nuclear weapons
- United Nations Convention to Combat Desertification
- United Nations Convention against Corruption
- United Nations Framework Convention on Climate Change
- United Nations Climate Change conference
- WHO Framework Convention on Tobacco Control

The Offshore Areas Mineral (Development and Regulation) Amendment Bill, 2023



The Bill amends the Offshore Areas Mineral (Development and Regulation) Act, 2002. The Act regulates mining in maritime zones of India. The Act categorises offshore mining-related activities into: (i) reconnaissance, which involves a preliminary survey to locate mineral resources, (ii) exploration, which includes exploring, proving, or locating mineral deposits, and (iii) production, the commercial activity of the extraction of minerals.

The Act provides for the following types of concessions: (i) a reconnaissance permit for reconnaissance, (ii) an exploration licence for exploration, and (iii) a production lease for undertaking mining. The Bill introduces a composite licence for granting rights for exploration as well as production. Under the composite license, the licensee will be required to complete exploration within three years. This may be extended by two years upon application by the licensee. If mineral resources have been established, the licensee will be granted one or more production leases for the explored area.

The maximum area for undertaking exploration under a single composite license will be 30 minutes latitude by 30 minutes longitude. The maximum area for undertaking production under a single composite license will be 15 minutes latitude by 15 minutes longitude.

The Bill adds that in case of atomic minerals, exploration, production, and composite licenses will be granted only to the government or government companies. Atomic minerals are defined in the Mines and Minerals (Development and Regulation) Act, 1957. These include: (i) rare earth minerals containing uranium or thorium, (ii) pitchblende and uranium ores, and (iii) uriferous allanite, monazite, and other thorium minerals.

The Bill sets up the Offshore Areas Mineral Trust. Concession holders will be required to pay an amount to the Trust in addition to any royalty. The funds will be used for specified purposes including: (i) exploration in offshore areas, (ii) research and studies about the mitigation of adverse effects of offshore mining on the ecology, and (iii) relief upon the occurrence of a disaster.

