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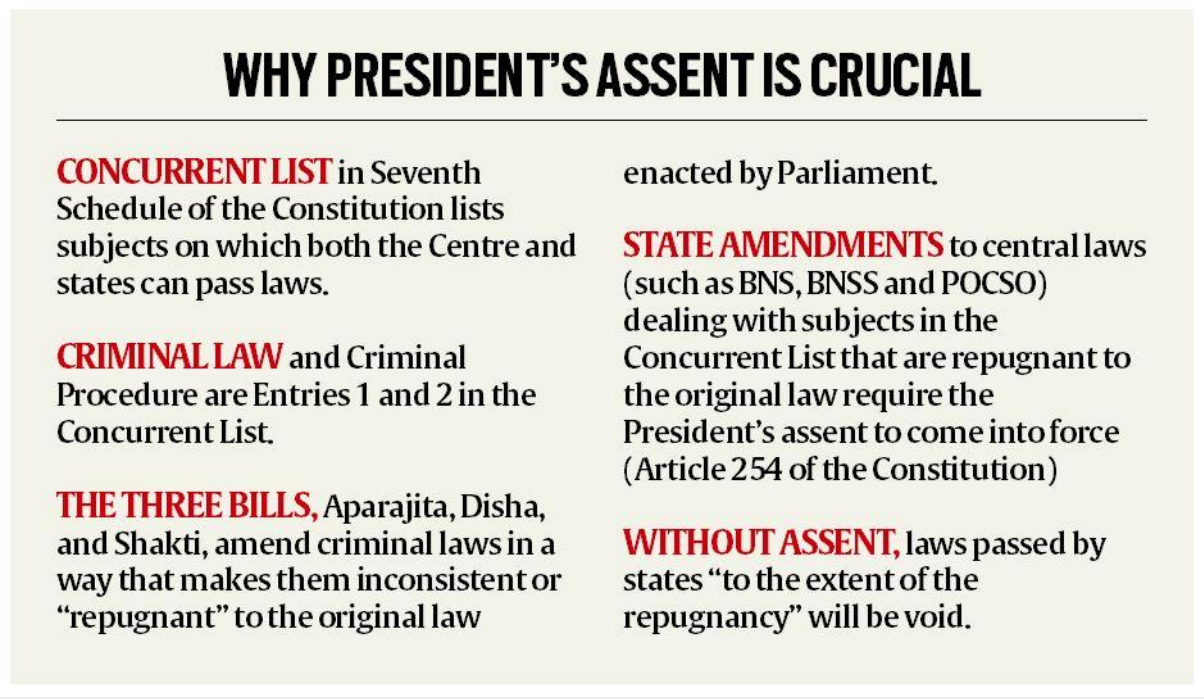
1. State changes in rape law: How Bengal, Andhra, and Maharashtra bills compare

Introduction

As street protests against the rape and murder of a young doctor in Kolkata's R G Kar Medical College and Hospital continued to roil West Bengal, the state Assembly on Tuesday unanimously passed a Bill providing for mandatory death penalty in cases of rape where the victim dies or is left in a permanent vegetative state.

The Aparajita Woman and Child (West Bengal Criminal Laws Amendment) Bill, 2024 (Aparajita Bill) also introduces death as the maximum punishment in all cases of rape, and changes the way in which cases of rape are to be investigated and tried — by a Special Task Force and Special Courts in every district respectively.



To effect these changes, the Bill amends provisions of the Bharatiya Nyaya Sanhita, 2023 (BNS), the Bharatiya Nyaya Suraksha Sanhita, 2023 (BNSS), and the Protection of Children Against Sexual Offences Act, 2012 (POCSO) in the state.

Before West Bengal, the Andhra Pradesh and Maharashtra Assemblies had passed laws prescribing the death penalty for rape by amending the criminal laws in force at the time. Neither Bill has received the mandatory assent of the President yet.

Earlier, the Madhya Pradesh and Arunachal Pradesh Assemblies had, in 2017 and 2018 respectively, introduced the death penalty for the rape or gangrape of "a woman up to twelve years of age" (Sections 376AA and 376DA of the Indian Penal Code, 1860).

West Bengal: Aparajita Bill

The West Bengal Bill begins by specifying that "Imprisonment for life" in Section 4(b) of the BNS "includes simple imprisonment for life or rigorous imprisonment for life". Rigorous imprisonment involves hard labour during the sentence.

SECTION 64 OF BNS: This section ("Punishment for rape") provides for both the floor punishment for the crime and for punishment in cases where aggravating circumstances are present, such as rape by a public servant, a member of the armed forces, during communal violence, etc. In both situations, the maximum punishment is "imprisonment for life".

The Aparajita Bill amends Section 64 to add the words "or with death" at the end of the description of the punishments.

SECTION 66: This provision in the "principal act" (BNS) punishes rape "which causes the death of the woman or causes the woman to be in a persistent vegetative state" with a minimum 20 years in prison with the possibility of life imprisonment, "or with death".

The Aparajita Bill deletes the mentions of all punishments barring death, making the death penalty mandatory in such cases.

SECTION 70: This BNS section deals with the offence of "Gang rape". There is a provision for the death penalty in cases where the victim is "under eighteen years of age" (Section 70(2)), but in the case of older women, the maximum punishment is rigorous imprisonment for life (Section 70(1)).

The West Bengal Bill amends Section 70(1) to introduce the death penalty also for the gang rape of a woman above age 18.

SECTIONS 71, 72, 73: For repeat offenders (Section 71), the Aparajita Bill replaces the punishment of simple "imprisonment for life" with "rigorous imprisonment for life". It also increases the jail terms for disclosing the identity of a rape victim (Section 72) and for publishing information relating to court proceedings in rape cases (Section 73).

ACID ATTACKS: The Bill removes the lighter punishments for acid attacks (prison terms less than life and fine), leaving "rigorous imprisonment for life" as the only punishment (Section 124).

DEATH IN POCSO ACT: The Bill amends the POCSO Act to introduce the death penalty for penetrative sexual assault (Section 4), where the highest punishment currently is life imprisonment.

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TASK FORCES, SPECIAL COURTS: The Aparajita Bill provides for special institutions with the express purpose of investigating, hearing, and deciding rape cases on strict timelines.

The amendment Bill introduces Section 29C to the BNSS, under which the state government shall create a special Aparajita Task Force in every district to investigate cases of rape. All persons, including government officers, will be obligated to assist the task force "without any delay", failing which they can be imprisoned for six months.

The Bill also reduces the time provided under BNSS Section 193 to complete the investigation into the relevant BNS and POCSO offences from two months to 21 days (which can be extended by another 15 days if necessary).

The Bill introduces Sections 29A and 29B to the BNSS to establish Special Courts in every district "for the purpose of expeditious completion of inquiry or trial" in rape cases, and to appoint a Special Public Prosecutor respectively.

The Bill also amends BNSS Section 346, reducing the time given to complete the trial after the chargesheet is filed from two months to 30 days.

The Bill will now be presented to the Governor of West Bengal who will send it to President Droupadi Murmu, who will then decide whether to give her assent and allow the Bill to come into force.

Andhra Pradesh: Disha Bills

In November 2019, a 26-year-old veterinary doctor was gang raped and murdered in Shamshabad, Hyderabad. Four persons who were arrested were shot dead by police in an encounter on December 6 that year. Then Andhra Pradesh Chief Minister Y S Jagan Mohan Reddy promised to bring legislation to ensure stronger punishments and speedy disposal of cases of crimes against women.

In December 2019, the Assembly unanimously passed the Andhra Pradesh Disha Act – Criminal Law (Andhra Pradesh Amendment) Bill, 2019, and the Andhra Pradesh Disha (Special Courts for Specified Offences against Women and Children) Bill, 2019.

The Bills amended the IPC, 1860 and the Code of Criminal Procedure, 1973 (CrPC) for the state of Andhra Pradesh.

DEATH FOR RAPE: The Disha Bill introduced the death penalty as punishment for the crimes of rape, including against a minor below 16 years of age (IPC Section 376); gang rape (Section 376D); and for repeat offenders (Section 376E).

Like Aparajita, Disha too, created "Special Police Teams" and "Exclusive Special Courts" in every district to investigate and hear cases of crimes against women, and prescribed shortened timelines for investigating and hearing such cases.

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It also proposed a "Women and Children Offenders Registry" in which full details of those "involved in" offences against women would be maintained, and be made available to law enforcement agencies.

Both Disha Bills are pending at the Centre, awaiting President Murmu's decision on giving assent.

Maharashtra: Shakti Bill

In 2020, the Maharashtra legislature passed the Shakti Criminal Laws (Maharashtra Amendment) Bill, 2020. The Shakti Bill too introduced the death penalty in rape cases and provided shortened timelines for concluding the investigation and trial.

OBLIGATION ON WEB PLATFORMS: The Shakti Bill punished with up to one month in prison "any social media platform or Internet or mobile telephony data provider including any intermediary or custodian who fails to share any data including document or electronic record with the Investigation Officer as requested" in cases of crimes against women.

DEATH PENALTY: The Bill introduced the death penalty in "heinous" acid attack cases where "adequate conclusive evidence is there and the circumstances warrant exemplary punishment".

POCSO ACT: Like Aparajita, Shakti too, amended the POCSO Act to introduce the death penalty as a punishment for penetrative sexual assault (Section 4).

Presidential assent for the Shakti Bill too, is pending. Leaders and workers of the NCP (Sharad Pawar) protested in Mumbai on Tuesday demanding assent to the Bill.

Relevance: GS Prelims & Mains Paper II; Governance
Source: Indian Express

2. How navigation satellite-based tolling, live monitoring of plazas can lower wait times

Introduction

After the announcement for the implementation of Global Navigation Satellite System (GNSS) based Electronic Toll collection in India, Ministry of Road Transport & Highways (MoRTH) said that it has developed a GIS based software for Real-time monitoring' of the waiting time at the Toll Plazas. The system, the Ministry said Monday (September 2), will help the NHAI officials to check the congestion at specific lane level to ensure free flow of traffic.

This new software has been developed by Indian Highways Management Company Limited (IHMCL), a company promoted by National Highway Authority of India (NHAI). Initially, this new technology will be implemented at 100 toll plazas, which has been identified by NHAI, for live monitoring. These toll plazas have been selected on the basis of the congestion feedback received through National Highway helpline number i.e 1033.

How will it work?

The GIS-based software will provide the name and location of the toll plaza to the officials.

"It will also provide congestion alert and lane distribution recommendation, if the queue of vehicles at a toll plaza is more than the prescribed limit," said MoRTH in an statement.

The ministry also said that as the toll plazas have been mapped across the country at respective NHAI field offices, the software will help the officials to get comparative traffic condition analysis on hourly, daily, weekly and monthly basis for the traffic queue & congestion.

Apart from this, the software will provide updates of current weather condition and information about local festivals. "This will help NHAI officials to take pre-emptive measures to manage the traffic load and decongest the toll plazas," said MoRTH.

As of now, the software is being implemented at the 100 toll plazas. The Ministry said that this GIS-based software will be extended to more toll plazas in a phased manner.

What is satellite based tolling system?
MoRTH is currently working on Global Navigation Satellite System (GNSS) based tolling system, which is expected to replace the current FASTag toll collection system and provide a long-term solution for congestion at tolling booths. It will also provide distance-based tolling where users will pay only for the stretch they have travelled on a National Highway and free flow of Vehicles at High Speed.

On July 02, 2024, Indian Highways Management Company Limited (IHMCL) issued a tender for the construction of free flow GNSS Lanes at toll plazas to implement GNSS based Electronic toll collection.

How will GNSS work?
According to IHMCL, the GNSS-based Electronic Toll Collection (ETC) system will be implemented with the existing FASTag ecosystem. It will be initially used as a hybrid model where both FASTag and GNSS will operate simultaneously.

To implement the scheme, a dedicated GNSS lanes will be available at toll plazas to allow vehicles using GNSS-based ETC to pass through freely. After GNSS-based ETC will become more widespread, all lanes will eventually be converted to GNSS lanes. It will have advance reading/identification/enforcement equipment for vehicles so that valid vehicles gets a free flow pass.

When a vehicle passes through the toll gates, the toll charger will receive pings (distance and time stamp) of GNSS vehicles through On Board Unit or OBUs fitted in the GNSS vehicles. The OBUs of GNSS vehicles will be onboarded with the toll charger through Fintechs, similar to the issuer banks concpet under the current FASTag System. The payment mechanism shall be similar to the existing FASTag ecosystem, but would involve automatic debit and obviate the need for the boom barriers at toll plazas.

How will it help the users?

The introduction of the ETC system will remove all kinds of time lag that currently people face while passing through the toll plazas. Under the FASTag system, it has been observed that there are still considerable delays in reading the bar code and opening of the boom barrier. These delays sometimes lasts for up to a minute and causes vehicle pile ups. Due to this, many cases of arguments and fights with toll employees have also come to light.

However, the GNSS tolling system will remove all these kinds of obstructions as there will be no requirement of reader and boom barrier while passing through the toll Plaza. Also, people will be able to pass through the plaza at high speed and the money will be deducted automatically according to the distance travelled on National Highway.

How does present system work?

Currently, the Electronic Toll Collection in India is done through Radio Frequency Identification (RFID) technology, commonly known as FASTag. It was launched in India in 2015 and Since February 2021, FASTag has been made mandatory for the payment of user fees at National Highway toll plazas, with a provision for a 100% penalty for cash or non-FASTag payments.

According to MoRTH, as of March 2024, more than 98% of user fee payments are made through FASTag at Toll Plazas.

The National Highway Authority of India is responsible for the development, maintenance and management of the National Highways. Currently, out of about 1.50 lakh km of National Highways declared by MoRTH, about 70,000 kilometers are managed by NHAI. Apart from this, NHAI collect tolls on these highways as per National Highway Fee (Determination of Rates and Collection) Rules, 2008.

According to MoRTH, at present toll is collected for approximately 45,000 kilometers of National Highways and Expressways through 1200 toll plazas maintained by NHAI or Concessionaires.

Relevance: GS Prelims; Science & Technology
Source: Indian Express

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3. Why PM Narendra Modi's visit to Singapore is significant for India's semiconductor push

Introduction

Prime Minister Narendra Modi visited Singapore during the second leg of a two-nation trip to South-East Asia this week, having travelled to Brunei Darussalam in the first leg. It was the first visit by an Indian Prime Minister to Brunei, and Modi's fifth trip to Singapore.

Brunei is an important partner in India's Act East Policy and Indo-Pacific vision, and the talks with Sultan Haji Hassanal Bolkiah, the world's longest reigning monarch, were focused on trade, defence, space and cultural ties.

The Singapore leg of the Prime Minister's visit was marked by agreements on semiconductors, digital technologies, health and skill development. The PM and his newly elected Singaporean counterpart Lawrence Wong witnessed the exchange of the Memorandum of Understanding on an India-Singapore Semiconductor Ecosystem Partnership.

India's push for chips

Given the critical importance of semiconductor chips in virtually everything from missiles to mobile phones and from cars to computers, the pact with Singapore has great geo-strategic and geo-economic importance.

Supply disruptions during the Covid-19 pandemic and the geopolitical tensions arising out of China's aggressive moves in the Taiwan Strait and the South China Sea have brought great urgency to India's efforts to develop its own semiconductor ecosystem. The global chip industry is dominated by companies from a very small number of countries, and India is a late entrant into this high-tech and expensive race.

The India Semiconductor Mission was launched in 2021 with a Rs 76,000 crore chip incentive scheme, under which the central government offered half the plant's capital expenditure costs as subsidy. In February, the Cabinet approved semiconductor-related projects adding up to investments of about Rs 1.26 lakh crore.

That same month, the government announced a partnership between the Tata Group and Taiwan's Powerchip Semiconductor Manufacturing Corporation (PSMC) to set up a semiconductor fabrication plant. The Cabinet has so far approved five semiconductor units, including four assembly units, under the incentive scheme.

Singapore's chip story

Singapore has a well-developed semiconductor industry, the outcome of an early start and the vision of its first Prime Minister Lee Kuan Yew.

The story, according to Chris Miller's Chip War: The Fight for the World's Most Critical Technology (2022), goes that LKY told US President Richard Nixon in 1973 that he was counting on exports to create employment for his people — thereafter, the government of Singapore supported Texas Instruments and National Semiconductors in building assembly facilities in the city state.

By the early 1980s, the electronics industry was already accounting for 7% of Singapore's GNP and a quarter of its manufacturing jobs, Miller notes.

Today, Singapore contributes around 10% of the global semiconductor output, along with 5% of the global wafer fabrication capacity (silicon wafer is a circular piece of ultra pure silicon, usually 8-12 inches in diameter, out of which chips are carved) and 20% of semiconductor equipment production.

Nine of the world's top 15 semiconductor firms have set up shop in Singapore, and the semiconductor sector contributes significantly to the country's economic growth. Singapore has players in all segments of the semiconductor value chain: integrated circuit (IC) design, assembly, packaging and testing; wafer fabrication, and equipment/ raw material production.

Some important lessons

In the 1960s and 70s, American chip makers, looking for lower labour costs and a sufficiently skilled workforce, started to offshore parts of their production process to countries in South-east Asia.

What worked especially for Singapore were infrastructure and connectivity, stable business conditions, a critical mass of leading companies based in the country covering the full value chain from design to testing, and suitable human capital.

Semiconductor plants in Singapore are clustered in four wafer fabrication parks spread over 374 hectares, where the government offers customised infrastructure solutions to investors.

To develop talent, Singapore's universities offer majors on microelectronics and IC design, and collaborate with semiconductor companies in doctoral research by their employees.

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Singapore is now seeing the benefits of the global focus on de-risking and improving supply chain resilience, as it appears to be a safe bet in the era of sharpening US-China rivalry.

* In 2022, Taiwan's United Microelectronics Corporation announced an investment of $5 billion for a semiconductor fab in Singapore that is expected to begin operations this year.
* In September 2023, GlobalFoundries inaugurated a $4 billion fabrication plant in Singapore that is capable of manufacturing specialty chips at the advanced "28 nm" node technology.
* In June 2024, NXP Semiconductors and TSMC-backed Vanguard International Semiconductor Corp announced a $7.8 billion joint venture for a plant that will make 40 to 130 nm chips for the automotive, industrial, consumer, and mobile market segments. Production is expected to start in 2027.

Challenges, opportunities

In the view from New Delhi, Singapore's semiconductor industry is limited to "mature-node chips" (process node technology of 28 nm or more), which are used in appliances, cars, and industrial equipment. It is not equipped to make high-end logic chips like the ones used in the AI sector (process nodes of 7 nm and smaller, requiring specialised production methods).

As the costs of production increase, semiconductor companies are seeking to diversify some low-cost and labour-intensive operations out of Singapore. For example, Utac, a semiconductor test and assembly services provider, has moved some of its more manual and technologically dated operations to Thailand. Also, Singapore does not appear keen on following the path of countries who are offering incentives to attract semiconductor investments.

As several countries including India work on building domestic semiconductor sectors, the industry in Singapore may come under pressure, especially with the increasing cost of production and the limited resources of land and labour in the country.

From New Delhi's perspective, there is scope for collaboration with Singapore in talent development, and knowledge-sharing about best practices in managing semiconductor industrial parks (called Wafer Fab Parks in Singapore).

India's abundant land and competitive labour costs could encourage semiconductor companies in Singapore to look at the country for their expansion plans. There is also scope for India to engage and collaborate with semiconductor equipment and material manufacturers in Singapore to develop its own semiconductor manufacturing ecosystem.

Relevance: GS Prelims; Economics
Source: Indian Express

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