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MIND MAPS

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Annual Status of Education Report (ASER) 2017

Introduction

- 2017 ASER report brought out by NGO Pratham focussed on 14 to 18 age group unlike earlier surveys, which measured learning levels in the 5-to-16 age group.
- The survey looks 'Beyond Basics', exploring beyond foundational reading and arithmetic in an attempt to throw light on activity, ability, awareness and aspirations of youth in this age group.
- ASER 2017 was conducted in 28 rural districts spread across 24 States and generated only district-level estimates.

Key Findings

- 14% of rural youth in the age group of 14-18 failed to identify the map of India.
- Significantly, 36% of those surveyed did not know that Delhi is the capital of India.
- Most 14-18 year olds are in the formal education system — only 14.4% are not currently enrolled in school or college.
- About 25% of this age group still cannot read basic texts fluently in their own language.
- The proportion of youths who have not acquired basic math skills by age 14 is the same as that of 18-year-olds.
- Irrespective of students being enrolled in formal education, 42 per cent youths are working mostly in agriculture or household jobs.

Highlights

- The number of girls enrolment falling sharply with age.
- The consequence of the RTE has been that most tend to continue to stay within the formal education, even after 14 years of age.
- The data shows that at age 15, 92.1% of the children surveyed continued to be in school/college.
- Inability to apply basic literacy and numeracy skills to everyday tasks.
- These skills that they are lacking in are important not just in terms of work but broader life itself.
- Many of these students are the first in their families to complete eight years of schooling.
- So, their ability to do basic calculations and make correct decisions is important not only for themselves but for the whole family.
- Girls and young women have far lower access to computers and the Internet.

Concerns / Challenges

- The school education currently isn't equipping youngsters for life outside.
- While the youth are high on aspiration (about 60% wanted to study beyond Class 12), they are short on vital, everyday skills that are needed to help them get to where they aspire.
- Gender divide with boys outperforming girls in almost every task such as counting money, adding weights and access to digital media.
- 14 to 18 age is a group high on aspiration but with limited access to information and counselling.
- Merely increasing enrolment will not lead to the development of elementary skills that education is supposed to provide.
- The quality of education remains a concern.
- Deficiencies in the curriculum and teaching infrastructure.
- Rashtriya Madhyamik Shiksha Abhiyan (RMSA) has not been much of a success in India's secondary education.

Way Forward

- As suggested by ASER there is a need to provide foundational skills in time.
- 73% have access to a mobile phone. So this is something the policy makers can build upon.
- Academic skills don't seem to get transferred to life skills or everyday skills. It's time to connect the dots.
- It probably involves a relook at the curriculum.
- Need for foundational agricultural courses that replace the usual bachelor's courses, seeding the necessary improvement in rural livelihoods.
- There need to be measures in place to identify and focus on students who have fallen behind in the earlier grades.
- Interventions aimed at improving cognitive skills rather than mere enrolment rates are required to boost economic growth.
- Need for early childhood interventions, retention of girl students, learning in primary schools and employability of students after high school.
- In-school and after-school academic support that measurably increase student learning levels.
- Regular assessments of teachers will determine individual gaps/needs in teachers.

Conclusion

- The bright future of the nation lay in the hands of well-educated and well-informed people.
- As India aspires to surpass major economies by 2030, it must also focus to meet the aspirations of India's young and provide them with an education system that is innovative and proactive.

Anti-Dalit Crimes in India

Introduction

- The violence on the 200th anniversary celebrations of the battle of Bhima-Koregaon has once again put the spotlight on violence against Dalits in India.
- Despite robust laws, violence against India's most oppressed people continues to rise.

Reasons

- Our feudal history, high poverty rate, and the important role religion has in society, are among the reasons
- Half of all atrocities committed against Dalits are related to land disputes
- Rising living standards of Dalits, this appears to have led to a backlash from privileged communities.
- Rising income and growing educational achievements may have led many Dalits to challenge caste barriers, causing resentment among upper caste groups
- There is also a possibility of the rise due to high registration and recognition of such crimes and dalits have increasingly started claiming their rights.
- Agrarian distress and lack of rural employment among the upper castes.
- Denial by dalits to continue with dehumanising jobs like manual scavenging, skinning animals, bonded labour, etc.
- Vote bank politics and populist policies project dalits in bad light and fuel anti-dalit sentiments.
- Large scale prevalence of uneducated, low skilled, unemployed youth falls prey to such provocation and unleashes violence.

Way Forward

- Enforcement of laws appears to be very weak.
- The Prevention of atrocities Act has not made a huge impact
- Lack of political and administrative will to resolve crimes against dalits.
- Dalits are severely under-represented in the leadership across political parties

Concerns / Challenges

- The present need is to depoliticise the Dalit discourse and strive towards an independent, objective and solution-centric Dalit narrative.
- Stringent norms to enforce SC, ST Prevention of atrocities act with accountability of police for not enforcing the legislation in true spirit
- Disqualification of MP, MLA and elected leaders under representation of People act, if they indulge or instigates such violence

- Strengthening the powers of National commission for SC and ST, NHRC, SHRC to protect the interest of the oppressed classes
- Moral education on equality, Human rights, compassion, liberty and dignity of life since childhood to develop egalitarian mindset

- Social boycott and non cooperation with groups who promote untouchability, discrimination on the basis of caste lines

- Crowd fund Dalit entrepreneurs who in turn contribute as part of CSR to further class interest

- Address structural issues of agrarian distress, employment generation, rural-urban divide, expansion of bank credit etc.

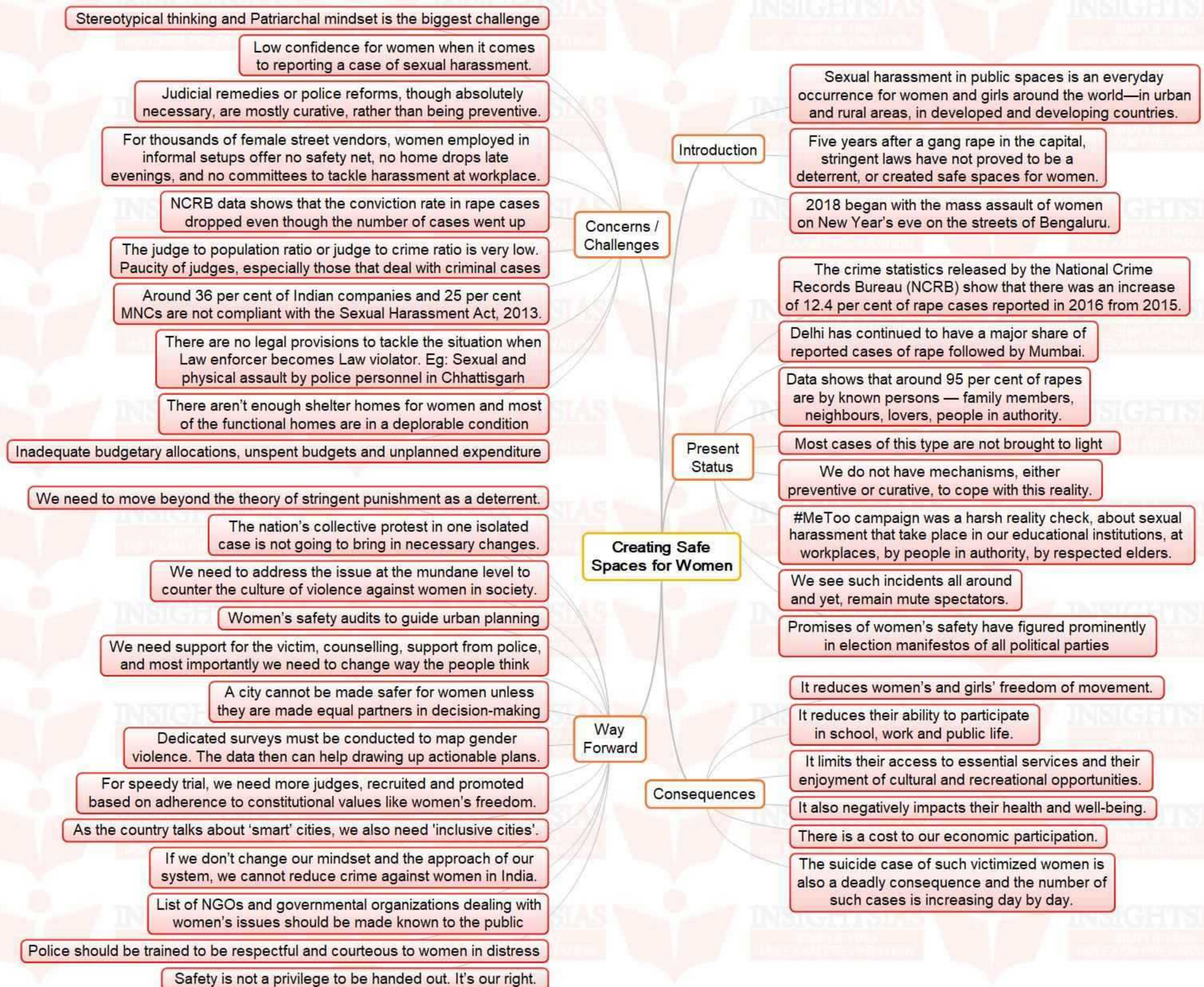
- India could learn from the experiences of Malaysian model of economic empowerment and South African policy for Blacks

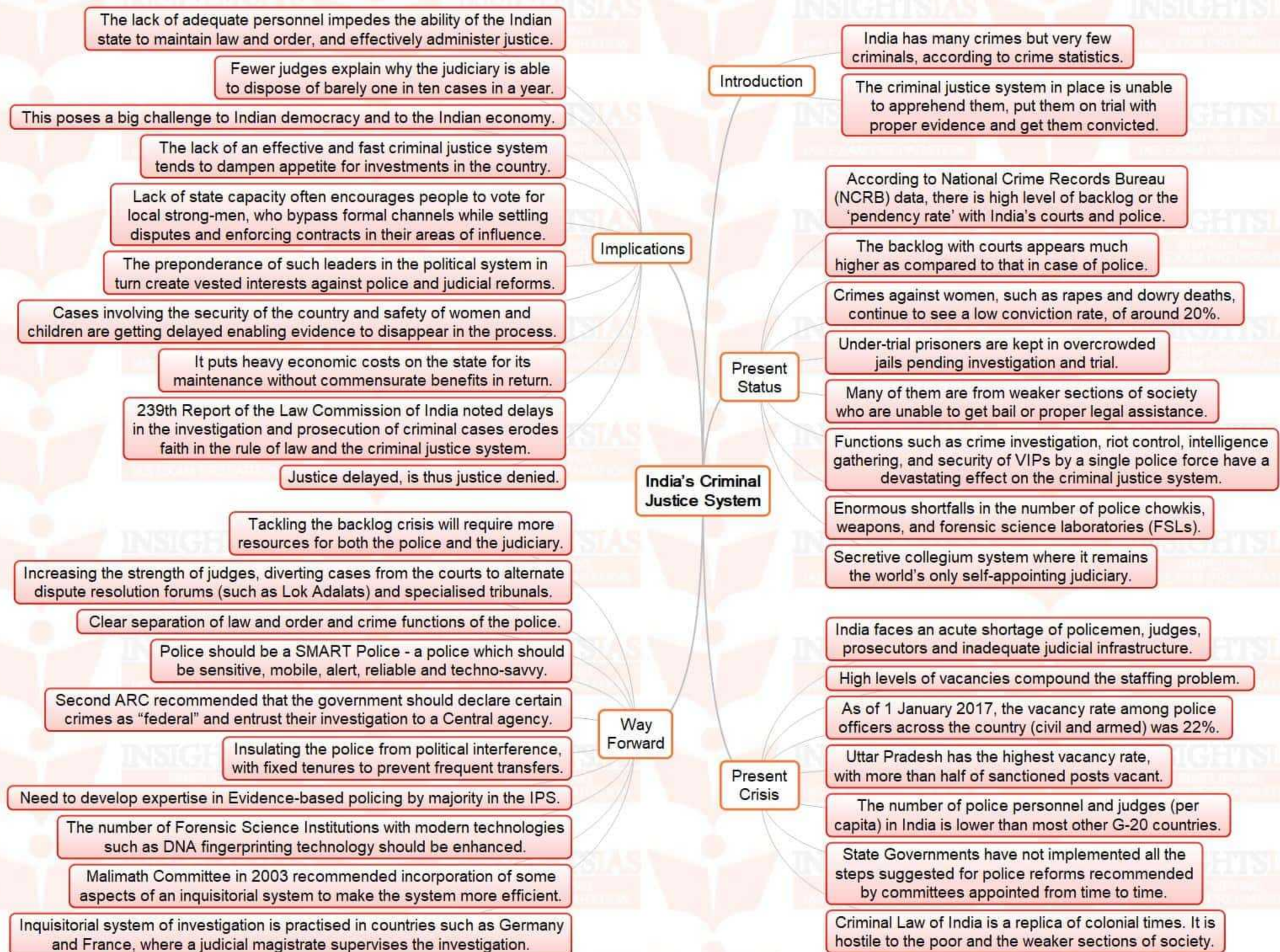
- The creamy layer of Dalit community too should take up the responsibility to help them join the main-stream of the society, and work for their true development in a peaceful manner.

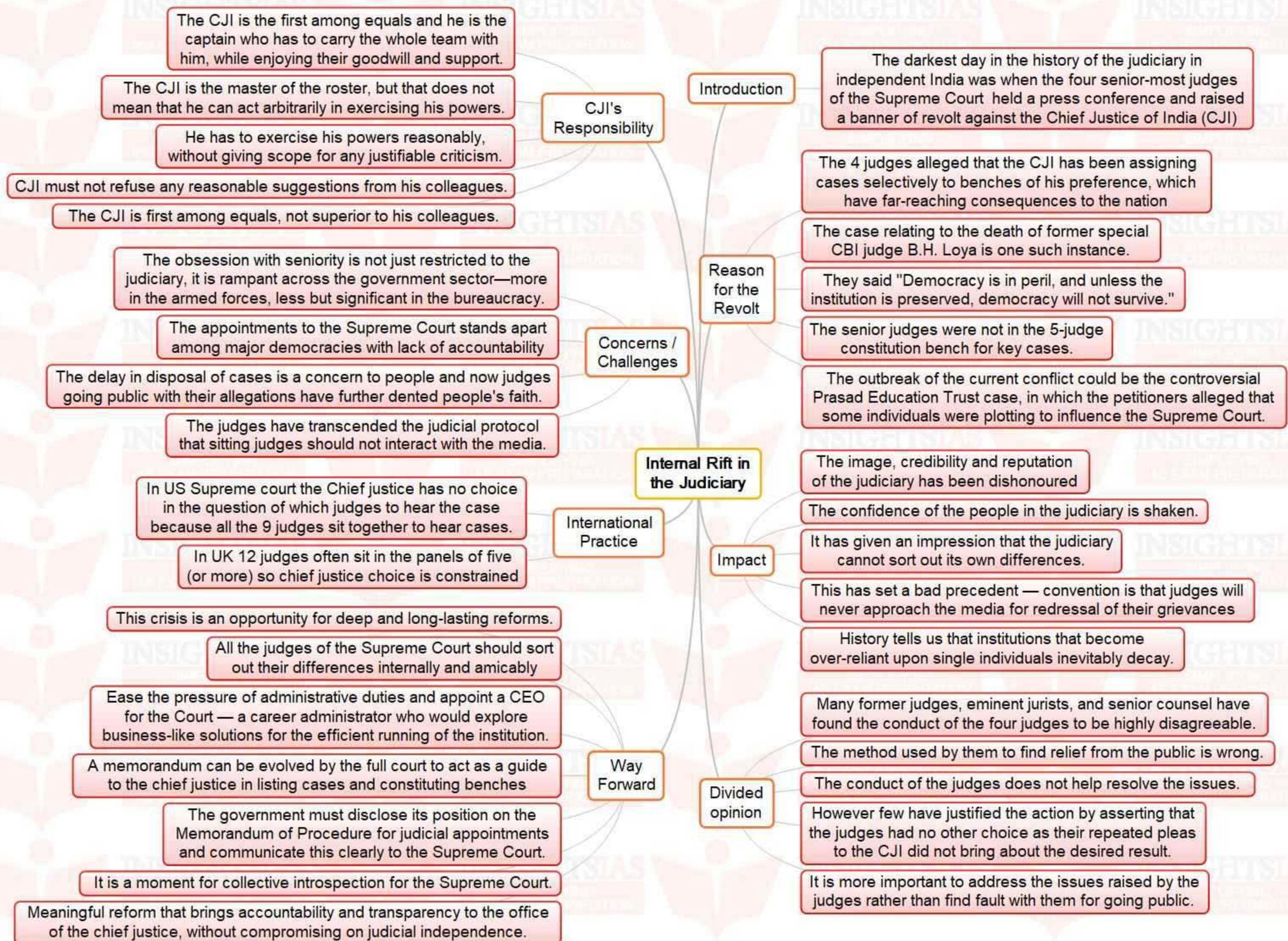
- Voluntary giving up of Reservation for the cause of poorer section of the group —Eg. Son of a Dalit doctor, Dalit Politician, Dalit Businessmen must give way the reserved space for the son of a Dalit landless labourer, or son an urban wage earner

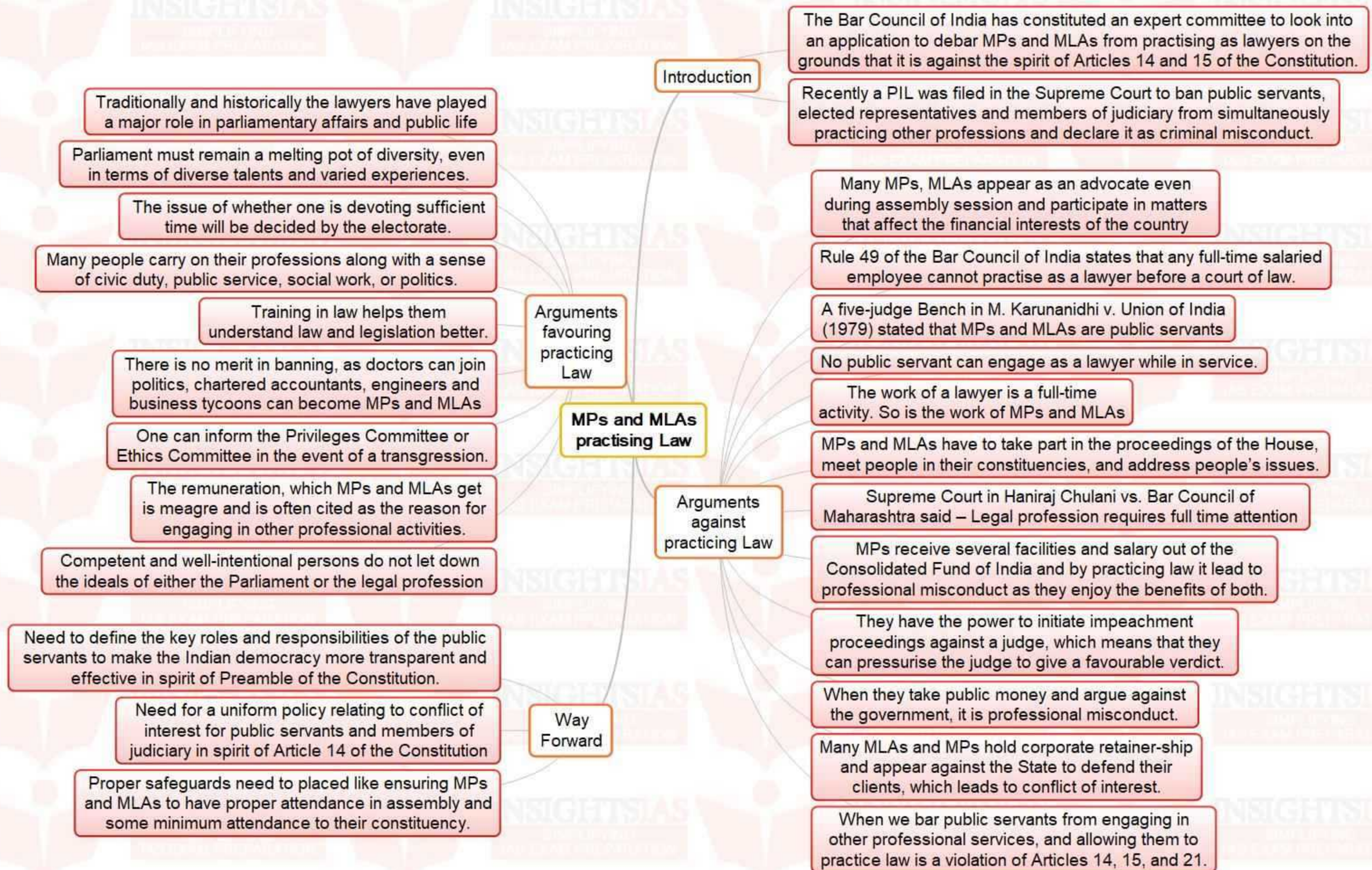
Present Status

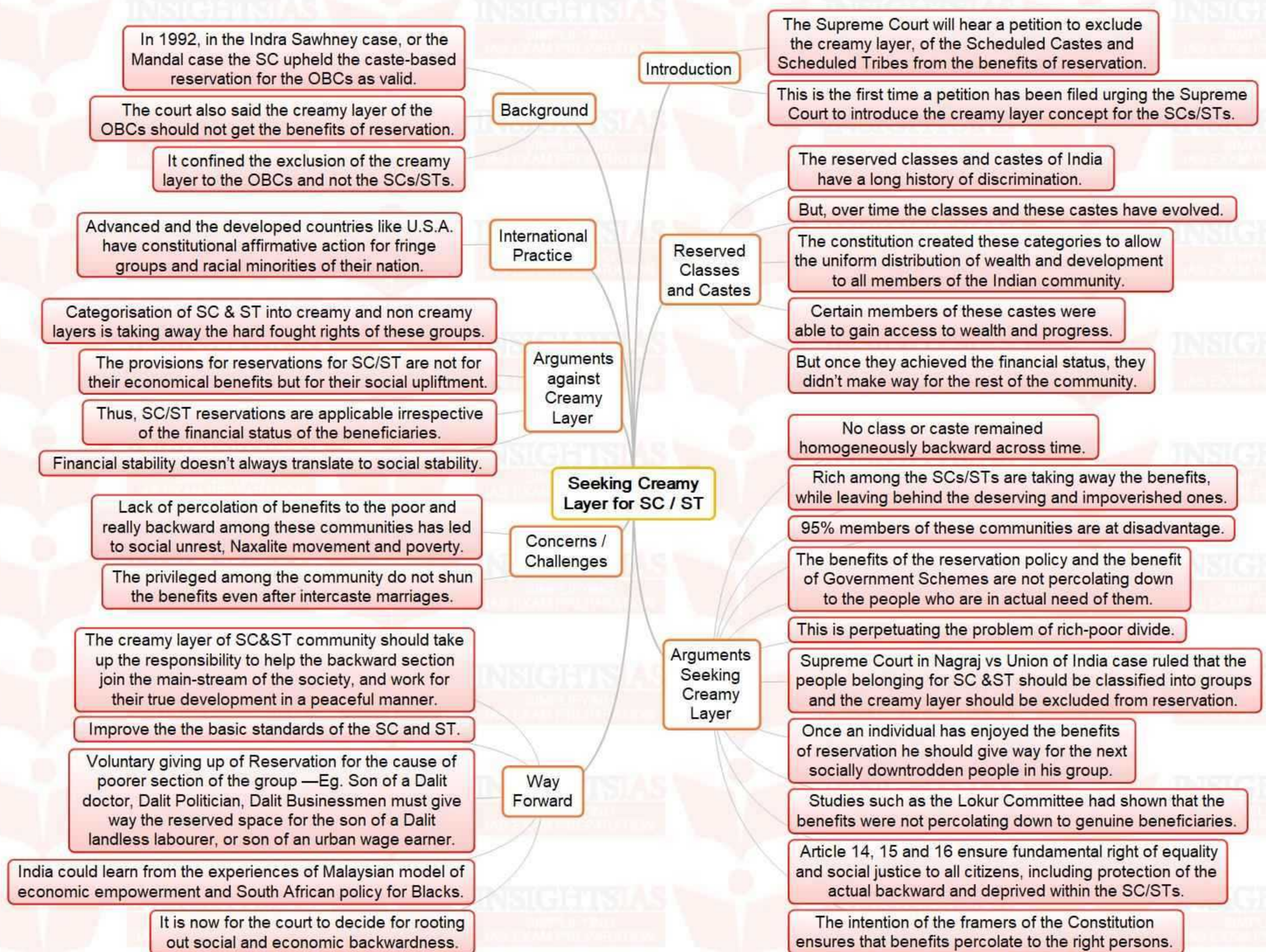
- The data from the National Crime Records Bureau (NCRB) show that the rate of crimes against Dalits has risen in recent years, even as the conviction rate for such crimes has declined.
- Uttar Pradesh, Bihar and Rajasthan are the states with most instances of crimes against Scheduled Caste people.
- Crime against Dalits – ranging from rape, murder, beatings, and violence related to land matters have increased.
- In 2016, an estimated 214 incidents of crimes against SCs were reported per million SC population, up from 207 the previous year
- While Dalits continue to be the poorest of all social groups in absolute terms, their position vis-a-vis upper castes has improved over the past decade.
- While Indian law has officially abolished the caste hierarchy, untouchability is in many ways still a practice.
- Dalit women continue to be victims of violence and rape
- Dalits are still heavily concentrated within certain geographical areas of cities, mostly in unauthorised settlements and poor neighbourhoods.

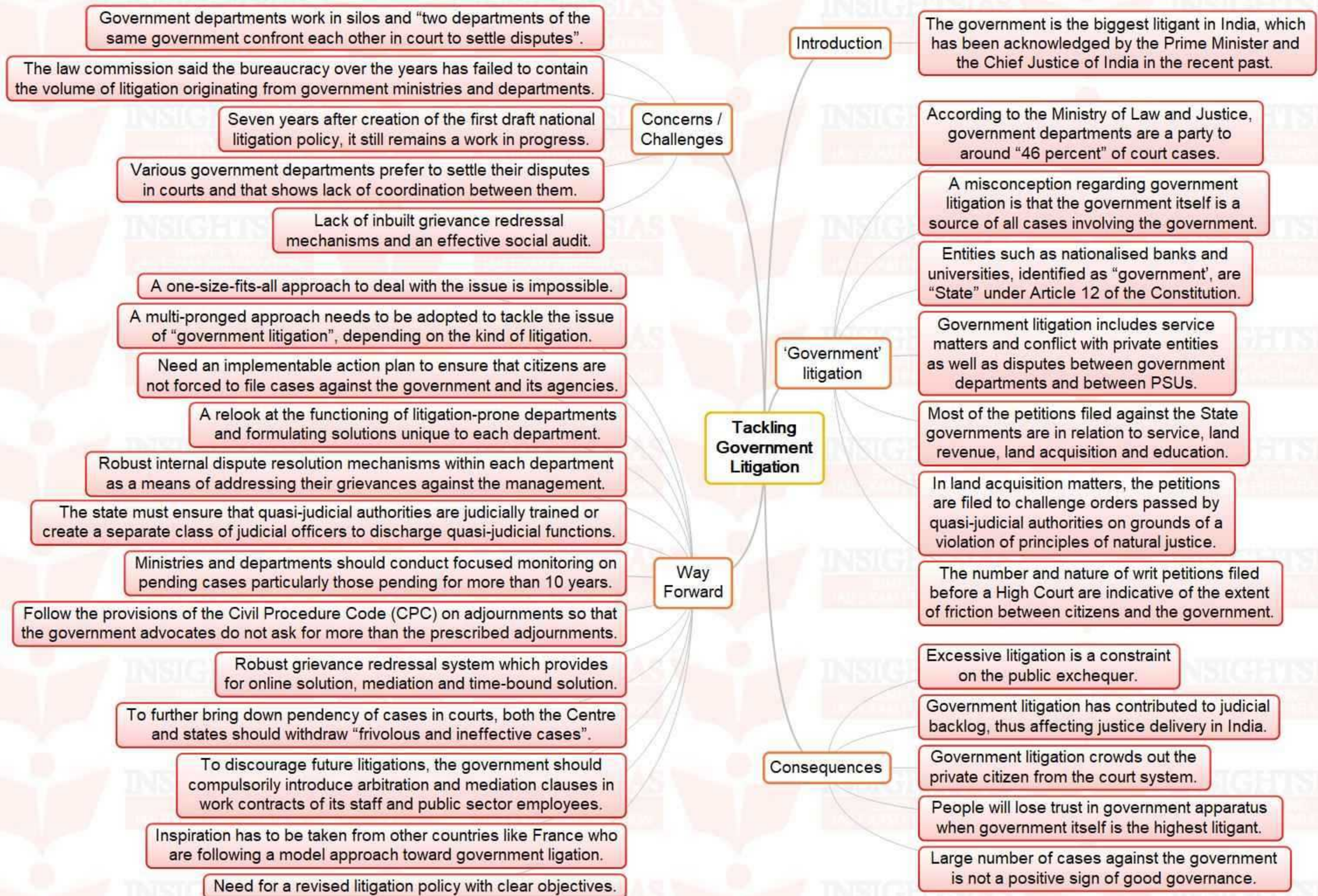


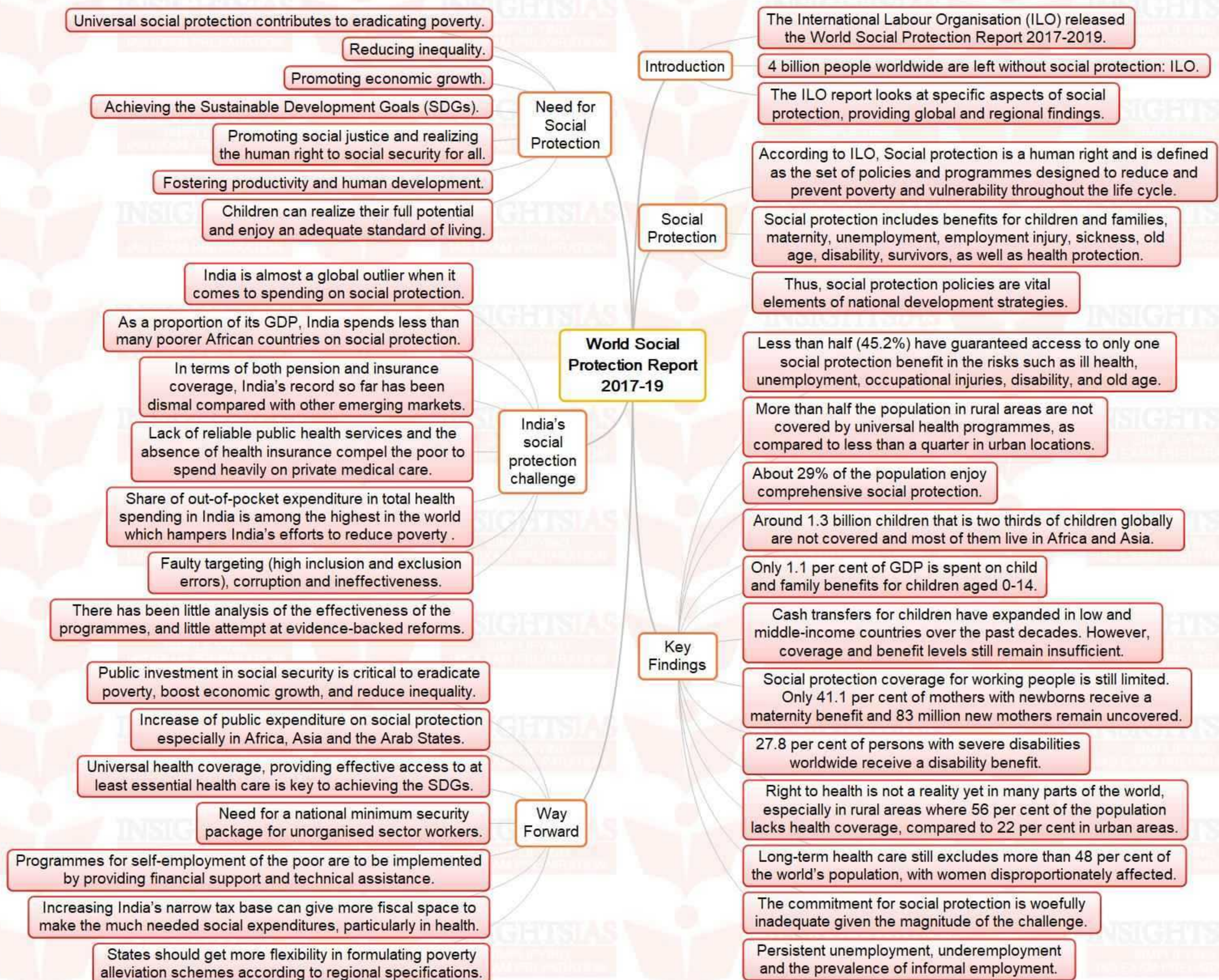












Changing Dynamics of India-China Relations post-Doklam Standoff

Introduction

The year 2017 is set to be a special year in the history of China-India relations.

If 2016 was marked by China's decision to block India's entry into the Nuclear Suppliers Group, 2017 saw military confrontation in the Doklam plateau.

The developments in Doklam "severely tested" bilateral relations in 2017.

Both sides patted themselves on the back for the peaceful resolution of the crisis

Some Positives

India's exports to China showed promise of steady increase though the trade deficit continued to be high.

China's investment in India, specially by mobile phone makers besides e-commerce giant Alibaba were on the rise.

At the ninth BRICS Summit, Pakistan-based terrorist outfits like JeM, LeT and the Haqqani network were included in the BRICS joint declaration

Beijing's offer to rename the China-Pakistan Economic Corridor (CPEC) and also create an alternative corridor if India joins OBOR

India and China made a joint proposal to the WTO that called for eliminating trade-distorting agricultural subsidies given by developed countries

China and India have huge potential despite long list of differences.

Present Crisis

The critical issue in bilateral relations is the absence of mutual trust.

Since 2008, there have been tensions on the boundary, imbalance in trade, strategic competition in the region and the divergence on international issues.

Stabilising the border has become hard as the frequency and intensity of the incidents has grown.

The Panchsheel agreement signed in 1954 was of no help in resolving the difficulties over Tibet and the boundary that emerged in the late 1950s.

One of the lessons from Doklam is that more confidence building measures on the border are not going to guarantee stability.

As Beijing's national power has grown, it has become more assertive on territorial disputes and its risk taking has increased.

Belt and Road Initiative

China has invested much personal and political capital on the BRI

India's concerns have been so deep that it publicly criticised the BRI and stayed away from it.

China insists that the BRI is a win-win for both

An unconditional bilateral discussions on the BRI is required.

The CPEC cuts through the Gilgit and Baltistan areas of Kashmir which India claims are illegally held by Pakistan.

Beijing's latest move to extend its USD 50 billion CPEC to Afghanistan

The victory of the pro-China Communist Party of Nepal (UML) leader K P S Oli in Nepal.

He has promised to use Chinese investments to build up infrastructure including links across the Tibet-Nepal border.

China's free trade agreement with the Maldives

The signing over of Sri Lanka's Hambantota port to China and "Chinese debt trap" in Sri Lanka makes India's ties with Sri Lanka difficult.

Chinese intentions in the South China Sea and the South Asian neighbourhood, including Sri Lanka, Nepal and the Maldives.

Reports about the diversion of the Yarlung Tsang-po, the upper stream of the Brahmaputra river and the polluting of its waters as it enters Arunachal Pradesh

Concerns / Challenges

The two sides must "turn to a new page"

We need a declaration that addresses the core problems in the relationship that generate the mistrust.

Urgent need to learn lessons from the Doklam crisis and prevent the recurrence of such incidents.

Need for a renewed effort to resolve the boundary dispute to maintain peace and tranquillity in border areas.

India and China should "reinforce communication and coordination in international affairs and make the international order more just and equitable".

Maintain regular contact and advance the development of bilateral relations in all areas.

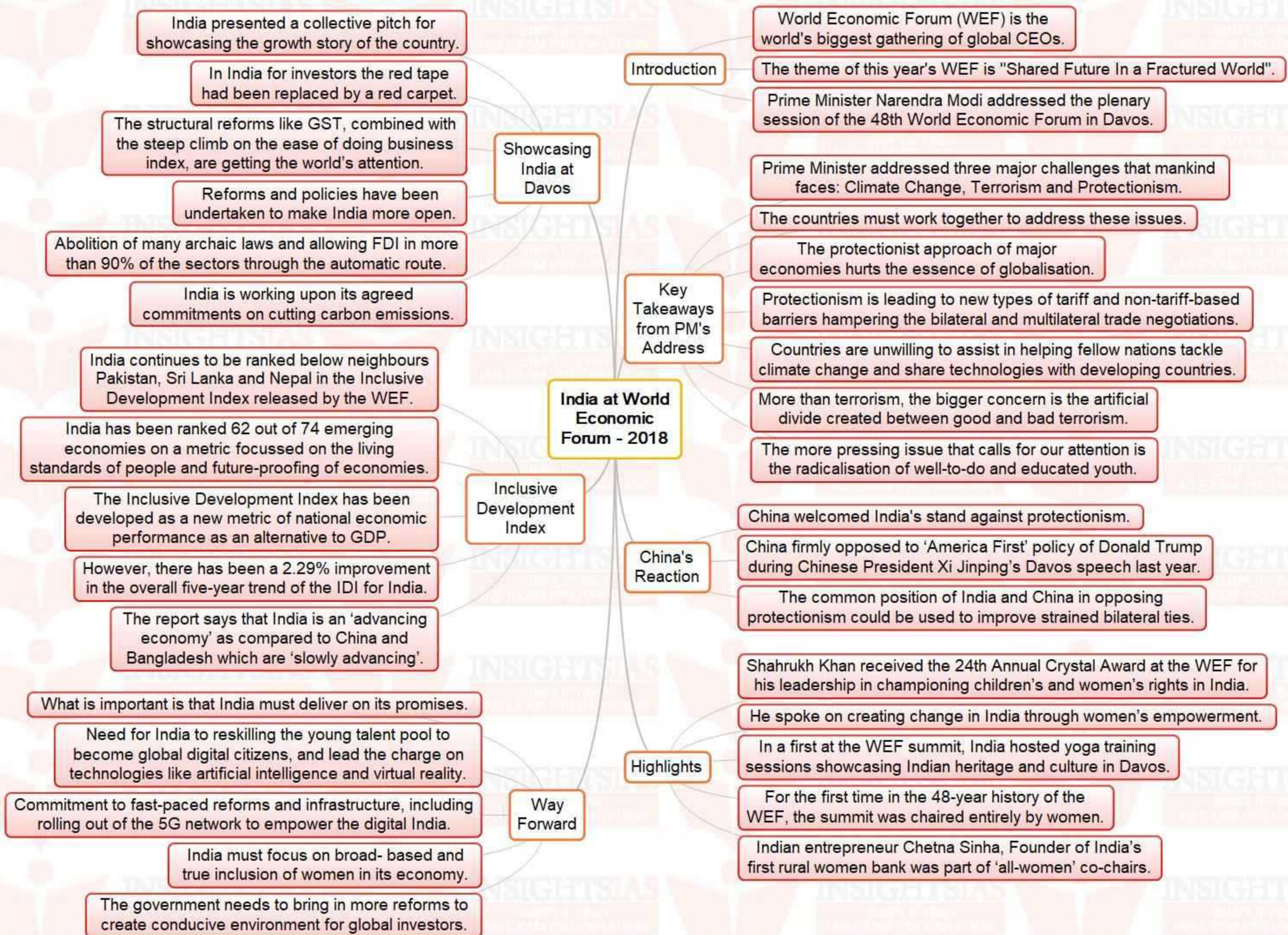
Seeking mutually acceptable resolutions on the differences with due respect for each other's sensitivities, concerns and aspirations

Need to respect each other's Sovereignty and sincere adherence to Panchsheel (Five Principles of Peaceful Coexistence)

Way Forward

Conclusion

A strong India-China relationship is important not only for the mutual benefit of the people of India and China, but also for the region and the world



India - Israel Relations

Introduction

Israel's Prime Minister Benjamin Netanyahu's six-day visit to India is a historic occasion.

Benjamin Netanyahu termed Israel's relations with India as a "marriage made in heaven but consecrated here on earth".

There is "prosperity, peace and progress" in bilateral ties.

The visit of Prime Minister Netanyahu is a significant landmark in India-Israel relations.

The visit is significant especially after India voted in the UN General Assembly against recognising Jerusalem as Israel's capital.

The visit clears apprehensions of a road block in India-Israel relations.

This is only the second visit by an Israeli prime minister since the two countries established diplomatic ties in January 1992.

The two countries are celebrating 25 years of friendship.

It is a good opportunity for businessmen from both sides to interact with and understand each other, and bridge the cultural gap that exists.

The two countries inked nine pacts in key areas including oil and gas sector and cyber-security.

The iconic Teen Murti Chowk in central New Delhi was renamed as Teen Murti-Haifa after Israeli City Haifa.

Significance of Benjamin Netanyahu's visit to India

Defence Ties

India already has robust defence ties with Israel which is expected to strengthen further.

India is the largest arms buyer from Israel; trade is to the tune of approximately \$600 million.

If defence ties keep increasing at the same rate, Israel may replace Russia as India's largest arms supplier.

Last year, India signed the biggest weapons deal in Israeli defence history, which is nearly \$2 billion.

This will provide India with an advanced defence system of medium-range surface-to-air missiles, launchers and communications technology.

Water and Agriculture

Israel has become one of the foremost technology superpowers in areas such as rainwater harvesting, use of oceanic water and using that for irrigation in the most dry land.

Israel has mastered water conservation techniques and India can learn from it.

It helps India to face its water stressed condition.

Another area of potential cooperation is cleaning polluted rivers.

The two sides must expedite talks on trade and investment in an effort to take bilateral ties to the next level.

Need for a Free Trade Agreement (FTA) as well as a Bilateral Investment Treaty (BIT) at the "earliest" in an effort to forge greater business-to-business ties.

India must provide greater market access especially in the farm sector, pharmaceuticals and automobiles segments.

Together, the existing Indian and Israeli innovation ecosystem can create a global impact.

Israeli companies can join hands with India's manufacturing sectors to scale up the innovations.

Greater partnership in new R&D projects in India in areas like digital healthcare, agriculture and water.

India can leverage its space technologies to Israel for its developmental purposes where India enjoys upper hand.

India could well take a cue from how Israel maintains stringent external and internal security, allowing Israeli settlements right up to the border of conflict zones.

Both need to cooperate to combat growing radicalisation and terrorism, including in cyber space.

Israel will be benefited from large pool of skilled Indian engineers and doctors as Mr. Netanyahu's quoted "Indian talent and Israeli technology equals India-Israel ties for tomorrow."

Way Forward

Recent Developments

"India-Israel Industrial R&D and Technological Innovation Fund" was concluded in July 2017 when Prime Minister Narendra Modi visited Israel.

This will support high value-added R&D and enhance the knowledge base of Indian technology industries.

The techno-economic collaboration is expected to increase significantly.

Israel will invest \$68.6 million to boost cooperation with India in areas like tourism, technology, agriculture and innovation over a period of four years.

India has been trying hard to balance its relationship with Israel with its support to the Palestinian cause.

Israel seems to understand India's position, which is a sign of maturity.

India and Israel are set to jointly develop new crop varieties and share post harvest technologies following the success of the 10-year-old Indo-Israeli Agriculture Project (IIAP).

Economic Relations

Trade, technology and tourism are the three key areas in India-Israel economic relations.

Over the last 25 years, bilateral trade has increased from \$200 million to more than \$4 billion (excluding defence) in 2016-17.

Given India's large market and huge consumer base, the numbers are low compared to India's economic relations with other countries.

The Decline of the WTO

Introduction

The WTO's latest ministerial conference in Buenos Aires ended with a lot of talk but no meaningful action.

The last 'low-hanging fruit' the WTO was able to garner for its members was the Trade Facilitation Agreement at the Bali ministerial in 2013.

Present Trend

Growing tension between developing countries who want to address "legacy issues" and inequalities, and developed countries move to new issues like e-commerce and investment facilitation.

Since the late 2000s, the organisation has been unable to carry out a successful conduct of multilateral trade negotiations.

Inability of WTO to bring together the developed and developing countries to build consensus on Doha Agenda.

One-sided nature of the original agreements

The North-South divide

BRICS lobby on subsidies, agriculture and food security at successive ministerial meetings.

Declining role of dispute settlement body. It has not been able to enforce its rulings effectively.

Negotiations are becoming more cumbersome

The U.S. and the EU have been losing interest in multilateralism in trade.

US having stepped back from its traditional leadership role when it comes to international trade.

The US has been a reluctant participant in the WTO dispute resolution process.

US's patchy compliance with WTO decisions

In a dispute where US online gambling sites were noted to be GATS non-compliant, the US offered a \$200 million settlement package to Antigua and Barbuda. However, it has only paid \$2 million till now.

South Korea has stated that the US has not implemented the WTO ruling on South Korean washing machines

In third-party disputes, the US has taken a position that undermines the dispute settlement system.

The US has refused to participate in the appointment of new judges to the appellate body.

Consequences

Real threat to the entire WTO system and the dispute resolution mechanism.

Trump's position of 'America First', and now slowly dismantling the working of the WTO system, will have long-term effects on global trade.

The pendulum of global trade is swinging from the richest nations to the most populous ones.

Global rule-making will face serious problem if countries take actions that lead to loss of trust in having a constructive dialogue process.

Multilateral agreements within the WTO framework have far-reaching implications on global trade unlike bilateral deals.

A weakened EU and Britain need a robust multilateral system

Outside the WTO system, weaker countries will be disadvantaged.

Regionalism cannot be an alternative. Regional trade groups have succeeded in some places and they have not elsewhere.

India's own experience with bilateral trade agreements has not always been good.

The world therefore benefits from a multilateral trade body – though a fairer one than the WTO of the 1990's.

Need for Multilateralism

As the U.S. loses interest in multilateralism in trade, India should actively try to arrest the organisation's slide

India should be more actively engaged to make the WTO a more equitable organisation.

India needs to work on persuading all members of the WTO to return to the table and negotiate on issues like agriculture, industrial tariffs, and services.

India's positions have much in common with the African nations' stand; we have to build bridges with Africa.

India needed to quickly forge a larger alliance to counter the moves that are against India's interests.

India's journey towards achieving 5 trillion dollar economy is not possible without expansion of our basket of global trade.

Way Forward

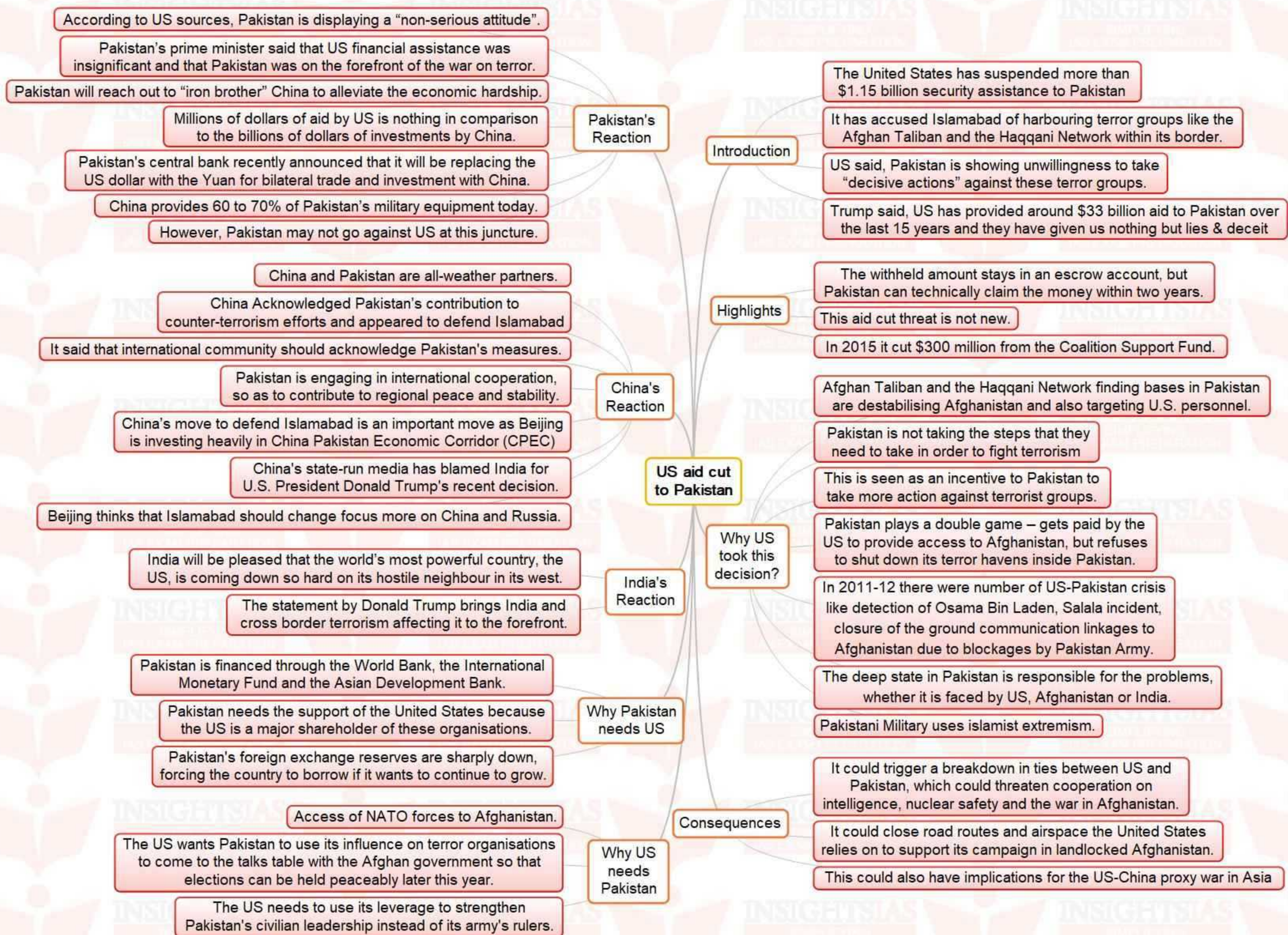
WTO needs to reinvent itself, focusing on issues where consensus can be built.

BRICS can play important role in bringing WTO back in center stage.

Development and inclusiveness must remain at the heart of our work.

India's Role

US Position



Electronics Manufacturing in India

Introduction

- India is one of the fastest growing economies in the world. But it is lacking in electronics manufacturing sector.
- India has a share of about 1.5 per cent in the world in total electronics hardware production.
- Data for 2014-15 shows that about 58% of domestic consumption is sourced through imports.

Opportunities

- India offers the 3 'Ds' for business to thrive — democracy, demography and demand.
- A growing middle class, rising disposable incomes, declining prices of electronics and a number of government initiatives have led to a fast-growing market for electronics
- The industry has the potential to provide millions of jobs, directly and indirectly.
- India has a large domestic market and a number of trained engineers
- China, with its rising labour costs, will soon not be the global manufacturing hub. This is an opportunity for India.
- GST has increased the distance that trucks are travelling by about 30% and also reduced the confusion associated with various state and local taxes.

Present Status

- India's electronics manufacturing has been unable to respond to the rising demand leading to a growing trade deficit.
- Of the country's total demand for electronics, between 50-60% of the products and 70-80% of the components are imported.
- It will increase the import bill and the country loses an opportunity to create employment for millions
- Due to a limited base of local component suppliers, manufacturers are dependent on importing parts.
- The custom duties on the components (or parts) used in electronic products make it expensive for domestic manufacturers to compete with foreign competitors.
- FDI in electronics is less than 1% of the total FDI inflow
- India ranks 146 in the category of trading across borders in Doing Business rankings due to the high costs of compliance.
- The numerous forms, fees, inspections and the associated time discourage domestic producers from exporting and keep them out of the international supply chain.

Concerns / Challenges

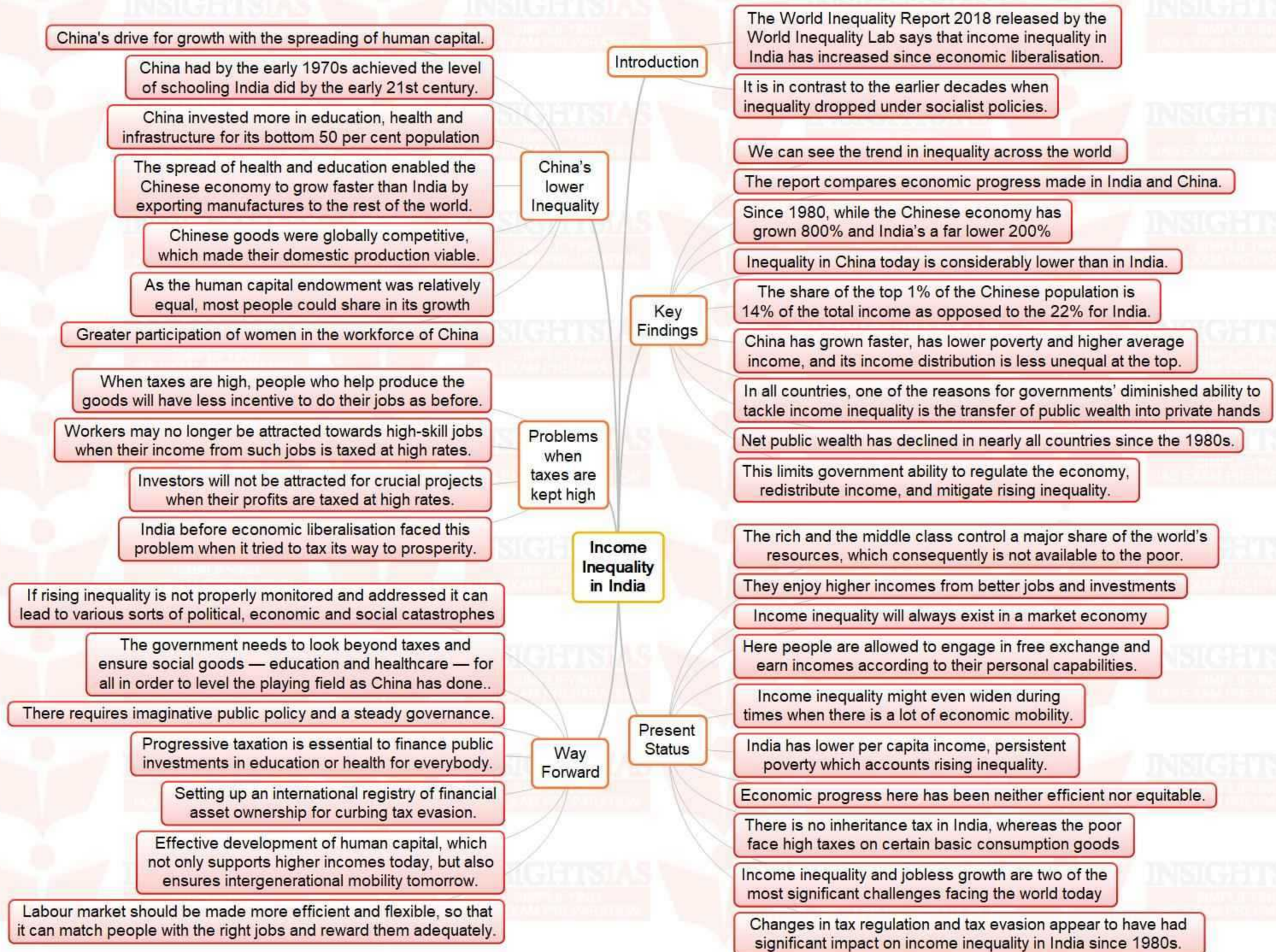
- According to a report, expenses on electronics imports could surpass those on oil imports by 2020.
- Low FDI in Electronics because of onerous labour laws, delays in land-acquisition and the uncertain tax regime
- Preponderance of electronic products from countries like. China, South Korea, Japan etc
- Lack of Rare Earth Minerals. China currently dominates the reserves of Rare Earth minerals
- Under inverted duty structure, the raw materials attract more import duty than the final products.
- R&D and Innovation in electronic manufacturing is lacking in Indian industries.
- The electronics manufacturing in India is insignificant in terms of quantity and quality compared to China.

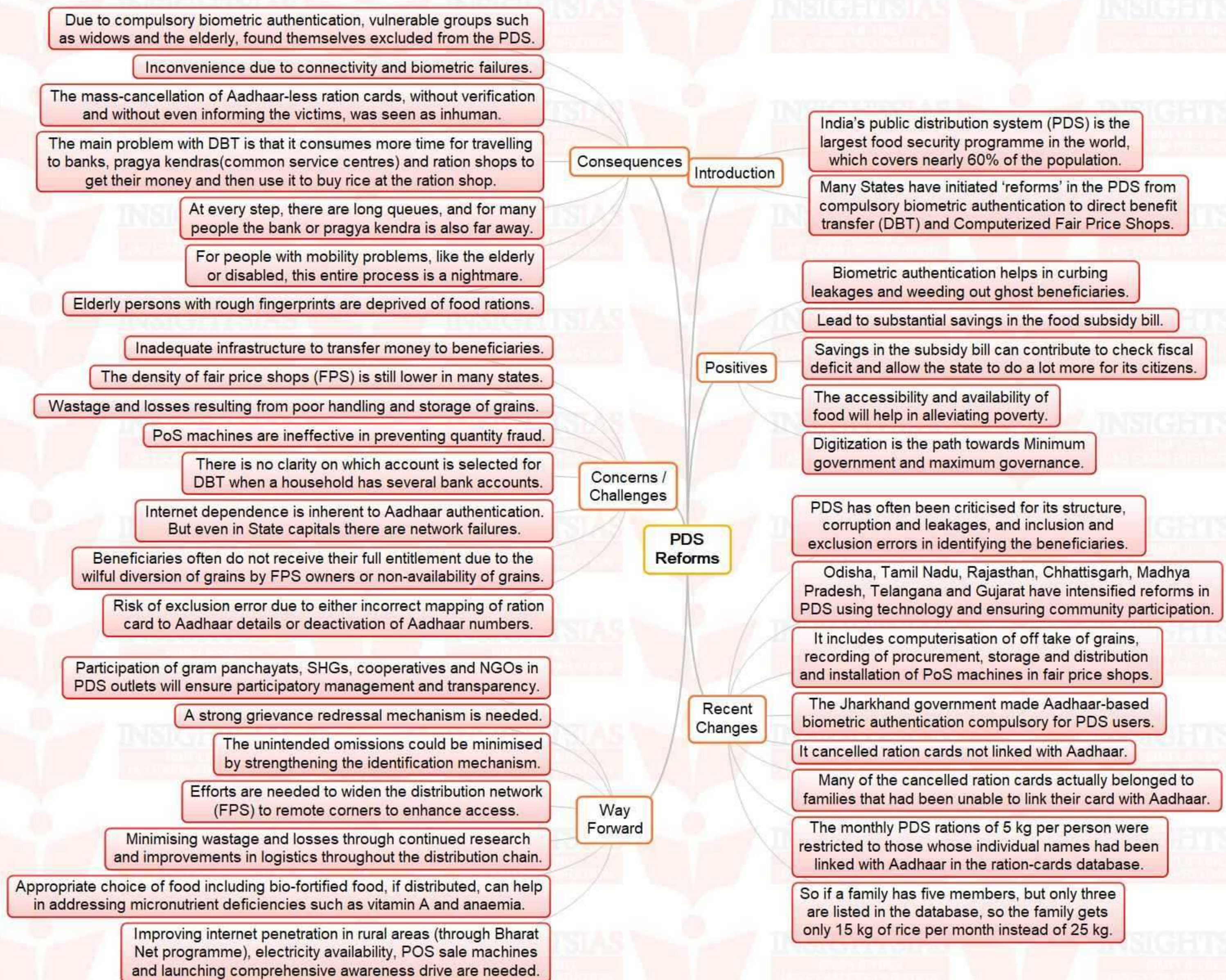
Government Initiatives

- The government has listed the electronics industry as a priority sector under its Make In India campaign.
- Encouraging domestic manufacturing by providing tax and tariff concessions, investment subsidies, preferential market access in government procurement and export subsidy.
- Government increased the import duty on various electronic items like smartphones, LED bulbs and microwave ovens
- The Government has envisioned a policy to substitute the import of electronic products by 2020.
- Government initiatives like Digital India are providing an impetus to the electronics manufacturing sector.
- Further boost is being provided in this area through Skill Development initiatives.
- Providing incentives through Modified Incentive Special Package Scheme (M-SIPS) and Electronics Development Fund (EDF)

Way Forward

- Electronics manufacturing needs a policy push to attract more FDI in Electronics
- Increase the country's general competitiveness in the export market
- Bring the duties on components down to the level of the product.
- In order to inspire investor confidence, laws need to be liberal and predictable.
- Establish special economic zones like the Dubai International Financial Centre—Dubai's normal civil and commercial laws do not apply in this area
- Reforming labour and land would make India an attractive destination in the global supply chain.
- Anomalies which discourage domestic manufacture on account of an inverted duty structure need to be rectified.
- Providing tax benefits that incentivise investment in domestic manufacturing facilities.
- Create a hundred design studios for new product development.





Recapitalisation of PSBs

Introduction

The government recently detailed the Rs 2.11 lakh crore recapitalisation plans for Public Sector Banks (PSBs) announced last year including a reforms package.

Details of Recapitalisation Plan

Rs 80,000 crore will be through recapitalisation bonds.

In exchange for bonds, the government will get shares of banks, a transaction that will not have an impact on the fiscal deficit.

The bonds will have a maturity of 10 to 15 years and priced at around 8 per cent.

The bonds will not have a statutory liquidity ratio (SLR) requirement and would be non-tradeable.

Rs 8,139 crore as budgetary support.

Banks will raise Rs 10,312 crore from the market.

An 'annual report card' for each of the PSBs.

Providing banking facility at all corners of the country within a radius of 5 kilometres.

The government also listed a six-fold roadmap for banking reforms which will facilitate ease of banking and encourage clean business.

Other Major Reforms

The reform agenda is aimed at EASE — Enhanced Access and Service Excellence. It focuses on six themes of:

Customer responsiveness

Responsible banking

Credit offtake

PSBs as Udyami Mitra

Deepening financial inclusion

Digitalisation and developing personnel for brand PSB

Banks will need to set up specialised monitoring agencies for loans above Rs 250 crore and a separate vertical for NPAs.

Banks need to have a minimum 10% exposure in consortium loans.

Government has the prime responsibility of keeping the public sector banks in good health.

To help PSBs deal with bad debts and revive credit growth.

Bank recapitalisation is "critical" for the economic recovery of the country.

For enabling the banks to meet higher regulatory capital burdens under Basel III.

Gross NPAs of PSBs rose to 12.47% at the end of March 2017 from 4.72% at the end of March 2014.

Impact

It will step up lending and, therefore, growth, step up tax collections and partly bring down the fiscal deficit.

The capital infusion in PSBs will pull down lending rates, spur aggregate demand, put idle factories to work, and spark investment in 2-3 years.

Once growth recovers, the government can gradually convert these recap bonds into normal G-secs and sell them to the market.

It will enhance the banks' ability to raise equity capital.

Capital infusion will stem the downward pressure on Viability Ratings (VRs), which have been downgraded several times over the last three to four years.

It will improve the financial risk profile of the banks and help them meet Basel-III regulatory capital norms.

It also provides a cushion against an expected rise in provisioning for non-performing assets (NPAs).

Concerns / Challenges

Recapitalisation will be difficult for the government due to the compulsion to adhere to the stringent budgetary deficit benchmarks.

Recapitalisation is not going to result in the recovery of bad loans.

Banks may not take adequate precautions while lending when they know that the government will step in to help if the loans turn sour.

Increased financial strength via bank recapitalisation is necessary but not sufficient for credit expansion.

Capital mobilization from the market in the post-recapitalisation period.

Steps need to be taken to ensure governance of banks follows highest standards.

Need for institutional mechanism to ensure past is not repeated.

The banks will have to monitor loans, keep a close eye on bad debt and sell non-core assets.

Need for Bank Consolidation. The banking structure outlined by the Narasimham Committee was 3 or 4 large "international" banks and 8 to 10 "national" banks.

If some PSBs cannot mobilize the required resources for their profitable growth, they should be either privatized or merged.

PSBs must be given adequate functional autonomy and operational flexibility. Bureaucratic and political interference must be minimized.

Re-skilling the existing staff, along with direct recruitment of specialists, is needed to address the talent issue in banks.

PSBs must create or purchase the expertise for excellent project evaluation.

Way Forward

Conclusion

Recapitalisation alone cannot be the panacea. It is extremely crucial that the banking reforms are properly sequenced and executed in time.

South Korea and the U.S. are intensifying regulatory scrutiny of the market.

South Korea recently proposed legislation to either heavily regulate exchanges or ban them.

In U.S., a court ordered a popular cryptocurrency platform to hand over information related to 14,000 accounts to the Internal Revenue Service

Global tech firms such as IBM are developing their own cryptocurrency platforms for transactions in a secure and transparent manner.

World's top central bankers are preparing to issue their own Central Bank Digital Currency (CBDCs).

Japan has recognised Bitcoin exchanges as legal

Most of the new users have little knowledge about the technology, or how to verify the genuineness of a particular cryptocurrency.

A number of investors have put their money into less well-established and often spurious cryptocurrencies.

Some private cryptocurrency operators in India have said that almost 90% of the currencies are scams.

Cryptocurrencies may or may not emerge as a useful tool because they are anonymous and non-fiat currencies.

It poses challenge to states and central banks

Reports of hackings at several exchanges have exposed the risks attached to such investments.

Intense volatility of cryptocurrency makes it an unacceptably risky investment for many

There is a need for more investor awareness on cryptocurrencies

Investors must spend time educating themselves about bitcoin and the technology behind it

India must be careful to differentiate between cryptocurrencies and the blockchain technology

SEBI will have to proactively consider allowing trading of Bitcoins under existing or new laws.

Explore the use of blockchain technology in areas such as education, health and agriculture.

International Practice

Introduction

A cryptocurrency (CC) is a digital asset generated by miners across the world by solving complex mathematical problems. Eg: Bitcoin, Ethereum, Litecoin, Dash and Ripple.

Bitcoin was one of biggest buzzwords of 2017, in India and in the world.

The price of bitcoin not only shot up over 1000% in one year but also fluctuated wildly.

Blockchains are basically digital ledgers of financial transactions

Each bitcoin transaction on the network can be traced on this Blockchain

They are immutable and instantly updated across the world on thousands of computers — the blockchain.

They aid in ease of doing business.

They have the potential to streamline payment mechanisms and make them transparent.

It eliminates the need for trust

On Ethereum, a blockchain platform that calls itself "the android of the cryptocurrency world," we can set up an application that enables people to rent out idle storage space on their laptop.

We can monetise a resource through blockchain technology.

Programmable money is another example of a decentralised blockchain-based application.

Digital currencies are software programs, one can program a particular CC such that, it cannot be used to buy the product of a company that violates any law.

Artificial Intelligence and Internet of Things (IoT) can gain immensely from blockchain applications

In an IoT world, thousands of devices would need to rapidly and seamlessly transact with each other in real time

It has enormous scope for increased efficiency and cost-saving

Blockchain technology could be used in property transactions, asset registries, bank records, etc.

In Amaravati, the Capital of Andhra Pradesh, about one lakh land records have blockchain protection.

Investment in bitcoin and other cryptocurrencies increased tremendously in India in 2017.

India accounts for more than 11% of global cryptocurrency trade

The Finance Ministry recently issued a statement warning against investing in bitcoin and other cryptocurrencies.

Likening CCs to 'Ponzi schemes', it linked them to terror-funding, smuggling, drug-trafficking, and money-laundering.

The government's caution comes on top of three warnings issued by the Reserve Bank of India since 2013.

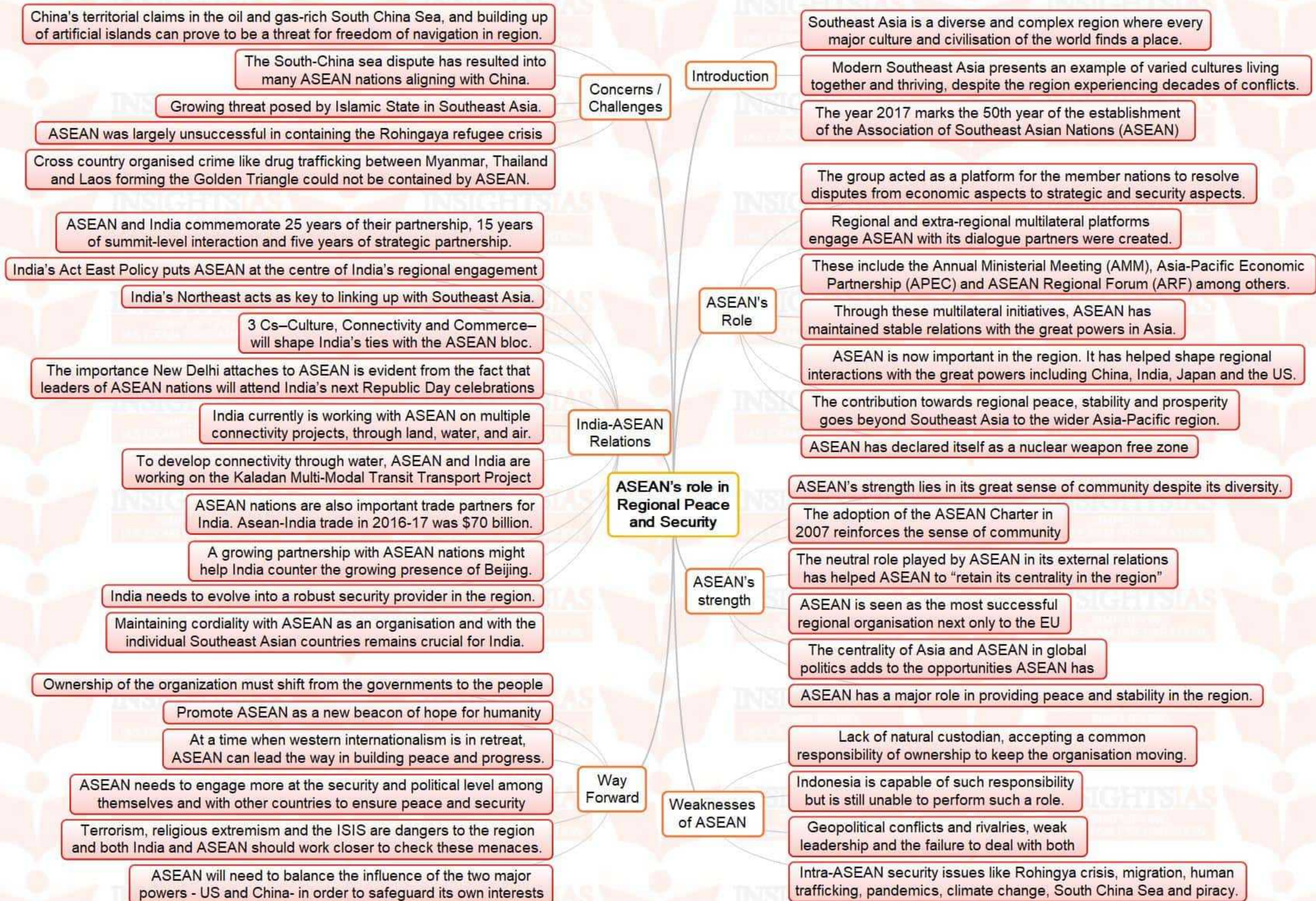
Blockchains

Cryptocurrencies and Blockchain Technology

Concerns / Challenges

Way Forward

Bitcoins in India



The Urban Heat Island Effect

Introduction

- Urban heat island (UHI) means urban areas getting significantly warmer compared with the surrounding areas.
- UHIs are formed as vegetations are replaced by asphalt and concrete for roads, buildings and other structures to meet the growing population.
- The temperature difference usually is larger at night than during the day
- UHI is most noticeable during the summer and winter.

Consequences

- Most cities in India and in the world are warmer than surrounding non-urban areas due to the urban heat island effect.
- Delhi is 4-12°C warmer due to the urban heat island effect.
- Urban dwellers may suffer from excessive changes to heat and rainfall patterns
- Rise in air pollution and heat-related biohazards.
- Increase in the use of air-conditioners in the city with increase in power consumption.
- Impact of the Urban Heat Island Effect on human health includes heat stroke, headache and tiredness.
- It will double the cities' costs for tackling global warming.
- It can make sweltering workers less productive
- Research shows that urban heat island effect contributes to climate warming by about 30%.
- Plants growth can be effected.
- High rooftop surface temperature can heat storm water runoff, which when flows into lakes and ponds raise the water temperature.
- The increase in water temperature affects aquatic life, especially the metabolism and reproduction of aquatic species.

Causes

- Rapid and unplanned urbanisation of cities
- Reduction in vegetation, water bodies and crop fields.
- Changes in land use pattern
- Heavily built-up areas and concrete structures
- Concrete and asphalt have low albedo value causing absorption of more heat.
- Dense high-rise buildings provide multiple surfaces for reflection and high absorption of solar radiation.
- Presence of atmospheric aerosols over the urban areas
- Buildings, road, footpaths and other constructions absorb heat and release it later, which increases the temperature of the surroundings.
- Use of tar and cement also triggers thermal changes
- Heat from automobiles, air conditioning, industry, and other sources also contributes to the UHI.
- All the losses mentioned negatively impact the thermal and radiative properties of the surface and make cities hotter than surrounding non-urban areas.

Way Forward

- With proper environmentally sound town planning we can minimise the impacts.
- Include passive cooling measures such as increased tree cover and increased ventilation in buildings .
- Use of sustainable building materials that absorb less heat during the day.
- Setting up a kitchen garden and using high solar reflective index paint helps in reducing the Urban Heat Island Effect.
- Painting rooftops white is a common strategy to reduce the heat island effect.
- The government must provide discount in property tax for residents taking environment-friendly measures
- Generating awareness to use more and more renewable resources.
- The policy makers should strike a balance by providing equal opportunities at village & town levels thereby checking migration & concentration of population at urban areas.

