

## CONTENTS

### NATIONAL ISSUES

1.	Appointment of Judges	3
2.	EMISSION CONTROL – Bharat Stage Emission Standards	5
3.	Bodoland Issue	7
4.	BrahMos Missile	9
5.	Capital Punishment	12
6.	Central Vigilance Commission and Central Information Commission	14
7.	Communication Sattellite for Armed Forces GSAT - 6A	18
8.	Crypto Currency – Bitcoin	20
9.	Defence Reforms : Shekatkar Committee	23
10.	Disaster Management	26
11.	Education Reforms in India	28
12.	Electoral Reforms in India	30
13.	Energy Security	33
14.	FDI in Defence	38
15.	Gay Rights	40
16.	Goods and Services Tax (GST)	43
17.	Shanghai Co-operation Organisation (SCO)	46
18.	Indian Economy	49
19.	Insurgency in Manipur	53
20.	Integrated Missile Technology Programme	57
21.	Inter-State River Water Dispute	61
22.	Indian Space Research Organisation (ISRO)	67
23.	Juvenile Justice (Care and Protection of Children) Act – 2015	71
24.	Make in India	73

25.	Nagaland Insurgency	76
26.	National Institution for Transforming India (NITI) Aayog	79
27.	NRC Updation in Assam	81
28.	Reasons for Rise in Communal Divide and Steps to Check It	84
29.	Remedial Measures to Prevent Farmers' Suicide	87
30.	National Water Grid	90
31.	Sports in India	93
32.	Start-up India	94
33.	Surrogacy	96
34.	Concept of Theatre Commands	100

## **IMPORTANT CONSTITUTIONAL AND LEGAL PROVISIONS**

35.	Article 35A	104
36.	Article 370 & its Abrogation	107
37.	Black Money and Various Anti Corruption Legislations	110
38.	Citizenship Amendment Act - 2019	114
39.	Financial Action Task Force (FATF)	116
40.	Land Reforms	118
41.	Legislations to Prevent Child Labour in India	122
42.	Section 66 of the Income Tax (IT) Act	124

## **INDIA AND ITS RELATIONSHIP WITH OTHER COUNTRIES**

43.	Indo-US Relations Leading to QUAD	127
44.	Exercise 'Malabar' and 'Pivot to Asia Strategy' to contain China	131
45.	India's Push for NSC Membership	133
46.	Indo-China Relations	137
47.	Military Stand-off between India & China	141
48.	Belt and Road Initiative (BRI)	144

49.	Indo-Iran Relations	147
50.	Indo-Israel Relations	149
51.	Indo-Japan Relations	152
52.	Baluchistan Issue and Significance of Gilgit-Baltistan Areas of Jammu & Kashmir	154
53.	Indo-Russia Relations	158
54.	Indo-Sri Lanka Relations	161
55.	India-UAE Relations Leading to I2 U2 Accord	164
56.	Indo-Pak Relations	167

## INTERNATIONAL ISSUES

57.	ASEAN	172
58.	QUAD	174
59.	BRICS	175
60.	SAARC	177
61.	G-20 Summit	179
62.	Implication of Banning Chinese Products in India	181
63.	Israel-Palestine Issue	183
64.	Siachen Dispute	187
65.	Ukraine Issue	192
66.	UN Reforms	195
67.	World Economic Forum (WEF)	197
68.	WTO, IMF & World Bank	201
69.	Indus Water Treaty	203
70.	South China Sea	

## **MISCELLANEOUS**

71.	Triple Talaq – a Step towards Uniform Civil Code	206
72.	Social Media	208
73.	India – A Tourist Paradise	210
74.	Wildlife Preservation in India	212
75.	Climate Change	214
76.	Sex Education	216
77.	Chat GPT	218
78.	Crime Against Women	220
79.	Drug Addiction	222
80.	India's Options to Deal with Cease Fire Violation by Pakistan	224
81.	Right to Privacy	226
82.	Free Basics & Net Neutrality	228
83.	Role of Free Media in a Democracy	231
84.	Water Cycle	233
85.	Students & Politics	234
86.	Role, Capabilities & Modernisation Plan of Indian Armed Force	237

# **1. APPOINTMENT OF JUDGES**

## **Introduction**

The judiciary and the executive/ legislature have been at loggerheads with respect to the method of appointment and transfer of judges in the country's higher judiciary.

The huge backlog of pending cases in the courts and inordinate delay in providing justice is increasingly reducing the faith of the citizens on the judicial system. The same poses a serious threat to the democratic governance of the country.

At present, there are 12 judges per 10 lakh people in the country and at least three crore cases are pending in the courts. If the situation does not change, the figure of pending cases would cross five crore in the next 15-20 years, and crores of people would be deprived of justice.

The reasons ascribed to the pendency of cases in the courts, is that a large number of vacancies of judges are lying under subscribed because of the failure of the apex court to fill up the vacant vacancies of judges in the high courts and in trial courts.

The judiciary-executive tussle over the procedure of appointment of judges became a flashpoint ever since a five-judge bench of Supreme Court struck down the National Judicial Appointments Commission, which was evolved through legislation enacted by the Parliament to replace the existing collegium system of appointment transfer of higher judiciary.

## **Existing System of Appointment/ Transfer of Judges**

At present the appointment of judges is made through a 'Collegium System', in which the Chief Justice of India (CJI) and a forum of four senior-most judges of the Supreme Court recommend appointments and transfers of judges.

The above said system was evolved through Supreme Court judgments in the 'Three Judges Cases'.

"The role of the CJI is primal in nature because this being a topic within the judicial family, the

Executive cannot have an equal say in the matter," the verdict reasoned.

Hence, the President is reduced to only an approver of the decision made by the CJI.

The Supreme Court through its interpretation of the Constitution of India, took away the constitutional rights of the President of India to appoint judges in consultation with the Chief Justice of India by forming the "Collegium System" for appointing judges.

In 1993, the Supreme Court created the "Collegium System" in which the Chief Justice and a Collegium of three or more senior judges would appoint other judges and the government could merely object to their nominations. But the Collegiums could still go ahead with its decision.

## **Institution of National Judicial Appointments Commission (NJAC)**

The National Judicial Appointments Commission (NJAC) is a constitutional body, which was proposed to replace the present Collegium system of appointment and transfer of judges.

The need for instituting the NJAC was felt as the higher judiciary is found lacking by way of, favouritism; by turning a blind eye to injudicious conduct of colleagues and masking their wrong deeds, distorting the norms of judicial independence, and transparency in the mechanism of the appointment and transfer of judges.

The Commission was established by amending the Constitution of India through the ninety-ninth constitution amendment vide the Constitution (Ninety-Ninth Amendment) Act, 2014 passed by the Lok Sabha and Rajya Sabha.

The NJAC Bill and the Constitutional Amendment Bill, was ratified by 16 of the state legislatures in India, and subsequently assented by the President.

The NJAC Act and the Constitutional Amendment Act came into force from 13 April 2015.

**The Proposed composition of the NJAC was as follows:**

- Chairperson is the Chief Justice of India.
- Two senior judges of Supreme Court.
- Union Minister of Law and Justice.
- Two eminent persons to be nominated for a period of three years (who cannot be re-nominated) by Chief Justice of India, Prime Minister and Leader of the Opposition in Lok Sabha. In case no such Leader of opposition is available, then it will be the Leader of the single largest opposition party in Lok Sabha. One of the eminent persons would be from SC/ ST or OBC or Minority Communities or a woman.

On 16 October 2015 the Constitution Bench of the Supreme Court, after hearing the petitions, upheld the 'Collegiums' System', while striking down the 99th Amendment and declared the NJAC Act unconstitutional by a 4:1 majority.

Further, the Constitutional Bench asked the government to prepare a new Memorandum of Procedure (MoP), laying down transparent procedure for the appointment of judges.

The MoP is a document which guides the appointment of judges to the Supreme Court and the 24 high courts. At present, there are two MoPs ; one for the Supreme Court and the other for the High Courts.

The Chief Justice of India and the SC collegium had objected to certain clauses in the Memorandum of Procedure, under which the government reserves the right to reject a recommendation if there are concerns about national interest.

The above mentioned controversial clause goes against the current practice, under which the government is bound to accept any recommendation by the collegium, which comprises four senior-most judges of the Supreme Court and the Chief Justice of India, if it reiterates.

The Judges' lobby hailed the ruling passed by the Constitution Bench. However, the decision marked the beginning of an open tussle between the Judiciary and the legislature/executive.

### **Objections of the Judiciary against Institution of NJAC**

Clearly the NJAC will remove the unprecedented usurpation of power of the judiciary. However, the following objections emanated from the judiciary against the NJAC:

- Judiciary was not consulted and it is felt that the constitutional amendment and passing of NJAC was done in too much haste.
- NJAC diminishes the role of judiciary in the appointment process of judges.
- Judiciary feels that it is a wrong practice to give the politicians a voice in the judicial appointments as it may bring about bias in the process of passing judgements involving politicians, e.g. 2G scam or Commonwealth scam, etc.

### **The Logjam Over Appointment of Judges**

The appointment of hundreds of judges in the Supreme Court and High Courts across the country has been caught in the tussle between the judiciary and the government with 30 million cases pending in high courts.

The government wants merit and seniority to be the criteria for appointing Judges, while the judiciary is opposed to it and wants the existing practice of seniority as the major criterion. Usually, the process of appointing judges takes between 60 to 75 days.

The major sticking points between the government and the judiciary are: rejection of candidates on grounds of national security, involvement of retired judges in appointment of judges and the participation of Attorney General and Advocate General of states in the selection process.

The government wanted to put in place a committee of retired judges to evaluate the applications of candidates before forwarding them to the collegium to decide whether to recommend their names for elevation or appointment as judges. However, the Chief Justice of India had rejected the government's move.

## 2. EMISSION CONTROL - Bharat Stage Emission Standards

### Introduction

The sale and registration of Bharat Stage III (BS-III) vehicles has been banned by the Supreme Court with effect from 01 April 2017.

Notwithstanding, the hue and cry being raised by the automobile manufacturers, asking for more time to dispose of their existing stocks of BS-III vehicles, the SC ruled that, only BS-IV emission norms compliant vehicles can be bought/registered across the country.

### India's Commitment to Curb Pollution

It is estimated that 1.2 million deaths take place every year due to air pollution in the country and hence, certain drastic measures are required to be taken to tackle this serious hazard.

Besides, India had pledged during the Paris Climate Summit to cut down its carbon emissions levels by as much as 33%-35% by 2030.

It had further pledged to create an additional carbon sink of 2.5 to 3 billion tonnes of carbon dioxide through additional forests and tree cover.

In order to meet this explicit requirement, besides drastically reducing dependence on fossil fuels and the use of alternative sources of energy, it is imperative to lay down clearly defined policy on vehicular pollution control regime.

### National Auto Fuel Policy

Emission norms were introduced in India in 1991 for petrol and 1992 for diesel vehicles. Thereafter, the use of catalytic converters for petrol vehicles was made mandatory and unleaded petrol was introduced into the market.

Supreme Court, ruled that all vehicles in India must comply with Euro I or India 2000 norms by 01 June 1999 and EURO II norms was made mandatory in NCR by April 2000, however, in a subsequent judgement the implementation date was postponed.

Mashelkar Committee, which was formed by the Government to propose a road map for implementation of Euro based emission norms for India, recommended a phased implementation of

future norms with the regulations being implemented in major cities first and extended to the rest of the country after a few years.

Consequent to the recommendations of the Committee, the National Auto Fuel Policy was announced officially in 2003. The policy also created guidelines for auto fuels, reduction of pollution from older vehicles and R&D for air quality data creation.

The Auto Fuel Policy initially enunciated the roadmap for implementation of the Bharat Stage norms till 2010.

### Bharat Stage Emission Standards

The Union Government instituted certain emission standards to regulate the output of air pollutants from all types of internal combustion engine equipments, including motor vehicles. These standards are called Bharat Stage Emission Standards.

The standards required to be adopted and the timeline for its implementation has been set by the Central Pollution Control Board under the Ministry of Environment & Forests and Climate Change.

These standards are based on the European regulations. All new vehicles manufactured after the implementation of the norms have to be compliant with the regulations.

Bharat Stage III norms were enforced across the country. The emission norms for two and three wheelers are more lenient.

### Impact of Switching Over from BS III to BS IV

The SC ruling has served as a bolt from the blue to the auto industry. Though, their representation seems to be unjustified, as the transport ministry had issued a notification regarding the transition to BS-IV two years ago, and they had sufficient notice to switch over production to BS-IV and reduce their BS-III inventory.

The switchover from BS III to BS IV emission norms may have caused a one-time material

impact on the auto industry; however, in the long run it will be a profitable exercise.

The reason being, that the next transition from BS IV to BS VI is also around the corner and the auto manufacturers better get their act together, if they wish to remain competitive in the global market.

### **Switchover from BS-IV to BS-VI**

The government displaying its unequivocal intention to curb vehicular pollution had earlier announced, that India would skip BS-V and directly switch from BS-IV to BS-VI norms.

The reason given by the Oil Ministry was that there is not much difference between BS-V and BS-VI fuel and this transition would turn out to be more economical in the long run.

The BS-VI norms is said to be equivalent to the Euro-VI norms.

The switchover to BS-VI would require the vehicles to be fitted with DPF (Diesel Particulate Filter).

### **Implications of Adopting BS-VI Norms**

Fitting of DPF inside the engine compartment will require major re-engineering effort and would also incidentally result in an increase of the length of the car bonnet.

The small car segment falls in the four meter length category, the increased length of the car bonnet is likely to put the present small cars into the higher excise duty bracket, thereby increasing the cost of cars.

Besides, skipping of BS-V will put extra pressure on auto manufactures to produce compliant vehicles with significantly higher technological enhancement.

In order to switch to the BS-VI norms, oil refineries will require substantial investments to upgrade refineries to supply fuel types that match the BS-VI standards.

This switchover from BS-IV to BS-VI is likely to cost the oil companies between Rs 50,000 cr to Rs 80,000 cr.

### **Setting up of Panipat Refinery & Petrochemical Plant at Panipat**

India has achieved the target of supplying petrol mixed with 10% Ethanol. The final target is mixing petrol with 20% ethanol.

Ethanol for blending is being extracted from sugarcane and other agri-commodities. Indian PM has dedicated the second generation (2G) ethanol Plant at Panipat, which will boost production and usage of biofuels in India. The plant has been built by Indian Oil Corporation (IOC) at a cost of over Rs. 900 Crore near Panipat. It will turn about 2 Lakh Tonnes of Rice Straw (Parali) annually into around 3 crore litres of Ethanol. It will empower farmers and provide an additional income generation opportunity for them.

### **Conclusion**

It can be well understood from the reasons given above that the industry is resisting the proposed changeover. However, the automobile industry must cooperate in the larger interest of the country and also to remain globally competitive.

Another point that needs to be highlighted here is that vehicular pollution contributes towards less than 10 percent of the overall pollution index of the country.

The two major factors which adversely impact the environment, besides the others, are the unethical practice of fuel adulteration and the uncontrolled usage of fossil fuels / conventional high polluting fuels by a host of small scale industries.

Therefore, along with the adoption of the new emission norms for vehicles, it is imperative that the menace of fuel adulteration and the type of energy resource being employed by small scale industries, especially in the unorganised sector, is strictly monitored to maximise the benefits of implementation of the new emission policy.

### **3. Bodoland Issue**

#### **Introduction**

The northern most region of Assam, which lies on the northern bank of Brahmaputra River, adjoining the foothills of Bhutan and Arunachal Pradesh is predominantly inhabited by the Bodo people and serves as a gateway to the complete North Eastern region of India.

The people of this region feel that their aspirations have not been met in terms of growth and development and hence, have been demanding for a separate state of Bodoland (within the Indian Union) to be created by carving out some area of eight districts of the current State of Assam, namely Kokrajhar, Dhubri, Bongaigaon, Barpeta, Nalbari, Kamrup, Darang and Sonitpur districts.

The situation seems to be getting worse in the region, with the intelligence agencies reporting that, six new terror groups were in the offing, mainly consisting of surrendered militants and criminals who had gone back to the jungles.

#### **Genesis of the Bodoland Issue**

Bodos happen to be the earliest inhabitants of the Brahmaputra valley. The complete NE region of India, especially the areas north of Brahmaputra River were highly underdeveloped prior to independence.

The region is known to have an abundance of natural resources like oil, natural gas and Assam tea. However, due to lack of infrastructure and inept road connectivity to major cities of Assam, the area lagged behind in terms of education, employment and development.

After 1947, certain steps were taken by the government to safeguard the interests of Bodo people, like giving them the status of Scheduled Tribes (ST) and by the creation of tribal belts and blocks (for scheduled-tribes), which was a mechanism to protect farming and grazing lands mainly from rich landlord and illegal immigrants.

However, by the early 1960s the Plains Tribal's Council of Assam (PTCA), a political party

representing Bodos and other plains tribals of Assam realized that tribal belts and blocks were gradually being acquired by rich landlords or new immigrants through illegal means.

This problem got further aggravated when the Government of India decided to open the floodgates for refugees seeking asylum in India from East Pakistan (now Bangladesh), before its separation from Pakistan in 1971.

Therefore, the original inhabitants of the region got marginalised by the mass influx of many affluent and also, desperate outsiders.

At present the demographic orientation of the region comprises of just 28% Bodo, 20% Muslims, 15% Adivasis, and rest are Assamese, Bengali Hindus and non-Bodo tribes.

In order to address this issue, in 1967, PTCA demanded a Union Territory status for an area to be carved out of Assam, called Udayachal.

The proposed Udayachal map included mainly those areas that were known as tribal belts and blocks. However, the demand for Udayachal never materialized.

#### **Demand for Bodoland**

The large size of Assam state, lack of political representation of Bodo people, rampant corruption that diverted financial packages meant for Bodo people from the Centre government, resulted in All Bodo Students' Union (ABSU) and Bodo political parties jointly demanding a separate state, called Bodoland in late 1980s. For similar reasons, Khasis and Garos had earlier carved out Meghalaya from Assam.

Officially, the Bodoland Movement for an independent state of Bodoland started on 02 March 1987, under the leadership of ABSU leader Upendrenath Brahma.

The ABSU created a political organisation called the Bodo Peoples' Action Committee (APAC), and heightened its agitation for division of Assam 50:50.

Consequently, a Bodo Accord was signed on 20 February 1993, which led to the creation of Bodo Autonomous Council (BAC). However, the accord soon collapsed due to a vertical split between the ABSU and the other political parties, which led to widespread violence and displacement of over 70,000 people.

Agitations and large scale riots took place again in 1994, 1996, and May 2014 as the Bodos continued to feel insecure. The Bodos feared that they would be reduced to a minority in their own homeland.

### **Bodo Territorial Council Act-2003**

Finally, after a series of rounds of deliberate and meaningful talks, the militant cadres laid down their arms and signed an agreement with the government called the Bodo Accord-2003.

As per the provisions of this Accord, a **Bodo Territorial Council (BTC)** was established and a **Bodo Territorial Areas Districts (BTAD)** was created under the Sixth Schedule of the Constitution of India.

The aim of creating BTAD was to safeguard the interests of Bodo people and ensure their appropriate representation in socio-political decision making processes in the region.

The BTAD comprises of 35% of the state of Assam and the areas include districts of Kokrajhar, Baska, Chirang and Udaguri.

The Bodos Territorial Council is being presently controlled by one of the parties of Bodos,i.e. the Bodoland People's Front (BPF). The council offers considerable local autonomy to more than 3,000 villages that are home to Bodo tribesmen.

### **Bodoland problem has four major dimensions:**

- Conflict of interests between Bodos and non-Bodos, mainly Muslims and illegal immigrants.
- Delineation of the border of the Bodo Territorial Areas Districts, as it includes areas with Bodo minority that the non-Bodos are objecting.
- Demand for a separate state of Bodoland.
- Demand for independence from the Union of India to form a sovereign Bodoland.

### **2020 Accord**

The Central Government signed a tripartite agreement with the State Govt. and different Bodo Groups, including 4 Factions of the National Democratic Front of Bodoland (NDFB), for a Permanent solution to the Bodo issue.

According to the new organization, the new accord has been a betrayal of the Bodo People. Besides being an inferior accord, it prescribes a reduction of the area currently under the Bodoland Territorial Council (BTC).

The Accord has a provision for excluding from the BTR (Bodoland Territorial Region) villages with more than 50% non-Bodos and including villages with more than 50% Bodo people left out of the BTC map after the 2023 accord.

### **Conclusion**

The situation in this region of Assam has always been in a state of turmoil. The political parties and GoI, will have to remain proactive and give a patient hearing and demonstrate willingness to address the genuine aspirations of the people of the region.

Government may perhaps need to review the provisions of Bodo Territorial Council to ensure no injustice is done to any community.

Also, active measures like the issue of proper identity proofs like the Adhar cards with biometrics need to be ensured to check illegal Bangladeshi immigrants from settling in India.

Lastly, adequate deployment of security forces in the sensitive areas is required and the re-delineation of BTAD may also have to be resorted to, for ensuring safety of the minority communities in the region.

## 4. BrahMos Missile

### Introduction

In 1998, the Government of India signed an agreement with Russia to design, develop, manufacture and market a Supersonic Cruise Missile System.

Accordingly, the Russian Federation's NPO Mashinostroeyenia and India's Defence Research and Development Organisation (DRDO) collaborated to form the **BrahMos Aerospace** and jointly produced the BrahMos missile. BrahMos is named after two rivers, Brahmaputra of India and Moskva of Russia.

The **BrahMos** is a medium-range **ramjet supersonic cruise missile** that can be launched from submarine, ships, aircraft, or land. Russia supplies 65% of the BrahMos components, including its ramjet engine and radar seeker.

It is the world's fastest anti-ship cruise missile in operation. The missile travels at speeds of Mach 2.8 to 3 with a range of 290 km and is about three and a half times faster than the American subsonic Harpoon cruise missile.

The land-launched and ship-launched versions are already in service, the air version was successfully test fired.

The submarine-launched version is currently in the testing phase. A **hypersonic** version of the missile, **BrahMos-II**, is also presently under development, which will have a speed of Mach 7-8 to boost aerial fast-strike capability.

India's entry into the Missile Technology Control Regime (MTCR) as a member in 2016 has opened up new possibilities for India. India and Russia are now planning to jointly develop a new generation of Brahmos missiles with 600 km-plus range and an ability to hit protected targets with pinpoint accuracy.

### Important Technical Terms

**Ramjet:** A ramjet may be called an air breathing jet engine that uses the engine's forward motion to compress incoming air without the requirement of an axial compressor.

Since the engine takes in oxygen from the atmosphere and does not additionally require oxidizer for combustion of fuel, it reduces the overall weight of the rocket and hence increases its efficiency.

Super Sonic Combustion RAM Jet or SCRAMJET, rocket engine was test fired by ISRO from Sriharikota, off the coast of Andhra Pradesh.

The rocket, also called the Advanced Technology Vehicle (ATV), lifted-off a weight of 3,000 kg during its testing.

This path breaking technology is also planned to be used by ISRO during the atmospheric phase of the rocket's flight, so as to drastically bring down the launch cost of weather satellites.

**Cruise Missile:-** A **cruise missile** is a guided missile used against terrestrial targets that remains in the atmosphere and flies the major portion of its flight path at approximately constant speed.

Cruise missiles are designed to deliver a large warhead over long distances with high precision.

Please also read about the differences between a cruise and ballistic missiles:  
<http://www.olivegreens.co.in/blog/important-comparisons-defence-related-terms>

Cruise missiles can be categorized by size, speed (subsonic or supersonic), and range, and whether launched from land, air, surface ship, or submarine.

Supersonic missile travels faster than the speed of sound, while subsonic travels at a speed lesser than the speed of sound.

A **hypersonic cruise missile** would travel at least five times the speed of sound, i.e. Mach 5.

### BrahMos Missile Variants for Indian Defence Forces

#### Indian Army

The BrahMos Block I was first inducted into the army on 21 June 2007. Presently, three regiments of the existing 40<sup>th</sup> and 41<sup>st</sup>

Artillery Divisions of the Indian Army hold the BrahMos missiles, which include one regiment of the Mark I and two missile regiments of the BrahMos Mark II.

Each regiment holds between four and six batteries of three to four Mobile Autonomous Launchers (72 missiles per regiment) that can be connected to a mobile command post.

### Indian Navy

At present, Brahmos has been inducted into eight warships of the Indian Navy. The following ship classes of the navy are equipped with BrahMos:

- Rajput-class Destroyer - INS Rajput is equipped with four BrahMos missiles in 2 twin inclined launchers and INS Ranvir & INS Ranvijay are armed with one stern mounted 8-cell BrahMos VLS launcher.
- Kolkata-class Destroyer - The three destroyers in this class are armed with two bow mounted 8-cell BrahMos VLS launchers.
- Talwar-class Frigate - Three ships, i.e. INS Teg, INS Tarkash and INS Trikand are armed with one bow mounted 8-cell BrahMos VLS launcher each.
- Shivalik-class Frigate - The three frigates in this class are armed with one bow mounted 8-cell BrahMos VLS launcher.
- Visakhapatnam-class Destroyer - The four destroyers in this class are planned to be armed with two bow mounted 8-cell BrahMos VLS launchers.

### Indian Air Force

The BrahMos-A is a modified air-launched variant of the missile which has a range of 290km that can be launched from a Su-30MKI as a standoff weapon (can be launched without even entering enemy's air space).

Two Su-30MKI of the IAF were initially modified by the Hindustan Aeronautics Limited (HAL) at its Nashik facility and integrated it with the missile's aerial launcher.

In order to reduce the missile's weight to 2.55 tons, many modifications were made like using a smaller booster, adding fins for airborne stability after launch, and relocating the connector.

A demonstration flight was carried out at Hindustan Aeronautics Limited Nashik on 25 June 2016 as a modified Su-30MKI carrying BrahMos-A underwent a successful trial flight.

The missile can be released from the height of 500 to 14,000 meters (1,640 to 46,000 ft). After release, the missile free falls for 100–150 meters, then goes into a cruise phase at 14,000 meters and the terminal phase at 15 meters.

The missile was successfully test fired from a Sukhoi-30MKI against a sea based target in the Bay of Bengal.

The missile's terminal altitude is as low as ten meters. (The ship-launched anti-ship version of the BrahMos can fly 3-4 meters above the sea to avoid detection.)

The IAF is planning to modify 50 Su-30MKI aircraft to carry the nuclear-capable cruise missile. In total, the IAF is expected to receive 200 air-launched BrahMos-As in the coming years.

### BrahMos Missile 2

It is the second of the BrahMos Series of cruise missiles. The BrahMos-II is expected to have a range of 1000 Kilometers (620 mi) and its Launch Platforms are Ship, Submarine, Aircraft and Land-based Mobile Launchers. Its Engine is Scramjet. The place of origin is India, Russia.

It is a hypersonic cruise missile currently under joint development by India's Defence Research and Development Organisation (DRDO) and Russia's NPO Mashinostroyenia, which have together formed – BrahMos Aerospace Private Limited.

### BrahMos (NG)

BrahMos Next Generation has been envisioned as a smaller & lighter, yet Smarter Weapon System having more versatility, lethality and flexibility alongwith ultra-precision for deployment onboard a wide range of military platforms, aerial as well as naval.

### Key Features

- Reduced Dimension & Weight for widespread usage.
- Advanced Next Generation Stealth.
- Greater effectiveness against ECCM.

- Higher versatility in underwater combat applications.
  - Launch readiness from Torpedo Tube and Vertical Orientation.

## Conclusion

The operational combat potential of the Indian Armed Forces has been greatly enhanced as it completes the tactical cruise missile triad capability after the successful test launch of BrahMos-A.

Considering its long range of 290km and the fact that it can carry nuclear warhead that can strike strategic targets deep into the heart of both China and Pakistan, this latest capability will serve as a major deterrent for our adversaries.

## 5. Capital Punishment

### Introduction

The crimes that warrant a death sentence to a convict are known as capital crimes or capital offences. The term capital originates from the Latin word "capitalis", which means "regarding the head".

Capital punishment in India is handed out in the "rarest of the rare" cases, like to a person guilty of heinous crimes particularly that of rape or murder and the sentence is executed by hanging the accused by the neck till the person is dead. In some countries this could be substituted by the electrical chair or shooting.

Worldwide about 55 countries actively practice capital punishment, while, 140 countries have abolished it for most crimes. 19 states in the U.S. and the country of Canada have abolished the death penalty. Nearly all countries in the world prohibit the execution of individuals who were under the age of 18 at the time of their crimes.

India had imposed an unofficial moratorium on executions, which ended in November 2012 with the hanging of Mohammed Ajmal Kasab, the lone surviving gunman in the 2008 Mumbai terror attacks. Two months later, Mohammad Afzal Guru, convicted in a deadly 2001 attack on India's Parliament complex, was also hanged. Both executions were done secretly, without any public notice.

United Nations General Assembly has adopted, in 2007, 2008, 2010, 2012 and 2014 non-binding resolutions calling for a global moratorium on executions with a view to eventual abolition. However, India along with three other most populous nations of the world, i.e. China, United States and Indonesia voted against it and continue to apply death penalty.

### Reasons Against Capital Punishment

The fallacy that crueler punishments deter crime doesn't take into account that there are complex social and economic factors that drive crime rates. Besides, a criminal does not often plan on getting caught or think through all the consequences of their actions.

Criminal justice systems the world over have had great success of reform without the threat of death, and often due to programmes that focus on offender rehabilitation. In fact ever since Canada stopped executing, the murder rate has dropped by 44 per cent through effective police work and rehabilitation.

Ironically, while awarding the death penalty, the time spent languishing in jail while on death row is never acknowledged. A person who has done 20-25 years in jail while the case was being heard has already suffered the trauma and a senseless deprivation of life.

India has a highly effective criminal justice system, however, it does not mean that it is absolutely infallible, errors can and do occur. We can't give back a life once it is taken, and hence, a cautious approach should be preferred to even the slightest possibility of taking an innocent person's life.

The desire for revenge is one of the lowest human emotions, perhaps sometimes understandable, but not really a rational response to a critical situation. To kill the person who has killed someone close to you is simply to continue the cycle of violence which ultimately destroys the avenger as well as the offender. On the contrary, the extended legal process prior to executions can prolong the agony experienced by the victims' families.

Lastly, capital punishment is not approved by any religion.

### Reasons to Support Capital Punishment

Each criminal should get what their crime deserves and in the case of a murderer what their crime deserves is death.

Punishments which are swift and sure are the best deterrent. The threat of the death penalty may deter some murderers who otherwise might not have been deterred.

The offender may no longer be a danger to the public, but a criminal mind would remain a danger to prison staff and other inmates. Execution

would remove that danger. Besides, there have been cases of criminals repeating their crime on parole.

The death penalty provides some sorts of peace to the victims' families.

The high cost of prolonged period in custody for highly sensitive cases like that of Ajmal Kasab, is at the expense of many people who die each year due to hunger and poverty. Hence, an early death sentence will reduce the expenditure to keep the criminal alive for his entire life, if given imprisonment for life.

In case of a possible death sentence, the prisoner has the strongest possible incentive to try to get their sentence reduced, even to life imprisonment, by helping the investigating authorities and the police. Hence, fear of capital punishments serves to assist the authorities to obtain maximum information from the prisoner, e.g. Yakub Memon exposed the role of ISI, Dawood Ibrahim, Tiger Memon and others in the 1993 Bombay blasts.

### Conclusion

Capital punishment is the ultimate, cruel, inhuman and degrading punishment. The death penalty is discriminatory. It is often used against the most vulnerable in society, including the poor, ethnic and religious minorities and people with mental disabilities. Some governments use it to silence their opponents.

In a nutshell, it can safely be concluded that capital punishment is a barbaric remnant of uncivilized society. It is immoral in principle and unfair and discriminatory in practice. The death penalty has no deterrent effect.

Capital punishment in India is a legal penalty for some crimes under the country's main substantive penal legislation, the Indian Penal Code, as well as other laws.

Capital punishment is a violation of international human rights law and may be defined as a sign of savagery, a threat to human dignity, a violation of basic principles of justice and a violation of fundamental human rights.

## **6. Central Vigilance Commission and Central Information Commission**

### **The Central Vigilance Commission**

#### **General**

The Central Vigilance Commission was conceptualized as an apex body for exercising general superintendence and control over vigilance matters in administration under Govt. of India.

It was set up in February, 1964 on the recommendations of the Committee on Prevention of Corruption, to advise and guide Central Government agencies in the field of vigilance. It became an Act after being duly passed in both the Houses of Parliament in 2003.

It has the status of an autonomous body, free of control from any executive authority, charged with monitoring all vigilance activity under the Central Government of India, advising various authorities in central Government organizations in planning, executing, reviewing and reforming their vigilance work.

#### **Organisational Structure of CVC**

The Central Vigilance Commissioner is headed by a Central Vigilance Commissioner who is assisted by two Vigilance Commissioners.

The CVC is assisted by a Secretary who is of the rank of Additional Secretary, two more Secretaries of the rank of Joint Secretary to the Government of India and other staff includes 10 Officers of the rank of Director/ Deputy Secretaries, an OSD and four Under Secretaries.

There is also a Technical Wing attached to the Commission with two Chief Technical Examiners of the rank of Chief Engineer who are assisted by Eight Technical Examiners of the rank of Executive Engineer, Six Assistant Technical Examiner of the rank of Assistant Engineer and other subordinate staff.

#### **Appointment of CVC**

The appointment of CVC as well as that of the VCs is required to be made by the President, by

warrant under his hand and seal, on the recommendations of a committee consisting of:

- (a) The Prime Minister,
- (b) The Minister of Home Affairs, and
- (c) Leader of the Opposition in the House of people or majority group leader in parliament.

#### **Jurisdiction of CVC**

CVC presently advises only on vigilance cases pertaining to the following categories of employees:-

- (a) Gazetted Central Government officials;
- (b) Board level appointees in the public sector undertakings of the Central Government;
- (c) Officers of the rank of Scale- III and above in the public sector banks;
- (d) Officers of the rank of Assistant Manager and above in the Insurance Sector (covered by LIC and GIC); and
- (e) Officers in autonomous bodies/local authorities or societies comparable in status to that of the Gazetted Central Government official.

#### **Role of CVC**

- (a) Conduct oral inquiries through its officers, in important disciplinary proceedings against the said public servants;
- (b) Review of procedures and practices of Administration insofar as they relate to maintenance of integrity in administration;
- (c) Scrutinise and approve proposals for appointment of Chief Vigilance Officers in various organisations and assess their work;
- (d) Conduct, through its organisation of the Chief Technical Examiner, independent technical examination mainly from vigilance angle, of construction and other related works undertaken by various Central Government organisations; and

- (e) Organise training courses for Chief Vigilance Officers and other vigilance functionaries in Central Government organisations.
- (f) Inquire or cause an inquiry or investigation to be made on a reference made by the Central Government wherein it is alleged that a public servant has committed an offence under the Prevention of Corruption Act, 1988;
- (g) Inquire or cause an inquiry or investigation to be made into any complaint against any official belonging to such category of officials specified above.
- (h) Review the progress of investigations conducted into offences.
- (i) Review the progress of applications pending with the competent authorities for sanction of prosecution under the said Act.
- (j) Exercise superintendence over the vigilance administration of the various Ministries of the Central Government.
- (k) The Commission has been given all the Powers of a civil court trying a suit under the Code of Civil Procedure, 1908, while conducting enquiry. Hence, it can:
  - Summon and enforce the attendance of any person from any part of India and examining him on oath;
  - Order production of any document;
  - Receive evidence on affidavits;
  - Requisition any public record or copy thereof from any court or office;
  - Issue commissions for the examination of witnesses or documents.

### **Limitations of CVC**

- CVC is only an advisory body.
- CVC does not have adequate resources.
- CVC cannot direct CBI to initiate inquiries against any officer of the level of Joint Secretary and above on its own.
- CVC does not have powers to register criminal case.
- CVC has supervisory powers over CBI. However, CVC does not have the power to call for any file from CBI or to direct CBI to investigate any case in a particular manner.

- Appointments to CVC are indirectly under the control of Government of India.

### **Central Information Commission**

#### **General**

The **Right to Information Act (RTI)** is an Act of the Parliament of India "to provide for setting out the practical regime of right to information for citizens" and replaces the erstwhile Freedom of information Act, 2002. It was passed by Parliament on 15 June 2005 and came fully into force on 12 October 2005.

The Act also requires every public authority to computerise their records for wide dissemination to any citizen that may request for the same formally.

#### **Scope of RTI Act**

The Act covers all constitutional authorities, including the executive, legislature and judiciary; any institution or body established or constituted by an act of Parliament or a state legislature.

Also all bodies or authorities established or constituted by order or notification of appropriate government including bodies "owned, controlled or substantially financed" by government, or non-Government organizations "substantially financed, directly or indirectly by funds" provided by the government are also covered in the Act.

#### **Procedure for Obtaining Information under RTI**

All organisations falling under the purview of the RTI Act must appoint their **Public Information Officer (PIO)**.

Any person may submit a written request to the PIO for information. He is required to send, along with the application on the prescribed format, a demand draft or a bankers cheque or an Indian Postal Order of Rs.10/- (Rupees ten) payable to the Accounts Officer of the public authority as fee prescribed for seeking information. It is the PIO's obligation to provide information to citizens of India who request information under the Act.

If the request pertains to another public authority (in whole or part), it is the PIO's responsibility to transfer/forward the concerned portions of the request to a PIO of the other authority within five working days.

In addition, every public authority is required to designate **Assistant Public Information Officers** (APIOs) to receive RTI requests and appeals for forwarding to the PIOs of their public authority.

The applicant is required to disclose his name and contact particulars but not any other reasons or justification for seeking information.

The **Central Information Commission** (CIC) acts upon complaints from those individuals who have not been able to submit information requests to a Central Public Information Officer or State Public Information Officer due to either the officer not having been appointed, or because the respective Central Assistant Public Information Officer or State Assistant Public Information Officer refused to receive the application for information under the RTI Act.

**The Act specifies time limits for replying to the request:**

- If the request has been made to the PIO, the reply is to be given within **30 days** of receipt.
- If the request has been made to an APIO, the reply is to be given within **35 days** of receipt.
- If the PIO transfers the request to another public authority (better concerned with the information requested), the time allowed to reply is **30 days** but computed from the day after it is received by the PIO of the transferee authority.
- Information concerning corruption and Human Rights violations by scheduled Security agencies (those listed in the Second Schedule to the Act) is to be provided within **45 days** but with the prior approval of the Central Information Commission.
- However, if life or liberty of any person is involved, the PIO is expected to reply within **48 hours**.

### **Constitution of the CIC**

The **Central Information Commission** is constituted through a Central Government Gazette Notification and has its headquarters at **New Delhi**.

Commission includes one Chief Information Commissioner (CIC) and not more than ten,

Information Commissioners (IC), who are appointed by the President of India.

### **Appointment of CIC and IC**

Candidates for CIC/IC must be persons of eminence in public life with wide knowledge and experience in law, science and technology, social service, management, journalism, mass media or administration and governance.

CIC/IC must not be a Member of Parliament or Member of the Legislature of any State or Union Territory. He must not hold any other office of profit or connected with any political party or carrying on any business or pursuing any profession.

### **Appointment Committee includes:**

- Prime Minister (Chair),
- Leader of the Opposition in the Lok Sabha, and
- One Union Cabinet Minister to be nominated by the Prime Minister.

### **Term of Office of CIC/IC**

CIC/IC shall be appointed for a term of 5 years from date on which he enters upon his office or till he attains the age of 65 years, whichever is earlier and is not eligible for reappointment.

### **State Information Commissions**

Similarly, the State Information Commission is constituted by the State Government through a Gazette notification.

It will have one State Chief Information Commissioner (SCIC) and not more than 10 State Information Commissioners (SIC) who are appointed by the Governor.

The Appointments Committee for the SCIC / SIC is headed by the Chief Minister. Other members include the Leader of the Opposition in the Legislative Assembly and one Cabinet Minister nominated by the Chief Minister.

The qualifications for appointment as SCIC/SIC shall be the same as that for Central Commissioners.

## **Powers and Functions of CIC / SCIC**

The Central Information Commission/State Information Commission has a duty to receive complaints from any person:

- Who has not been able to submit an information request because a PIO has not been appointed ;
- Who has been refused information that was requested;
- Who has received no response to his/her information request within the specified time limits ;
- who thinks the fees charged are unreasonable;
- Who thinks information given is incomplete or false or misleading ;
- And any other matter relating to obtaining information under this law.

**CIC/SCIC will have powers of Civil Court such as:**

Summoning and enforcing attendance of persons, compelling them to give oral or written evidence on oath and to produce documents or things; Requiring the discovery and inspection of documents;

Receiving evidence on affidavit; requisitioning public records or copies from any court or office issuing summons for examination of witnesses or documents.

**Power CIC / SCIC to secure compliance of its decisions from the Public Authority includes-**

- Providing access to information in a particular form;
- Directing the public authority to appoint a PIO/APIQ where none exists;
- Publishing information or categories of information;
- Making necessary changes to the practices relating to management, maintenance and destruction of records ;
- Enhancing training provision for officials on RTI;
- Seeking an annual report from the public authority on compliance with this law;

- Require it to compensate for any loss or other detriment suffered by the applicant ;
- Impose penalties under this law; or
- Reject the application.

## **Reporting Procedure of Information Commission**

Central Information Commission sends an annual report to the Central Government on the implementation of the provisions of this law at the end of the year. The State Information Commission will send a report to the State Government.

Each report contains details of the number of requests received by each Public Authority, number of rejections and appeals, particulars of any disciplinary action taken, amount of fees and charges collected, etc.

Central Government tables the Central Information Commission report before Parliament after the end of each year. The concerned State Government will table the report of the State Information Commission before the Vidhan Sabha (and the Vidhan Parishad wherever applicable).

## **Right to Information (amendment) Act 2019 amended the Right to Information Act 2005**

- The RTI Act 2005 specified the tenure, terms of service and salaries of the Chief Information Commissioner (CIC) and Information Commissioner (ICs) at the central & state levels in the parent law.
- The RTI (Amdt) Act 2019 removed these provisions and stated that the central Government will notify the term & quantum of Salary through rules.
- CIC and ICs (at the central & state levels) will hold offices for a term of three years as per RTI Rules 2019.
- The CIC needs to get updated in terms of the digitalisation & proper management of records to ensure remote access to conduct hearings and appeals.

## 7. Communication Satellite for Armed Forces GSAT 6A

### Introduction

Indian Space Research Organisation (ISRO) added another feather to its cap by successfully placing the high-power S-band communication satellite GSAT-6A, precisely into the designated orbit.

Indigenously built, GSLV Mk II (F08) carried GSAT-6A that took off from the second launch pad in Sriharikota. This launch marked the 12th flight of Geosynchronous Satellite Launch Vehicle GSLV-F08 and sixth flight with indigenous Cryogenic upper stage.

It will exclusively provide services for defence purposes and will not add any transponder capacity for general uses. The mission life of the satellite is about ten years.

GSAT-6 has been in orbit providing communication services since its launch. The details of other communication satellites held with India are given in the following blog: <https://www.isro.gov.in/spacecraft/list-of-communication-satellites>

### Key Features of GSAT-6A Satellite

- GSAT-6A, which cost around Rs 270 crore, weighs 2,140kg, is a high powered S-band communication satellite built on I-2K satellite bus (I-2K developed by ISRO, is a standard bus for 2,000 kg class satellites; the 'I' in I-2K stands for INSAT, a group of communication satellites developed and launched by ISRO. I-2K spacecraft bus platform can supply DC power up to 3000 watts and is targeted towards satellites in liftoff mass in range of 1500–2500 kg).
- The satellite will provide mobile communication through 'multi beam coverage facility'. The satellite generates a network of spot beam coverage areas on the earth. A hub and at least one ground terminal are located in each of at least two spot beams. Multi beam coverage facility enables a synchronous communications between each hub and the satellite to maximize frequency re-use and the overall capacity of the system.

- The satellite will also provide a platform for developing technologies such as demonstration of 6 m S-Band Unfurlable Antenna, handheld ground terminals and network management techniques. The 6m diameter antenna, gives it more power, which ensures that a two-way exchange of data, voice or video, can be carried out through small hand-held devices from any corner of the country.
- Besides the cryogenic engine of GSLV, for the first time, a second indigenously developed engine, called Vikas was installed for validation purposes. The high thrust Vikas engine works on liquid propellants. The improved engine, which will power the second stage of the launch vehicle, will enhance its payload capability by additional 70kg. Vikas engine was used after validation during the launch of Chandrayaan-2 and 3 missions.
- Lastly, the successful launch of GSAT -6A will give a shot in the arm for the Indian Armed Forces. The security forces stationed in remote corners of the country will be able to send and receive signals from hand-held devices. The handheld devices have been already fine-tuned by the Defence Research and Development Organisation. The DRDO hopes to deploy a large number of these, especially for security personnel in Maoist-hit areas.

### Conclusion

The launch of GSAT -6A is a highly commendable feat by ISRO of which every Indian is highly proud.

### GSAT-7 Series Satellites for Armed Forces

- GSAT-7 Series Satellites are advanced satellites developed by the Indian Space Research Organisation (ISRO) to meet the communication needs of the Defence Services.
- It provides wide range of services spectrum from low bit rate voice to high bit rate data communication.

- GSAT-7 Communication payload is designed to provide communication capabilities to users over a wide oceanic region, including the Indian Land-mass.

#### **GSAT-31 : India's Telecommunication Satellite**

- Successfully launched from Kourou Launch Base, French Guiana by Ariane-5 VA-247.
- It is configured on ISRO's enhanced 1-2 K Bus, utilizing the maximum bus capabilities of this type.

#### **GSAT-7B Satellite**

- GSAT-7 & 7B Satellites are Advanced Satellites developed by defence services.
- GSAT-7 (Rukmini) & GSAT-7A are India's only two dedicated military satellites for the Navy.

The first satellite was launched on 22nd April 2016 and the second one on 26th April 2016. Both the satellites were successfully placed into their respective orbits. The two satellites will provide secure communications to the Indian Navy.

Both the satellites have been developed by the Defence Research and Development Organisation (DRDO) and the Indian Space Research Organisation (ISRO).

The two satellites are designed to provide secure communications to the Indian Navy and the Indian Air Force.

The two satellites are designed to provide secure communications to the Indian Navy and the Indian Air Force.

The two satellites are designed to provide secure communications to the Indian Navy and the Indian Air Force.

The two satellites are designed to provide secure communications to the Indian Navy and the Indian Air Force.

The two satellites are designed to provide secure communications to the Indian Navy and the Indian Air Force.

and IAF since August 2013 & December 2018 respectively.

- GSAT-7B Satellite has been approved by the Defence Ministry, likely to be used by the Indian Army for communication.

Please read blog regarding the landmarks etched by ISRO in the annals of Indian space research programme:

<http://www.olivegreens.co.in/blog/unparallel-feats-by-isro-in-2016-navigation-with-indian-constellation-navic-reusable-launch-vehicle-rlv-and-scramjet-technology>

<http://www.olivegreens.co.in/blog/indian-space-research-organisation-isro-creates-a-world-record>

ISRO has created a world record by launching 104 satellites in a single mission. The record was set on 22nd February 2017. The record was set by launching 104 satellites in a single mission.

ISRO has created a world record by launching 104 satellites in a single mission. The record was set by launching 104 satellites in a single mission.

ISRO has created a world record by launching 104 satellites in a single mission. The record was set by launching 104 satellites in a single mission.

ISRO has created a world record by launching 104 satellites in a single mission. The record was set by launching 104 satellites in a single mission.

ISRO has created a world record by launching 104 satellites in a single mission. The record was set by launching 104 satellites in a single mission.

ISRO has created a world record by launching 104 satellites in a single mission. The record was set by launching 104 satellites in a single mission.

ISRO has created a world record by launching 104 satellites in a single mission. The record was set by launching 104 satellites in a single mission.

ISRO has created a world record by launching 104 satellites in a single mission. The record was set by launching 104 satellites in a single mission.

## 8. Crypto Currency – Bitcoin

### General Information

**Bitcoin** is crypto-currency or software that forms a decentralized, peer-to-peer, world-wide payment system, without the control of any centralised authority.

At present, most investors are not really using it like a currency to make payments, but instead, they're using it as a speculative investment or 'digital asset', with the hope to turn it into profit in the future.

The unit of account in this system is 'Bitcoin'. A 'Satoshi' (named after its creator) is the smallest amount within bitcoin, representing 0.00000001 bitcoin, i.e. divisible down to 8 decimal points. A 'Millibitcoin' equals 0.001 bitcoin or 100,000 satoshis.

As on date, 'bitcoin' has not been accepted as a legal tender in India. Japan and Australia have officially accepted bitcoin as a legal currency.

### Advent of Bitcoin System

A domain name, called [bitcoin.org](http://bitcoin.org) was registered on 18 August 2008. In January 2009, bitcoin network came into existence using the pseudonym 'Satoshi Nakamoto'.

However, in spite of many speculations, it is not known who that was, and interestingly, that person or group does not have control over the bitcoin network today.

As per Satoshi's blueprint, the total supply of bitcoin will eventually be capped at 21 million coins. Of the 21 million in bitcoin due to be mined, about 16.74 million, or roughly 80%, are presently in circulation.

Initially, most bitcoin trading was done in the west, but now the lion's share is done in China (and traded versus the Chinese Yuan).

### Running of Bitcoin Operations

The bitcoin network runs on a software system called 'blockchain'. The blockchain software can be used to store and send anything of value, so there are companies using it to store documents like property deeds, etc.

In fact, blockchain as a technology is becoming popular among banks and other big financial institutions, who want to use it to settle payments on their back-end systems.

Bitcoin blockchain is a public, decentralized ledger (no central party or institution is in-charge) that records every single bitcoin transaction. Think of it like a library card in the cloud.

Hence, blockchain can be described as an unchallengeable digital "ledger."

### Creation of New Bitcoins

The blockchain software resides on thousands of computers, all over the world and is maintained by a mix of ordinary people and more sophisticated computer experts, collectively known as 'miners'.

Miners use large, expensive computers to find and mine the blocks. Codes running on their machines create new bitcoins by solving complex mathematical computations, which also generates a great deal of heat.

The world's largest manufacturer of bitcoin mining equipment is Bitmain, based in China.

It may be interesting to know that Bitmain consumes about 1400 Watts per hour, similar to an average space heater.

Presently, 16.7 million bitcoins have been created. A fractional amount of new coins gets created every time a miner uploads a block to the blockchain, which is a reward for mining.

### Recording of Bitcoin Transactions

All bitcoin transactions are permanently recorded by miners, who upload bundles of transactions, or "blocks," to the chain, maintained on all those computers. The miners receive a small fee in bitcoin as an incentive to mine.

Miners keep the blockchain consistent, complete and unalterable by repeatedly verifying and collecting newly broadcast transactions into a new 'block'.

A complex algorithm links it within the blockchain to the previous block through a system called proof-of-work (described ahead).

Blocks of transactions are validated on the blockchain network through computing "consensus," which is a feature of the software.

### **Procedure to Buy and Transact in Bitcoins**

The first step to buy bitcoin currency is to download a bitcoin wallet, which is a digital wallet that does not hold actual coins (since bitcoins are intangible) or even hold any files.

The bitcoin wallet simply stores (mainly for security purposes) your 'private keys', which are strings of numbers and letters that allow you to access your coins. A bitcoin key looks like this: 05GL56JDK45sv754HR7ac.

Next step will be to register with a bitcoin brokerage agency, like the 'Coinbase'. While registering with the brokerage agency, it makes you answer a number of security questions to get set up with an account.

Once the account is approved by the agency, you can buy bitcoins using money transferred from a bank account and in some cases by charging a credit card.

What you are actually buying is a 'bitcoin key', as described above. You can transfer this asset to others for whatever the market price of bitcoin is, minus transaction fees.

Lastly, in order to make transactions you can visit any bitcoin exchange site and sell bitcoins, from your wallet, by entering in your key.

Bitcoin can be converted into ordinary currency based on its value on that date, or even used to make purchases from sellers that accept bitcoin.

### **Safety & Security Feature**

In order to process new transactions in bitcoin, the miners using powerful computers solve complex mathematical problems that add the transactions in a block to the blockchain. This is called "proof of work" and is one of the core features of most crypto-currencies.

Multiple miners are required to verify the work through the process of computing "consensus," which prevents fraud in bitcoin transactions.

Besides, certain brokerage agencies like Coinbase, asks to provide personal information of anyone who buys or sells bitcoin on their exchange. In case the law-enforcement agencies demand, the exchange will have to provide the info under the same laws that govern banks or brokerages.

The bitcoin blockchain by itself is very secure, but the bitcoins can be stolen from an account by stealing log-on and password info, i.e. 'private key' of the account holder and the bitcoin can be sent to another account controlled by the thief. Once bitcoin is transferred, it can't be recovered.

### **Implications of Using Bitcoin Currency**

#### **Positive Implications**

- The trend over the previous few years has made bitcoin a good long-term investment that has a long shelf life and whose value generally goes up over time.
- Bitcoin is being considered as a genuine innovation that will be around for a long time and help transform money.
- Governments across the world have already stepped in, to regulate trading in bitcoin, so that it can become a more established part of the financial system. Hence, it will actually legitimize the currency and broaden its adoption for investors.
- Some financial experts see the recent surge in bitcoin market as a bubble that may burst. But because the bitcoin market cap is very small, even if it crashed, it would not have a significant impact on the broader financial markets.
- Slowly bitcoin as a currency is catching on among some retailers, mostly e-commerce: US companies like, Overstock accepts bitcoin, as does Microsoft's Xbox store, and PayPal and Square allow merchants to accept bitcoin.
- The retailers might even encourage customers to pay in bitcoin in future if it costs them less in transaction fees than credit cards do.

#### **Negative Implications**

- Since bitcoin transfers cannot be traced, bitcoin is often used to purchase drugs or stolen goods or finance other types of criminal activity.

- It can become a major source for terror funding across the globe.
- It is believed that 40% of the bitcoin are owned by just 1000 people and hence, powerful people or 'whales' could collude to influence the price of bitcoin.
- Moreover, since there are relatively few buyers and sellers of bitcoin, this market is likely to remain volatile and the 'whales' could easily push the price around.
- There is a risk that the demand of bitcoin may go down sending its price plummeting. It can happen because of any unforeseen circumstances like, technical problem, regulatory interference, bad publicity arising from the massive amount of electrical power needed to mine for bitcoin, etc.
- Bitcoin offers both anonymity and the security of an electronic transaction. Hence, bitcoin can become a substantial gray or black market or a sub-economy where people could hide their income and evade government taxes.
- Bitcoin is not as liquid as other investments, firstly because settlement can take more than a week, and secondly, amid panic selling, some bitcoin holders might be unable to sell for a fairly long time, resulting in steep losses.

## Conclusion

In India, the penalties for Crypto tax evasion depend upon the tax avoided & the severity of the offence. It ranges between a fine of 50% to 200% of the tax due, as well as a potential prison sentence of upto 7 years.

There is no central authority in India that regulates the use of crypto currencies as a form of payment.

## **9. Defence Reforms -Shekatkar Committee**

### **Introduction**

The Ministry of Defence had constituted a 'Committee of Experts' to recommend measures to enhance combat capability of the armed forces.

The 'Committee of Experts' submitted its final report with 188 recommendations to the then Defence Minister.

The Defence Ministry scrutinised the recommendations and selected 99 of these recommendations dealing directly with Army, Air Force and Navy for implementation.

Finally, 65 out of 99 recommendations of the Shekatkar Committee were accepted by the government.

Defence Minister informed that a reform process in the Indian Armed Forces has been approved and will be implemented in a phased manner.

### **Mandate of Shekatkar Committee**

The mandate assigned to the 'Committee of Experts' by the MoD was to recommend measures to enhance the combat capabilities of the Indian Armed Forces and rebalance the defence expenditure by way of restructuring the forces to meet the objective of an agile, but effective military that can stand up to any kind of future threats that India may face.

### **Objectives of Restructuring the Forces**

#### **Increase "Teeth to Tail Ratio"**

The rationalisation of manpower held with organisations with non-combat roles vis-s-vis combat roles is recommended to be carried out.

The Committee pointed out that substantial savings can be achieved by downsizing or rationalising the manpower in organisations like the Defence Estates, Defence Accounts, Directorate of Quality Assurance, Ordnance Factory Board, Directorate of Research and Development, National Cadet Corps (NCC), etc.

The first phase of the reforms also entails redeployment and restructuring of approximately 57,000 posts of officers/JCOs/ORs and civilians.

The Committee recommends that the combatants be better utilised for improving the operational preparedness and civilians to be redeployed in different wings of the Armed Forces for improving its efficiency.

The implementation of the reform process has already begun with the decision of the Cabinet Committee on Security to close 39 Military Farms in a time bound manner.

#### **Reduce Defence Expenditure**

The Shekatkar Committee Report points out that if majority of its recommendations are implemented; the government can save up to Rs 25,000 crore from its current expenditure.

However, considering the internal and external security threat spectrum, the Committee has recommended that the defence budget should be in the range of 2.5 and three per cent of the GDP as against the present trend of previous five years, where the Defence Budget has been below two percent of the GDP.

#### **Streamline Defence Procurement Systems**

The panel has highlighted in its recommendations that the Defence Finance Wing of the MoD is seen to be more of an impediment in clearing projects proposed by the forces for execution. In order to quicken the pace of acquisitions of war-like stores and equipment, the financial powers of all the three service chiefs and vice chiefs should be further enhanced.

Also, the Committee has recommended that a 'roll on' plan for fresh acquisitions be introduced so as to overcome the practice of 'surrendering' funds at the end of every financial year.

#### **Enhance Tri-Service Integration**

The Shekatkar Committee has proposed a speedy creation of a permanent Chairman of the Chiefs of Staff Committee, i.e. a four-star general to head the Chief of Defence Staff (CDS) for seamless integration between the three services during combat and to also act as a 'chief coordinator' between the military and the Ministry of Defence.

Please read the previous blog on the subject for better understanding of the Integrated Theatre Command

Concept:<http://www.olivegreens.co.in/blog/integrated-theatre-commands-an-operational-imperative>.

Furthermore, the committee has also suggested the establishment of a Joint Services War College for collective training of middle level officers of Army, Air Force and Navy, so as to better understand the inter-service nuances and promote operational cohesion.

Similarly it has recommended that the Military Intelligence School at Pune be converted to a tri-service Intelligence training establishment.

### **Utilisation of Technology for Training**

The Committee has recommended that wherever possible technology must be utilised to enhance combat readiness and cut down on defencespendings, e.g. new recruits can do about 60 per cent of their firing training on simulators, resulting in substantial savings to the tune of Rs 20-25 crore per annum in expenditure of training ammunition.

### **Miscellaneous Recommendations**

- Optimising the Corps of Signals by downsizing and merging manpower of units with similar operational role.
- Improving efficacy of repair and recovery echelons in the Army by restructuring Base Workshops, Advance Base Workshops and Static/Station Workshops in the field Army.
- Streamlining inventory control mechanisms and redeployment of Ordnance echelons to include Vehicle Depots, Ordnance Depots and Central Ordnance Depots.
- Optimum utilization of Supply and Transport echelons and Animal Transport units.
- Closure of Military Farms and Army Postal units in peace locations.
- The Committee has also suggested that the standards for recruitment of clerical staff and drivers in the Army be enhanced.

- The investment in the National Cadet Corps requires a review and the Committee has recommended that its efficiency be improved.

### **Relevant Aspects Missed by the Shekatkar Committee**

**Defence Procurement Procedure:** This aspect is required to be streamlined in greater detail on priority; however, it was only partially reviewed by the Shekatkar Committee.

The Committee failed to highlight a cardinal point pertaining to the composition of the Defence Procurement Board which the armed forces have been trying to project before the government for some time now.

The Defence Procurement Board, which is an executive body responsible for defence procurements, is headed by the Defence Secretary and not by the respective Service Chiefs, which results in undue delay due to bureaucratic red-tapism.

**Shortfall in Ammunition:** It is now common knowledge that there is an acute shortage in our War Wastage Reserves (WWRs) of ammunition. However, the Committee did not suggest any emergency measures that may be set into motion to bridge the gap on priority.

**Improving Research and Development (R&D):** The report is completely silent about the actual need of the hour, i.e. to create a vibrant "R&D" establishment so that we are able to manufacture state of art equipment and weaponry.

In the present day scenario of hi-tech warfare, the only way to enhance the combat capability of the forces is to equip it with hi-end, state-of-art weapon platforms.

**Welfare Measures:** The Report does not make any mention of various welfare measures that the armed forces has been asking for, e.g. housing, children education and rationalization of grant of Military Service Pay to soldiers, etc.

### **Major Reforms Ministry of Defence:**

20 Defence Reforms as mentioned in the MOD E-book are as given in succeeding paras.

1. India's Chiefs of Defence Staff (CDS)

2. Creation of Department of Military Affairs (DMA)
3. Self Reliance Brought to Defence Sector
4. Bringing Digital India to Ministry of Defence.
5. New era of Speed & Transparency in Defense Acquisition.
6. Trial & Testing – transformed & simplified.
7. Connecting Broader Areas for better Development and Security.
8. Fortifying the defence-adding Firepower to IAF.
9. Women Power in Armed Forces.
10. Reforming Defence R& D to boost innovation and instil a Scientific Temper.
11. Reforms in Defence Land Management.
12. Reforms in Cantt Administration.
13. Unprecedented Welfare.
14. Unparalleled Reforms in NCC to Expand reach in Local Areas.
15. Help beyond the Boundries.
16. Galvanising Strategic Thinking.
17. Offset Reforms
18. Vocal for Local- CSD Reforms.
19. Increase Defence Export – New Vision, Explore Growth.
20. Leveraging Medical Capabilities.

### **Conclusion**

The implementation of the recommendations of the Shekatkar Committee may not be able to fully meet the mandate that it set out for.

Restructuring a few operational logistic elements and shutting down postal units and 39 military

farms will accrue some financial gains, but may not qualitatively improve the operational readiness of our forces.

In order to improve the combat capabilities of our military, we need to recruit the right talent, train realistically, provide modern state of art equipment and weapons and above all be able to maintain a very high standard of morale of the men behind the machines.

The bottom line is that in order to achieve the above, we should be prepared to spend nothing less than 3% of our GDP to be able to maintain the robust armed forces that we envisage.

## 10. Disaster Management

Disaster Management in India refers to conservation of lives and property during a natural or man-made disaster. Disaster Management plans are multilayered and are planned to address issues such as floods, hurricanes, fires, mass failure of utilities and the rapid spread of disease. The National Institute of Disaster Management (NIDM) is one of the pioneer institutes under Ministry of Home Affairs, located in New Delhi.

### NDRF (National Disaster Response Force)

This is the World's largest force, dedicated to disaster response. It provides sustained Disaster response service under all circumstances. It has rescued 1.44 Lakh precious human lives & also evacuated more than 7 lakh stranded persons from disaster situation within the country and abroad. The swift & effective response of NDRF during Japan Triple Disaster and Nepal Earthquake was acclaimed globally. The Kutuch Bhuj Gujarat Earthquake taught the Government of India to carve out NDRF in 2005. The Morbi disaster has shown that NDRF saved many precious lives.

### SDRF (State Disaster Response Force)

On the similar lines of NDRF, all states also manage natural & manmade disasters at State levels.

### 10 Steps to Disaster Preparedness

- a. Assess your Risk
- b. Assess your critical business functions
- c. Prepare your supply chain
- d. Back-up your data
- e. Create an emergency management plan
- f. Create a crisis communication plan
- g. Assemble emergency supplies
- h. Plan for an alternate location
- i. Review your insurance coverage
- j. Test your plan

### Introduction

India is vulnerable to a large number of natural as well as manmade disasters; 58.6% of the total landmass is prone to earthquakes, 12% of the land

is prone to floods, 68% of the cultivated area is prone to draught and hilly areas are at the risk of landslides and avalanches and our huge coastline of 5700km is prone to Tsunami and cyclones.

### Organisational Structure for Disaster Management

On 23 December 2005, the GOI enacted the **Disaster Management Act-2005**, which envisaged the creation of a National Disaster Management Authority (NDMA), headed by the Prime Minister, State Disaster Management Authorities (SDMAs) headed by the chief ministers and District Disaster Management Authorities (DDMAs) headed by the District Collectors/ District Commissioners or District Magistrates to provide an **integrated approach to disaster management**.

The objectives of the organisation, as enunciated by the **National Disaster Management Policy** were; to prevent the risk of disaster, mitigate the consequences of the disaster, capacity building through research and knowledge management, early detection, evaluation of severity, evacuation & relief and post incident care and rehabilitation.

National Executive Committee (NEC) assists the NDMA in its functioning. Its chairperson is the Home Minister. The guidelines and policies are communicated from NEC to the SDMAs and the DDMAs, who in turn carry out resource allocation/management and training of its executioners, up to the level of Panchayats and municipalities.

The NDM Policy also mandates raising of National Disaster Management Response Force (NDRF). Eight battalions of NDRF were initially raised. These battalions have been positioned at pre-designated locations and work in close liaison with the state governments to tackle eminent threats. Four battalions of the NDRF have been especially equipped and trained for certain specific central exigencies.

The training of the NDRF personnel takes place at various paramilitary centres. The further responsibility of training and rehearsing various stakeholders is that of NDRF.

## **Institutional Arrangements for Disaster Management**

**Cabinet Committee on Security (CCS).** It deals with defence of the country, law and order and internal security.

**Cabinet Committee on Management of Natural Calamities.** This body carries out assessment of the situation and measures adopted to reduce the impact of natural calamities.

**High Level Committee** In case of a calamity an Inter-Ministerial Group headed by the Union Home Minister visits the affected state to assess the extent of damage and recommends the quantum of assistance from the National Calamity Contingency Fund (NCCF).

### **National Crisis Management Committee.**

Comprises of high officials of GOI to deal with major crisis that may have national ramifications.

The other important institutions forming part of the DM are the Armed Forces, Central Paramilitary Forces, State Forces and Fire Services, Home Guards & Civil Defence.

### **Pro-active Approach to Disaster Management**

- a) Identification of various hazard prone areas and its mapping for future reference. The same has been carried out all along the length and breadth of the country to identify, e.g. seismic zones for earthquake prone areas, areas predicted for Cyclone/Tsunami, etc.
- b) Vulnerability and risk assessment to forecast a risk, e.g. early warnings for cyclones, Tsunami and floods, etc.
- c) Retro-fitting to upgrade existing structures like bridges and old buildings to ensure safety.
- d) Ensuring all safety norms, like fire precautions, checking of nominal ground pressure/soil firmness and architectural safeguards to

create earthquake/ other hazard resistant structures.

- e) In case of a hazard, mitigating the loss and effective drills to provide timely relief.
- f) Frequent rehearsals of all stakeholders so that everyone knows the drills and procedures.

**The super cyclone that hit Orissa in 1999 killed more than 10,000 people,** while an example of exceptional disaster management was the cyclone, Phailin that hit the coast of Orrisa on 11 October 2013, a total of 12 million people were affected.

It may be classified as **the India's biggest evacuation ever when 550,000 people** from the coast of Orissa and Andhra were moved to safer places.

### **Recommendations to Improve Disaster Management**

- a) Restructuring the national policy on disaster management.
- b) Awareness and training.
- c) Preparing mitigation plans.
- d) Conducting micro-zonation survey of congested urban areas and preparing a disaster mitigation plan.
- e) Incorporation of disaster resistant codes and guidelines in the bye-laws of all housing societies and ensuring no unauthorised construction comes up.
- f) Planning and provisioning of alternate communication mechanism that can be used during emergencies.
- g) Collecting data base of previous calamities.
- h) Finally, equipping all people to become adequately trained and self reliant.

## 11. Education Reforms in India

### Introduction

The Constitution of India lays down, that the Right to Education is a Fundamental Right of every citizen.

Article 21A was inserted under the 86<sup>th</sup> amendment to the Constitution on 12 December 2002, which states that, "The State shall provide free and compulsory education to all children of the age of six to fourteen years in such manner as the State may, by law, determine".

The National Council of Educational Research and Training (NCERT) is the apex body for curriculum related matters for school education in India and provides support and technical assistance to schools in various aspects of enforcement of education policies.

Education in India is being provided by Public sector and Private sector school, in the ratio of 7:5. The quality of education being imparted in Public schools is much to be desired.

It is felt that the education system in India needs further reforms to make it globally competitive, oriented towards reducing the academic stress and be more focussed towards identifying the latent potential in the students and producing industry ready material.

### TSR Subramanian Committee

The Subramanian Committee was formed in October 2015 to study feedback obtained from various states regarding reforming education.

The Committee comprised of prominent academicians like, ex-NCERT chiefs.

The Committee was tasked to assist in the formulation of the National Policy of Education 2016.

### Recommendations of the Subramanian Committee

a) Class X exams to be held at two levels, particularly for maths and science, to reduce stress and anxiety amongst students, who do

not wish to pursue these subjects further or are opting for vocational courses.

- b) Conduct of online, on-demand board exams, which a candidate can take at his/her convenience. The same will serve to relieve stress and offer flexibility to students.
- c) Conduct of national level test after class XII, similar to SAT in US, to replace various entrance exams for admission into colleges.
- d) The Committee recommended reinstating detention of students beyond Class V.
- e) The overhaul of regulators such as the UGC, inculcating values and nationalistic pride in school students
- f) Compulsory quality audit of all higher education institutions every three years
- g) Allow foreign universities to set up campuses in the country in collaboration with Indian institutions, among other things.
- h) Introduction of Sanskrit at primary level as an independent subject has been proposed.
- i) Open school courses at all levels to give wider options to students.
- j) Introducing sports facilities in education centres and importance of physical development for students.
- k) It proposed to introduce compulsory Yoga in all public and private schools.

### New Education Policy in India

The New Education Policy (NEP) is based on four pillars.

- a. Access
- b. Equity
- c. Quality
- d. Accountability

In this new policy there will be a 5+3+3+4 structure, which comprises 12 years of school and 3 years of Aanganwadi / Pre School, replacing 10+2 structure of Education.

## **Other Government Initiatives Related to Educational Reforms**

a. National Programme on Technology Enhanced Learning.

- b. Sarva Shiksha Abhiyan
  - c. Pragyata
  - d. Mid Day Meal Scheme
  - e. Beti Bachao Beti Padhao
  - f. PM Shri Schools

## 12. Electoral Reforms in India

### Introduction

India, with its diverse and enormous pollution is considered to be the world's largest and strongest democracy. The most effective instrument to ascertain the efficacy of a democratic system is the general perception amongst the people of the country that the election process is free and fair.

Thus, it is imperative that to legitimise the power being bestowed on the political masters by the masses of the country; a highly versatile, fool-proof election process is in place.

However, in the face of unscrupulous use of money and muscle power by political parties to win the elections at any cost, the Election Commission confronts serious challenges to meet its designated aims.

The other factors that come into play during elections, which maligns the electoral process, is stroking the sensitive cord of casteism/ communalism by politicians, use of core issues, like poverty, unemployment, etc by political parties to unjustifiably win over the voters, the unauthorised employment of government machinery to improve their candidates election prospects, and lastly, the influence of criminalization in politics, e.g. poll violence, booth capturing, and intimidation of voters to render the established electoral system defunct.

Let us consider some of the electoral reforms that have been already instituted and also, those that are being proposed to be incorporated to ensure an unbiased election process.

### Electoral Reforms Already Instituted

#### Electoral Reforms Pre-2000

The age to vote was reduced from 21 years to 18 years vide the Constitution (Sixty-first Amendment) Act, 1988.

The government employees deputed during the conduct of the elections for preparation, revision and correction of electoral rolls shall be deemed to be on deputation to the Election Commission in terms of their administrative control, superintendence and discipline for the period of such an employment.

The total number of persons from a constituency who must propose the name of the leader desirous of filing his nomination papers to stand for elections of Rajya Sabha and State Legislative Council must be minimum 10% of the total population of eligible voters of that constituency.

The use of Electronic Voting Machines (EVMs) is considered as one of the most revolutionary electoral reform to ensure fool-proof, efficient and eco-friendly conduct of elections. The EVMs were used for the first time in 1988.

In the event of booth capturing or any other form of established poll violence/ intimidation of voters, the Election Commission has the authority to either declare the poll of that particular polling station invalid and may appoint a date for fresh poll or countermand election in that constituency because of booth capturing.

In order to check the non-serious candidates from contesting elections, the amount of security deposit which a candidate needs to deposit at an election to the Lok Sabha or a State Legislative Assembly was enhanced to Rs 10,000 and Rs 5000 for the general candidate and to Rs 5,000 and Rs 2500 for a candidate who is a member of a Scheduled cast/tribe respectively.

The disqualification from contesting elections to Parliament and State Legislatures on the grounds of insulting the National Honour, vide the Act of 1971 is for a period of six years from the date of such conviction.

There is a restriction on contesting for elections by a candidate from not more than two Assembly or parliamentary constituencies at a general election or at the bye-elections which are held simultaneously. These restrictions also apply to biennial-elections and bye-elections to the Council of States (Rajya Sabha) and State legislative councils.

In the event of the death of a contesting candidate, the party concerned will be given an option to nominate another candidate within seven days of the issue of a notice to that effect by the Election Commission. The elections will not be countermanded as it was the practice earlier.

**Bye-elections to any House of Parliament or a State Legislature will now be held within six months of occurrence of the vacancy in that House.**

There is a strict prohibition on carrying of arms for polling and accounts for a cognizable offence punishable with imprisonment up to two years or with fine or with both.

No liquor or other intoxicants shall be sold or given or distributed at any shop, eating place, or any other place, whether private or public, within a polling area during the period of 48 hours ending with the hour fixed for the conclusion of poll. The violation of this rule is punishable with imprisonment up to six months or fine up to Rs 2000 or both.

Poll Day has been declared as a paid holiday for the employees and any violation to this order will attract fine up to Rs 500.

The gap between the last date for withdrawal of nomination papers and the polling date has been reduced from 20 days to 14 days.

#### **Electoral Reforms Post-2000**

Publishing the results of exit polls (opinion survey regarding how electors have voted, etc by media houses) during the election to the Lok Sabha and state legislative assemblies within the period notified by the election commission shall be punishable with imprisonment up to two years and with fine or both.

The ceiling on election expenditure has been notified by the EC, which is between Rs 54-70 lakhs for parliamentary constituency and 20-28 lakh for assembly constituencies as per the Elections (Amendment) Rules 2014.

The appellate authority for appealing against the orders of the electoral registration officers at the district level will now be the district /additional district magistrate/officer of equivalent rank. Appeal against the orders of the district magistrate will now lie before the chief electoral officer.

Election Commission has given its consent to allow government servants and certain other class of persons to vote via postal ballot.

Indians who are living abroad and have not acquired the citizenship of any other country and have their names registered in the electoral roll of

a particular constituency (place of residence) can vote.

Political parties are required to report any contributions received by them in excess of Rs 2000 from any source to the Election Commission. Earlier it was Rs 20,000.

#### **Landmark Judicial Pronouncements towards Electoral Reforms**

The Supreme Court of India, directed that all the contesting candidates will have to furnish all personal information, including the criminal record at the time of filing of nomination papers.

In 2013, SC held that as per the existing provisions of Sec 8(4) of RPA, 1951, a legislator shall be disqualified automatically from being a member of the house, if he is convicted and sentenced to two or more years of imprisonment by a court of law.

Those candidates, who have not been convicted, but are under arrest for criminal charges have been debarred from filing the nomination papers from the prison.

The Supreme Court also ruled that the provision of 'Right to Negative Vote' be given to the citizens during elections. The same has come to be known as the None Of The Above (NOTA) option.

Further, SC laid a stipulation and directed the trial courts to dispose of the criminal cases involving MPs and MLAs/MLCs within one year, from the time the charges have been framed by the court of law.

#### **Electoral Reforms Report (Proposal) Submitted by Law Commission of India**

Candidates or election agents should maintain an account and disclose particulars of names, addresses and PAN card numbers of donors and amount they received as contribution.

Companies Act 2013 to be amended with regard to the passing of resolution on the contributions from company's funds to a political party in the company's Annual General Meeting.

Political parties should maintain annual accounts audited by a CA. These accounts should clearly disclose the amounts received by the party and expenditure that they incurred which should be uploaded online for public inspection.

Political parties to maintain Regulations, stating that the party would not use violence for political

gains, and avoid discrimination based on race, creed, caste, language or place of residence. Violation of this regulation to result in de-registration of political party to contest parliamentary elections for 10 consecutive years.

Law commission also recommends a suitable amendment to 10th Schedule of the constitution in relation to disqualification on the ground of defection by President or Governor instead of Speaker or Chairman along with ECI's advice.

Representation of People's Act is proposed to regulate the issue of paid news and political advertisements where in Definitions for Paying for News, Receiving payment for News, and Political Advertisement has to be inserted in Section 2 of the RPA. Disclosure provisions should be made mandatory for all forms of media to curb the practice of disguised political advertisement.

Regulating and restricting government sponsored advertisements has been recommended by Commission to prevent the use of public money for party interest.

The Commission has recommended that the candidate should contest from only one constituency instead of two that is prevailing now.

The Commission also recommends that independent candidates should be disbarred from contesting elections as they increase the voter's confusion and allow only political parties to contest Lok Sabha elections.

Introduction of common electoral rolls for Parliamentary, Assembly and Local body elections is also recommended to save an enormous amount of time and effort by the commission.

### **Electoral Reforms in a Nutshell**

Electoral Reform is a change in Electoral Systems which improves or worsens how public desires are expressed in election results.

- **Voting systems** such as proportional representation, a two-round system (runoff voting), instant run off voting (alternate Voting, ranked choice voting, or preferential

voting) instant Round Robin Voting called condorset voting, range voting approval voting citizen initiatives and referendum and recall elections.

- Vote-counting procedures.
- Rules about political parties, typically changes to election laws.
- Eligibility to vote.
- Nomination Rules and Ballot Access.
- Electoral Constituencies and election district borders.
- Ballot designs & voting equipment.
- Scrutinizing
- Safety of Voters & election Workers.
- Measures against bribery, coercion and conflicts of interest.
- Financing of Candidates and referendum campaign.
- Factors which affect the rate of voter participation (voter Turnout)

Electoral reforms can contribute to democratic backsliding.

### **Conclusion**

It is cardinal that the general public of the country is continuously sensitised about the power of voting. Electing the right leader to power has a direct bearing on where the future of the country is headed.

In order to encourage more young voters to take part in the electoral process, the Government of India has decided, to celebrate January 25th of every year as '**National Voters Day**'.

It is also important that the Election Commission is able to instil the requisite confidence and reinforce the belief of the common man in our democratic system.

The proposed electoral reforms will suitable cleanse the electoral process and bring about the desired accountability and transparency.

# 13. Energy Security

## Introduction

India is the fourth largest energy consumer after China, USA and Russia and third largest importer in the world and its import dependence is expected to grow to 50% of its current total demand in the coming decade.

The present consumption from crude oil (29.45%), natural gas (7.7%), coal (54.5%), nuclear energy (1.26%), hydro electricity (5.0%) and alternate sources (wind power, biomass electricity and solar power) is 595 Mton.

About 70% of India's electricity generation capacity is from fossil fuel and coal accounting for 40% of India's total energy consumption followed by crude oil and natural gas at 28% and 6% respectively.

India imports 159.26 million tonnes of crude oil which amounts to 80% of its domestic crude oil consumption and **31% of the country's total imports are oil imports.**

## Total Installed Power Generation Capacity of India

- **Coal** – 148,474.39 MW, which accounts for **59.51%** of the total capacity.
- **Hydroelectricity** – 40,730.09 MW, which accounts for **16.33%** of the total capacity.
- **Renewable Energy Sources** – 31,692.14MW, which accounts for **12.70%** of the total capacity.
- **Natural Gas** – 22,607.95MW, which accounts for **9.06%** of the total capacity.
- **NuclearEnergy**– 4780MW, which accounts for **1.92%** of the total capacity.
- **Oil** – 11, 99.75%, which accounts for **0.48%** of the total capacity.

## Coal

India holds the largest coal reserves in the world. The coal reserves available with India are sufficient to meet its needs at the present rate for 100 more years.

Coal is the mainstay of India's energy sector and accounts for over 50% of primary commercial energy supply and its availability or otherwise can hugely impact the energy balance of the country. Out of the total power generated in the country, 69% comes from coal based thermal power stations.

The major challenges faced by the coal sector which needs to be addressed through policy and regulatory interventions are given below:

- The domestic production has stagnated and slowed down.
- To meet the domestic demands, dependence on imported coal has proportionately increased which in turn has put an increased pressure on the fiscal deficit and also depletes the foreign exchange reserves of the country.
- Coal is a non-renewable source and will run out in about 100 years. Therefore, tapping alternative sources of energy is an imperative.
- Older plants (without emissions filters) generate large amounts of pollution and the smoke can cause health conditions such as black lung disease or pneumoconiosis and also emphysema.
- Sulphur dioxide and nitrogen emissions can bind to water creating acid rain and hence, is a serious threat to environment and contributes towards climate change.
- To dig up coal, mines have been created, where safety norms for the workers and labour rights are being grossly flouted by the coal mafias operating there.
- Transporting coal by lorry and train from the mine to the power stations and thermal plants demands for energy and provision of locomotives, this further adds to the cost of production.
- There is a pressing need for a well-integrated infrastructure for coal supply chain, which includes railroads, importing ports and washeries.

- Coal as a sector is monopolised by public sector undertakings like the Coal India Limited and remains virtually closed to private sector participation and hence, fraught with discrepancies as prevailing in other government undertakings.

### **Oil and Natural Gas**

India has only 0.5% of world's proven oil reserves and it houses more than 15 percent of the world's population. Reserves of Oil are mainly situated in Bombay High (of the coast of Maharashtra), Gujarat, Eastern Assam and Rajasthan (yet to be exploited).

There are a total of 26 sedimentary basins in India covering 3.14 million sq. km of area, out of which, 22 basins fall into the category - of being prospective, having identified prospectively and proven to be commercially productive.

India's existing domestic production of about 858,000 barrels of oil per day (bopd) is less than 25 percent of its current consumption of 3,473,000 bopd, creating a wide gap to be met through imports.

Further, the domestic reserves so far identified, at their present rate of production, can supply for just 20 years more before getting fully exhausted.

As a result, the volume of crude oil imports has been increasing steadily in India to more than 76 percent of its total crude and 21% of the natural gas requirement. The import dependence is likely to increase to 80% for crude oil and 35% for natural gas, in coming years.

The following challenges accrue for India from the above stated predicament:

- High import dependence for energy will make the initiatives of the present Government with respect to promoting manufacturing sector through its campaigns like 'make in India', vulnerable due to compromised energy security.

Because of high import dependence for energy sector, the GDP growth rate becomes dependable on external factors like oil prices and hence, increases the fiscal deficit and depletes Forex reserves.

- Stiff competitive bidding for both, oil & gas is making it all the more difficult for Indian companies to source energy at a competitive price. ONGC Videsh lost out to Chinese companies in competitive bidding at Kazakhstan and in Myanmar.
- The volatility in prices of crude oil due to instability in the Middle East region, increasing import bill for oil and gas and depreciating rupee against dollar are further adding to the concerns of policy makers.
- India's problem to secure oil and natural gas at reasonable prices is further aggravated by increased demand from other fast growing Asian economies like China, Japan and South Korea.

Lastly, around 30-40% share of current supplies to Indian gas market is based on short term contracts or spot market, which is highly unpredictable because of global trends and hence, the prices in the spot market are expected to remain high for some time.

### **Hydroelectricity**

India is blessed with immense amount of hydroelectric potential and ranks 5th in terms of exploitable hydro-potential on global scenario. India is endowed with economically exploitable hydro-power potential to the tune of 1,48,700 MW.

The installed capacity of hydroelectricity is presently 40,730.09 MW, which accounts for 16.33% of the total power generation capacity of the country. The same needs to be harnessed on a war footing.

The hydroelectricity generation has continued over the past many years now, however, traditional approaches have suffered disadvantages due to environmental factors. For example:

- Building a dam across a river inundates the land that would have been otherwise available for agriculture/ other uses and for dwelling of local community.
- The traditional use of an area is made redundant by diverting a river as it affects the nature of the countryside and natural habitation. Certain areas will become

swampy, while some many have a drop in underground water table as the water has been diverted away from it.

- The variation in flow caused by complete or partial blockage of a river for energy conversion adversely affects the use of river water for irrigation and other purposes.
- Building large-scale hydro power plants can be polluting and damaging to surrounding ecosystems, e.g. natural movement/migration of fish and aquatic life gets affected.
- Changing the course of waterways can also have a detrimental effect on human communities, agriculture and ecosystems further downstream.
- Most importantly, Hydro projects are fed by rain water and hence, can become unreliable during prolonged droughts and dry seasons when rivers dry up or reduce in volume.

### **Unconventional and Renewable Sources of Energy**

In order to augment the energy resources discussed above and to meet the growing energy demands for quality and pollution free supply of energy to today's environment conscious population, India has to focus towards natural, clean and renewable energy sources.

These energy sources capture their energy from on-going natural processes, such as geothermal heat flows, sunshine, wind, flowing water and biological processes. Some of these are discussed below:

#### **Solar Energy**

Solar heating is to capture sun's energy for heating buildings and for cooking and heating foodstuffs, etc.

Solar electricity is mainly produced by using photovoltaic solar cells which are made of semi-conducting materials that directly convert sunlight into electricity.

India is a vast country with an area of over 3.2 million sq. km. Most parts of the country have about 250-300 sunny days. Thus there is tremendous solar potential.

- 140 MW solar thermal/naphtha hybrid power plant with 35 MW capacity is planned to be constructed in Rajasthan.
- Grid interactive solar photovoltaic power projects aggregating to 2490 KW have so far been installed and other projects of aggregated 800 KW capacity are under installation.

#### **Wind Energy**

Wind power is one of the most cost effective renewable sources of energy today and this has been the most rapidly-growing means of electricity generation across the world.

Its long-term technical potential is believed to be at five times the current global energy consumption or 40 times the current electricity demand.

India now has the fifth largest wind power installed capacity, of 3595 MW, in the world.

The estimated gross Wind potential in India is 45,000 MW that needs to be effectively harnessed.

#### **Biomass**

Solid biomass such as firewood or combustible field crops including dried manure is actually burnt to heat water and to drive turbines. Field crops may be grown specifically for combustion or may be used for other purposes and the processed plant waste then used for combustion.

Currently, biomass contributes 15% of the total energy supply worldwide. The total capacity of 55.105 MW has so far been installed in India, mainly for stand-alone applications. Details are listed below:

- 5 x 100 KW Biomass Gasifier installation on Gosaba Island in Sunderbans area of West Bengal is being successfully run on a commercial basis to provide electricity to the inhabitants of the Island through a local grid.
- 4X250 kW (1.00 MW) Biomass Gasifier based project has recently been commissioned at Khrichera, Tripura for village electrification.

#### **Bio Fuels**

Bio fuel is any fuel that derives from biomass, e.g. living organisms or their metabolic by-products,

such as manure from cows. Typically, bio fuel is burned to release its stored chemical energy.

India has so far commissioned a capacity of 537 MW and 536 MW is under installation.

It has an established potential of 3,500 MW of power generation.

### **Biogas**

Biogas can easily be produced from current waste streams, such as: paper production, sugar production, sewage, animal waste and so forth.

Biogas production has the capacity to provide us for our major energy needs, like for electrical productions or piped into current gas lines for use for cooking and heating, etc.

It is estimated that about four millions biogas plants are successfully functioning in India. However, only 31% of the total estimated potential of 12 million plants is being exploited.

### **Nuclear Energy**

India's current nuclear generation capacity is 4.8 GW and ranks 13th in the world, which account for only 1.2% of global nuclear capacity. The installed capacity of nuclear energy is presently 4780MW, which accounts for 1.92% of the total power generation capacity of the country.

Currently, four indigenously developed 700 MW PHWRs are under construction, two each at Rawathbhata in Rajasthan and Kakrapar in Gujarat. Several others are also planned.

Construction of two 1000 MW VVERs, (a type of Light Water Reactor) at Kudankulam in Tamilnadu is nearing completion and one of the reactor has been already tested for commercial production.

An Inter-Governmental Agreement with Russia has been signed for setting another four light water reactors of 1 GW each, in addition to the two which are already under construction. India plans to import totally about 40 GWs of LWRs to accelerate the nuclear power deployment in the country.

During the XII Five Year Plan, which commenced this year, about 5300 MW installed capacity will be added and several new 700 MW PHWRs as well as LWRs of varying capacities under international cooperation will be launched.

In order to meet the fuel requirements to these reactors, related fuel cycle facilities are planned to be augmented. India has signed a 'civil nuclear deal' with Australia, for supply of Uranium and production of radio isotopes.

The target is to increase nuclear power capacity to about 60 GW by coming decade. The major challenges to create the desired capacity are:

- Ensuring a credible, high level of safety at the plants. Sensitising the environment and shape the opinion of the local population in the post Fukushima scenario.
- Capacity building and ensuring a perennial supply of fuel for the nuclear reactors. Nuclear liability in case of an accident and allied issues are inhibiting foreign companies to set up plants.
- Environmental clearances, politically motivated agitations and other regulatory measures need to be addressed to encourage and win the trust of foreign companies.

### **Energy Imperatives for India**

- Move from being largely a fossil-fuel-driven energy economy, to one that is powered by energy from clean and renewable energy forms.
- Rapidly move to a high efficiency energy path by creating appropriate regulatory mechanism and incentivising renewable sources of energy.
- Make solar energy the mainstay for satisfying national energy needs, both as a large-scale generator as well as a small-scale distributed provider of energy.
- Invest liberally in developing a bio-based economy in rural areas, supplemented with other locally available energy forms as appropriate (wind, solar, and small hydro).
- Reduce coal dependency, and effectively switch over to an alternate energy economy.
- Aggressively pursue the development of nuclear energy while providing the essential emphasis on safety and addressing public perception issues.

- Develop a long-term integrated mobility and freight movement strategy that is aligned with the overall objective of driving India's energy economy through clean energy forms.
- Move to a completely market-driven pricing mechanism for all energy by initially reducing and then removing subsidies.
- Roll all energy subsidies (LPG, kerosene, electricity, and so on), into a single energy subsidy delivered directly to the beneficiary through a system of biometric card.
- Create a pool of technically qualified human resources to R&D and serve the domestic and international clean energy markets.
- Position India as a leader in clean energy policies, technologies, manufacturing, and services.

#### **How do we get to 280 GW of Solar Energy by coming decade**

Recently, India registered 20% more solar installations. India added approximately 9.2 GW of Power capacity, out of which the renewable including large hydro, contributed close to 90%.

Solar contributed about 70% to the capacity additions during the period. Even with the continues growth year on year, India must add close to 26 GW annually, to reach the target of 280 GW of Solar energy by decade end.

In recent years India registered 20% more solar installations compared to previous ones. Mercom India Research forecasts India to close to 15 GW of Solar very soon with favourable regulations and demand, 280 GW of Solar Energy is an achievable task.

The slew of policies announced by Government of India like the storage bidding guidelines, production-linked incentives programme and transmission corridors are steps in the right direction.

The centre needs to align more with the states and the policies need to be consistent, which otherwise could cause a lot of uncertainty.

To reach the target, India needs to install about 27 GW a year. The country needs to start looking beyond that there must be a long-term viability,

broken down year on year so that they can plan accordingly.

India is now the lowest – cost producer of Solar Power

#### **Conclusion**

India is projecting itself as a lucrative market for foreign investors. The 'make in India' campaign and PM Modi meeting up with world leaders and global investors to attract investments and catapult domestic job creation needs to be backed up with adequate availability of potential for capacity building, slick policies for resource allocation and advanced technological wherewithal.

Curtailing dependence on imports, promoting alternate and renewable sources of energy, harnessing resources available close at hand, including with our neighbouring countries like, hydro projects in collaboration with Bhutan and Nepal and oil & natural gas with Myanmar, should assume utmost significance.

As we are being ushered into a new vibrant era of sustainable growth, energy security will play a pivotal role, besides other organisational factors, to decide, how far we could go and how fast we could move on the intended path of leaving an indelible foot print on the global canvas.

## 14. FDI in Defence

### Introduction

The government has opened up the defence sector allowing foreign companies to own as much as 100% equity in the local defence sector through the government approval route in cases where it is likely to result in access to modern technology.

The current foreign direct investment (FDI) regime permits foreign companies to own 49% in Indian units through the automatic approval route.

The Long-term Integrated Procurement Plan of the government gives out the planned procurement right up to the present decade. To meet this requirement internally, the industry needs a capital of more than Rs 50,000 crore over the next three years.

The defence Public Sector Units (PSUs) are in no position to make this investment and the Indian private industry may not find this high risk investment lucrative enough due to the fund intensive requirement of developing expertise through R&D / transfer of technology from foreign sources.

### Implications of 100% FDI in Defence Sector

The existing policy on FDI requires the foreign Original Equipment Manufacturers (OEMs) to form joint ventures with domestic firms if they want to establish a manufacturing base in India.

However, once the policy regarding 100% FDI in defence comes into force, an OEM can independently plan and implement operations in India. Thus, the new policy will reduce the dependence of OEMs on domestic manufacturers.

In other words, the new guidelines will automatically bring in greater competition for domestic firms, who will have to match up in every respect with their foreign counterparts.

### Advantages of 100% FDI in Defence

Collaboration with foreign OEM will ensure availability of state-of-the-art and cutting edge technologies for the defence forces. Besides, it

will serve as a catalyst to boost local manufacturing in India.

Moreover, it will also promote India centric R&D to develop and deploy solutions catering specifically to the country's security needs, like, weather conditions, terrain and ergonomics.

Defence manufacturing in India will be able to create couple of million jobs, which in turn will boost up the country's GDP.

Bringing in 100% FDI will create a competitive atmosphere for India's 'white elephant', the Defence Research and Development Organisation (DRDO) and its agencies, which would then be pushed towards bringing in path-breaking products.

The R&D within India will get a boost to develop cutting edge equipment and the Intellectual Property Rights of the designs developed through FDI by the joint ventures will be retained within the country.

By allowing FDI in defence, India can ensure that companies deliver what they have promised. Many a times, there is a mismatch between what is promised and what is delivered.

Considering that India imports most of its equipment and weapon systems, there will be a huge savings to the State exchequer as the cost of manufacturing in India will be low.

The after sale service of the equipment will be better. Presently, there are many categories of equipment which are lying off road for want of spares and technical support.

Many types of ammunition used by our equipment is not available in the world market, for various reasons, like, equipment has become obsolete, OEM has shut down, etc, and hence, that weapon system has become defunct. This problem will also not occur, if it is being manufactured in collaboration in India.

Finally, FDI in defence will give a quantum boost to Indigenisation of equipment. Given the diversity of the wherewithal available in India,

perhaps we could look at exporting rather than importing the same in future.

### **Disadvantages of 100% FDI in Defence**

It may be wishful thinking to assume that the foreign companies would transfer technology to India and give us their latest and best technologies.

It is reasonable to say that DRDO has not delivered much in the last 60 odd years. However, instead of overhauling and making it productive, 100% FDI in defence will make DRDO irretrievably defunct.

In other words indigenous R&D will get a beating and we will remain heavily dependent on foreign technologies.

Further, it will be very unfair that 100% FDI in defence is being implemented even before giving a fair chance to the Indian private sector. We could have incentivised the defence manufacturing for the Indian private players first, as they cannot really compete with the foreign companies.

It has been proven by Indians time and again that given a chance and encouragement, they can deliver the same technology much cheaper, e.g. Chandrayaan and Mars mission.

Lastly, there could be an element of security risk by inviting FDI from foreign firms.

### **Rs. 494 Crore FDI Received in Defence Sector Since Revision of the Government Policy**

Recently, the Government announced increasing the FDI limit from 40% to 74% under the automatic route and upto 100% through the Government route in the Defence Sector.

India has received around Rs. 494 crore of FDI in the defence sector since ibid revision in recent years. The Government has adopted a series of measures to boost domestic defence manufacturing. India is one of the largest importers of arms global. According to estimates, the Indian Armed forces are projected to spend around USD 130 billion in capital procurement in this decade.

The Government now wants to reduce dependence on imported military platforms and has decided to support domestic defence

manufacturing. Govt has issued 584 defence licenses to 358 private companies for setting up of manufacturing units.

In order to promote 'make in India' in the defence sector, govt has also issued 107 licences for weapon manufacturing to private companies in India. In addition, there are 16 defence public sector undertakings manufacturing various platforms and equipments for the Armed Forces.

### **Conclusion**

The government's decision to allow 100% FDI in defence sector, is a win-win situation for all, as it will facilitate the much needed up-gradation of the equipment profile of our defence force in a much shorter timeframe with state of art equipment, obviate corrupt practices, which often delays and muddles critical defence deals, create jobs, skill youth and draw foreign exchange to bolster economic growth.

## 15. Gay Rights

### Introduction

Chapter XVI, Section 377 of the Indian Penal Code was introduced by the British in the year 1860. This Section criminalised all sexual activities that may be categorised as 'against the order of nature'.

**Section 377 has been elucidated in the Indian Penal Code (IPC) as thus:**

**Unnatural Offences:** Whoever voluntarily has carnal intercourse against the order of nature with any man, woman or animal shall be punished with imprisonment for life, or with imprisonment of either description for term which may extend to ten years, and shall also be liable to fine.

Thus, any form of sexual union involving penile insertion, including consensual heterosexual acts involving unnatural penetrations may be punishable under this law.

### Chronology of Legislations on the Issue

**Delhi High Court Order of 02 July 2009:** The case for repealing Section 377 was first initiated by an organisation called the AIDS Bhedbhav Virodi Andolan in 1991. The case was revived by a social activist group, led by the Naz Foundation (India) Trust that works for AIDS awareness.

In its 105 page judgment in July 2009, the Chief Justice said that Section 377 of the IPC is violative of Article 21 (Right to Protection of Life and Personal Liberty), Article 14 (Right to Equality before Law) and Article 15 (Prohibition of Discrimination on Grounds of Religion, Race, Caste, Sex or Place of Birth) of the Constitution.

Hence, the 150-year-old Section 377 was declared unconstitutional with respect to sex between consenting adults by the High Court of Delhi.

**HC Judgement Overturned by Supreme Court of India:** The reason given by the Court, while passing this judgement was that amending or repealing Section 377 falls in the ambit of the Parliament, and cannot be decided by the judiciary.

Furthermore, Supreme Court dismissed all the review Petitions against its earlier verdict on Section 377 of IPC.

**Curative Petition by Gay Rights Activists** A curative petition had been filed by Gay rights activists and NGO Naz Foundation against the apex court's judgement upholding validity of section 377 (unnatural sexual offences) of IPC and the later order, by which it had dismissed a number of review petitions.

(A curative petition is the last judicial resort available for redressal of grievances in court which is normally decided by judges' in-chamber).

**Supreme Court Order of April 2014:** Supreme Court in its landmark April 2014 verdict had directed the government to declare transgender as a 'third gender' and include them in the OBC quota.

The verdict pronounced that the 'third gender' must be given equal rights under law, including marriage, adoption, divorce, succession and inheritance.

This verdict indirectly helped in protecting the LGBTs rights and provided an impetus to the move against Section 377.

**02 February 2016: Curative Petition Referred to Five-Judge Bench:** In a departure from the norms, the Supreme Court on 02 February 2016 referred the curative petition to a five-judge bench against Section 377 of the Indian Penal Code. The bench was headed by the then Chief Justice of India, TS Thakur.

Therefore, rather than out-rightly dismissing the petition, which is usually the case with most curative petitions, the Supreme Court decided to admit the petition, which underlined the importance that the apex court had accorded to this highly sensitive issue involving 2.5 million strong Gay community of India.

**Right to Privacy Ruling of Supreme Court - 24 August 2017:** A nine-judge bench of the Supreme Court ruled on that the 'Right to Privacy' is protected as an intrinsic part of the right to life

and personal liberty under Article 21 and as a part of the freedoms guaranteed by Part III of the Constitution of India.

The declaration of Right to Privacy as a Fundamental Right and Recognition of transgender as a "third gender" by Supreme Court are being cited to seek constitutional protection of sexual minorities from harassment and persecution.

In fact, Supreme Court had ruled on the matter that, "Sexual orientation is an essential attribute of privacy. Discrimination against an individual on the basis of sexual orientation is deeply offensive to the dignity and self-worth of the individual."

The Supreme Court had ruled that "in a democratic Constitution founded on the rule of law, their rights are as sacred as those conferred on other citizens to protect their freedoms and liberties."

**08 January 2017 - Constitutional Validity of Section 377 Re-examined by Supreme Court:** In response to a fresh plea the Chief Justice of India Dipak Misra, decided to re-examine the constitutional validity of Section 377.

The CJI asked a larger bench to decide if sex in any form between consenting adults should be kept out of the ambit of Section 377, IPC, which criminalises homosexual behaviour.

**10 July 2018 – Supreme Court Commenced Hearing of Petitions Challenging its 2013 Verdict that had Re-criminalised Consensual Sex between two Consenting Adults of the same Gender:** Additional Solicitor General told the five-judge constitution bench headed by Chief Justice that it would leave it to the wisdom of its judges to decide on the constitutional validity of Section 377.

#### **Arguments in Support of Section 377**

All religious leaders voiced their unequivocal support to the SC judgement of December 2013 that overturned Delhi High Court Judgement on Section 377.

Most churches of northern India and All India Muslim Personal Law Board are against decriminalising homosexuality.

Those who supported the judgment argue that homosexuality was against Indian culture, against nature and against science and said that it was representative of a regressive animalistic behaviour that may result in out-break of deadly sexually transmitted diseases, like HIV/AIDS.

It is an established truth that any sex other than natural can be a cause of many serious ills in the human beings, e.g. homosexuals are more prone to sexually transmitted diseases like, AIDS, etc than any normal person.

Decriminalising Section 377 may result in the sex ratio becoming further adverse in the country.

Many child rights activists had criticized the Delhi HC verdict de-criminalising homosexuality on the ground that Section 377 was required to prevent cases of child sexual abuse.

#### **Arguments against Section 377**

Those who support LGBT (Lesbian, Gay, Bi-sexual and Transgender) community vehemently oppose the Supreme Court judgment of 2013.

Section 377 of the IPC is violative of Article 21 (Right to Protection of Life and Personal Liberty), Article 14 (Right to Equality before Law) and Article 15 (Prohibition of Discrimination on Grounds of Religion, Race, Caste, Sex or Place of Birth) of the Constitution.

Many organizations, like The People's Union for Civil Liberties published reports of the human rights violations faced by sexual minorities and, in particular, the transsexuals in India.

The Reports highlight that the police extorts money from the transsexuals and sex workers and also how they were being harassed and marginalised through moral policing.

Further, it was brought out by Human Rights Watch that implementation of this law restricts and impedes HIV/AIDS prevention efforts, and those who are most adversely affected are the sex workers and homosexuals, in whose cases the spread of such diseases are most rampant.

The legislations for protection of children and minors already exist, like Protection of Children from Sexual Offences (POCSO) Act 2012. Therefore, it is argued that there is no need for Section 377 in the child abuse cases.

Also, it is being argued that progressive countries like Ireland and US have even legalised same sex marriages since 2015. Closer home, Nepal had legalized homosexuality in 2007 and the new Constitution of the country too gives many rights to the LGBT community.

Lastly, many progressive countries like, France, UK, Canada, United States, Australia and Brazil have decriminalized homosexuality. Other countries like Belgium, Brazil, Canada, France, Iceland, Ireland, Luxembourg, Norway, Portugal, South Africa, Spain, Sweden and Uruguay allow same sex marriages or a civil union.

Hence, it is argued by those who want Section 377 to be de-criminalised that, it is high time that the Indian Penal Code reflects that India too is a diverse and progressive nation.

### **Conclusion**

A ruling by the Supreme Court of India in 2022 widened the definition of families to live-in couples inclusive of LGBTQ thereby providing LGBTQ couples rights and benefits equal to that of married couples.

Same sex relations in India are legal. Legal gender recognition is possible.

India's Supreme Court has agreed to examine a petition that seeks legal recognition of same sex marriage in a development that could build on a string of rulings expanding protection for the LGBTQ community.

In India, currently a single individual can adopt children irrespective of their sexual orientation and gender. The surrogacy rules were changed recently. But the Government ignored the minority LGBTQ community while prohibiting it.

Marriage is still important in our society for various reasons, starting from inheritance of property to medical insurance. In India proof of marriage is vital when it comes to rights, such as inheritance, adoption or even basic financial planning, like taking a family health insurance.

## 16. Goods and Services Tax (GST)

### Introduction

The 122<sup>nd</sup> Constitutional Amendment Bill for approval of the GST was introduced and passed by Lok Sabha and Rajya Sabha in 2015 and 2016 respectively.

A total of 19 states out of the 29 ratified the Bill in a record 23 days and the Bill got Presidential accent on 08<sup>th</sup> September 2016.

The passage of the Constitution Amendment Bill paved the way for setting up a decision making body for the GST, called the GST Council.

### Formation of GST Council

The government notified 12<sup>th</sup> September 2016, as the date from which the procedure for setting up of the GST Council was initiated. The GST Council was constituted under the 101st Constitutional Amendment.

The Council is headed by the Finance Minister and comprises of a Minister of State for Finance and representatives from all 29 states and two union territories.

The Council has the mandate to decide upon the following major aspects:

- GST rates to be imposed.
- Taxes to be subsumed under GST.
- Goods and Services to be covered under GST.
- Model laws to be passed by Parliament and state assemblies to enable implementation of GST.
- Apportionment of IGST for inter-state movement of goods.
- Special provisions for the North-Eastern or Himalayan states.

### Examining the GST

At present, tax is collected through a tax credit mechanism on value-added goods and services at each stage of sale or purchase in the supply chain i.e. tax is paid during the procurement of goods and services and subsequently, again value added

tax is paid while selling the goods or services to the end user.

Thus, the consumer bears this cumulative tax burden as he is the last person in the supply chain.

The implementation of GST will lead to the abolition of other taxes such as Octroi, Central Sales Tax, State-level sales tax, entry tax, stamp duty, telecom licence fees, turnover tax, tax on consumption or sale of electricity, taxes on transportation of goods and services, etc, thus avoiding multiple layers of taxation that currently exists in India.

Since, multiple layers of taxation will be subsumed into the GST; it will reduce the overall tax burden of goods and services on the consumers from the current 25% to 30% to an average of around 18% to 20%. Consequently, the end user will have to pay lesser cost comparatively.

Besides, the reduced cost would make our products more competitive in the national and international market. Therefore, the new tax regime is likely to spur economic growth and it is estimated to increase the country's GDP by 1.5% to 2%.

The GST Council has finalised a four-tier GST tax structure of 5 per cent, 12 per cent, 18 per cent and 28 per cent, with lower rates for essential items and the highest for luxury and de-merits goods, including luxury cars, SUVs and tobacco products, that would also attract an additional cess.

Moreover, with a view to keeping inflation under check, essential items including food, which presently constitute roughly half of the consumer inflation basket, will be taxed at zero rate. The cess is expected to provide additional resources to the central government to compensate states for losses incurred in revenue after GST is implemented.

### Salient Features of GST

The proposed mechanism which will be implemented entails a dual GST system. Under dual GST, a Central Goods and Services Tax (CGST)

and a State Goods and Services Tax (SGST) will be levied on the taxable value of a transaction.

The CGST and SGST would be levied at rates, which will be mutually agreed upon by the centre and the states, through a body called the Council of GST, comprising of concerned representatives from states and centre.

All goods and services, barring a few exceptions, will be brought into the GST base. There will be no distinction between goods and services.

GST would be applicable on **supply** of goods or services as against the present concept of tax on the **manufacture** or on **sale** of goods or on provision of services, e.g. a supplier of raw materials, which may be required for the manufacture of certain goods by a company, will have to pay his share of the tax. Subsequently, when the company pays the tax on the supply of the finished product to the retailers, it can claim for deduction of the tax already paid by his supplier of raw materials.

It is in effect a self-collecting tax, since every company will get a deduction on the taxes already paid by its suppliers. Hence, the buyer more or less will force his supplier to pay his part of the tax to claim his (buyer's) deductions.

A common threshold exemption would apply to both CGST and SGST. Companies with an annual turnover of less than Rs 20 lakh will be exempted from paying GST. This threshold will be Rs 10 lakh for special category states (i.e. Himalayan and North-Eastern states).

Every business entity will have to self-assess and file tax returns on a monthly basis by submitting: (i) details of supplies provided, (ii) details of supplies received, and (iii) payment of tax. In addition to the monthly returns, an annual return will have to be filed by each taxpayer.

The GST Council has laid an upper cap on the tax rates, e.g. for each CGST and SGST the tax rate will not exceed 20% and the tax rate of IGST will not exceed 40%.

The Central GST Bill allows certain taxpayers with turnover less than Rs 50 lakh to pay CGST at a flat rate on turnover (composition levy), instead of the value of supply of goods and services.

The liability to pay GST in relation to supply of goods and services will arise on the date of: (i) issue of invoice, (ii) receipt of payment, whichever is earlier.

An Integrated GST (IGST) would be levied on inter-state supply of goods or services, which would be collected by the centre and after deducting the CGST rate, the balance revenue would be transferred to the state where the goods or services were eventually consumed.

Import of goods or services would be treated as inter-state supplies and therefore, would be subject to IGST in addition to the applicable customs duties.

In order to compensate the states for loss in revenue generation accruing out of implementation of GST, a cess on certain luxury goods like tobacco, high-end cars and aerated drinks will be allowed to be levied by states on certain goods and services for five years from the date GST Act comes into force. After five years, the cess will be shared between the centre and states.

Alcohol and petroleum products have been kept out of the ambit of GST in the initial year. However, entry tax (Tax paid while getting product into the state boundary) will be included in GST.

All offences relating to GST, like mis-reporting of goods and services supplied or details furnished in invoices, will be a punishable offence and a defaulter can be fined, imprisoned, or both, by the CGST Commissioner. Such orders can be appealed before the Goods and Services Tax Appellate Tribunal, and further before the High Court.

The central government is planning to set up an anti-profiteering authority by law to ensure that the reduction of tax rates on account of implementation of GST results in a commensurate reduction in prices.

### Benefits of GST

The implementation of GST will improve tax collections and boost India's economic development by breaking tax barriers between the states and integrating India through a uniform tax rate. It is estimated that the country will gain

\$15 billion a year by implementing the Goods and Services Tax.

The overall taxation burden will be divided equitably between manufacturing and services, through a lower tax rate by increasing the tax base and minimizing exemptions.

It will build a transparent and corruption-free tax administration, by simplifying procedures of taxations and reducing the tax burden, though increasing the ambit of taxation.

The ease of doing business will improve after cumbersome layers of taxes are removed and business deals will become more transparent as various hidden taxation will not be present.

Since, both Centre and State GST will be collected at the place of **sale of a product**, it will be charged on the **manufacturing cost** only, and hence, the cost of the product will come down. Lower price (approximately 5%-7% for consumer goods) will attract more consumption and thereby help both the manufacturer and the consumer.

The four-tier GST tax structure and the upper cap laid on the tax rates, will ensure that the essential commodities of daily use and food items will be placed at minimum tax rate or even exempted from tax. The same will immensely benefit the common man.

To safeguard the interests of the states, in terms of revenue collection, Alcohol, tobacco, petroleum products have been kept out of the GST regime. Besides, provision of additional cess for the next five years to compensate for their revenue loss.

Lastly, greater clarity in the taxation system through GST is likely to expand the tax base and incentivise foreign investments into India.

Consequently, it will generate greater revenue for the government to put into social and infrastructure development projects. The same will serve as a catalyst to attract more domestic and foreign investments, thus providing a boost to the economy.

## Conclusion

Smaller companies with turnover less than 20 lakh will not fall in the ambit of GST. So, these companies will continue to pay excise or value added tax, the rate of which is higher than GST. Hence, big companies will get benefit of deductions paid as taxes (at a higher rate) by their small suppliers.

The key beneficiaries will be big companies from the organised sector, as their overall tax liability will reduce. However, the small players, mostly from the unorganised sector will perhaps be affected adversely. It needs to be seen that unorganised sector in India constitutes 30% to 75% of the market size.

Since, unorganised sector will get adversely affected and lose its competitiveness, there is a fear of higher attrition rate of workers or layoffs by such small companies to cut cost.

The small companies to remain profitable will have to boost their sales to cross the 20 lakh threshold to come into the folds of GST; there is a likelihood that short term increase in prices of products may take place.

The GST Council has finalised four-tiers of GST tax structure at the rate of 5%, 12%, 18% and 28%. Though it stands to reason that luxury items must be taxed at a higher rate as compared to the regular items being used by ordinary citizens, but assigning different items to differ categories will make the structure of the GST highly complex and difficult to execute and monitor.

Some economists are saying that GST is nothing more than 'old wine served in new bottle' and the rates of taxation will not change substantially.

Lastly, GST may be fundamentally considered as anti-federal, as the states will be unable to increase or reduce taxation, as hitherto fore to suit the socio-political specific requirements during certain special and unforeseen circumstances.

## 17. Shanghai Cooperation Organisation

### Introduction

The Shanghai Cooperation Organization (SCO), or the Shanghai Pact, emerged from the organisation, 'Shanghai Five' (China, Russia, Kazakhstan, Kyrgyzstan, Tajikistan), which was founded in 1996 after demarcation of China's borders with the four newly formed breakaway states of erstwhile USSR to peacefully resolve the boundary disputes.

This conglomeration was transformed into the today's **Shanghai Cooperation Organization (SCO)** after the induction of Uzbekistan as a new member at the Shanghai Summit in 2001.

Initially, the role of SCO was predominantly to look at the security concerns of the member states, often describing the main threats it confronts as being terrorism, separatism and extremism.

Later the scope of SCO was enlarged to encompass political, cultural, economic, and military cooperation, intelligence sharing and counter terrorism. There have been a number of SCO joint military exercises.

A major joint military exercise called the Peace Mission 2010 was conducted from 09–25 September at Kazakhstan's Matybulak training area, where, over 5,000 personnel from China, Russia, Kazakhstan, Kyrgyzstan and Tajikistan participated in joint planning and operational manoeuvres.

The official working languages of the Shanghai Cooperation Organisation are Chinese and Russian.

### Reasons for the Organisation to Come into Being

Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan are all landlocked states. After the collapse of Soviet Union, these states had to fend for themselves as independent entities.

The Central Asian region is richly endowed with natural resources and vital minerals. Since, the region became landlocked after independence, movement and accessing these resources became difficult.

Trade with these states became dependent on passage through adjoining countries and also on the political dispensation of the regimes in power in those countries.

Consequently, major powers, both regional and farther away, came to compete to secure and possibly control access to these resources. Besides this, many endeavours are also going on to identify and create credible transport routes that pass through friendly countries to improve accessibility.

Hence, in the present regional geo-political context of growing fundamentalism, protectionism and need for projection of joint military power, SCO has assumed a much greater political, economic and military significance.

### First Ever Expansion of SCO

India, Iran and Pakistan were admitted as observers at the 2005 Astana Summit. The Tashkent SCO Summit in June 2010 had lifted the moratorium on new membership, paving the way for the expansion of the grouping.

India has subtly indicated its interest in playing a more substantive role in the development of the SCO. It was during the Summit in Ufa, Russia, in July, 2015, that administrative hurdles were cleared to grant membership to India and Pakistan.

India and Pakistan signed the memorandum of obligations on 24 June 2016 at Tashkent, thereby full members.

The acceptance process is now complete and India, along with Pakistan will be inducted as permanent members to the Shanghai Cooperation Organization (SCO) during the SCO Summit at Kazakhstan.

The inclusion of India and Pakistan into the SCO would mean the addition of another 1.45 billion people which would make the grouping cover around 40 per cent of the global population.

## **Implications for India**

Central Asia is truly an extended neighbourhood for India. India's relations with countries in the region, however, have failed to realize the enormous potential for enhancing ties in areas such as security, policy, economy, trade, investment, energy, connectivity, and capacity development.

A major reason for India's inability to exploit this resource rich neighbourhood is that India does not share common land-borders with the region. Moreover, Pakistan has flatly refused India land access to Central Asia through its territory.

In order to circumvent this challenge, India signed an agreement with Iran and Afghanistan to develop Chabahar Port facility and an associated rail-network at a cost of \$500 million. Besides, India also prioritized the construction of the International North-South Transport Corridor to connect with Eurasia.

Hence, joining the SCO gives a diplomatic boost to India's efforts to connect with Central Asia.

Another reason for lack of communication with Central Asia has been the infrequent visit of Indian dignitaries to these countries.

India's membership in the SCO provides renewed opportunities for India's leadership, including prime ministers, to meet with their counterparts from Central Asia, Russia, China, Afghanistan, and others regularly and frequently. India's potential participation in the Eurasian Economic Union (EEU) will be an added advantage to make this partnership more fruitful.

India being the fifth largest economy (\$8 trillion) in PPP terms and seventh largest (\$2.3 trillion) in nominal dollar terms, it's rapidly expanding energy needs, provide a stable and assured market for these countries.

In addition, stalled processes like the agreement on Turkmenistan-Afghanistan-Pakistan-India (TAPI) pipeline, signed in December 2015 may get an impetus.

India's development experience, particularly in promoting agriculture, small and medium enterprises, pharmaceuticals, and information technology, can be of immense benefit to Central Asian countries.

In terms of tackling terrorism and issues relating to security, which is one of the greatest challenges of the present times, India can have a greater say and can build consensus for effective action in combating terrorism in the region.

Lastly, India's membership in the SCO adds to the military muscle of the organization and in due course, is likely to give a boost to the 'Make in India' campaign, especially in the defence sector, as the breakaway provinces of USSR were a hub for manufacture of defence equipment and weaponry.

## **Implications for Pakistan**

The SCO's permanent membership for Pakistan paves the way for it to establish close socio-economic ties and improve road connectivity with Central Asia, inviting the business community of both sides to invest in each other's agriculture, mining, pharmaceutical, and manufacturing sectors.

The close proximity of Kyrgyzstan to Pakistan allows it to avail cheap power supply schemes from that country, which has a plethora of hydroelectric power resources.

Pakistan is already working with Afghanistan, Tajikistan, and Kyrgyzstan on the CASA-1000 Project to transmit electricity from Central Asia to South Asia.

Conversely, the landlocked Central Asian countries could use the important ports of Karachi, in Sind and Gwadar in Baluchistan, Pakistan for movement of its goods.

The Gwadar port is located near key oil shipping lanes from the Persian Gulf, thus it will provide closest access to the sea to Central Asian Republics for oil and other imports.

The extensive network of roads and rail to carry goods from the Persian Gulf to China and Europe through the Silk Route under the 'One Belt One Road' project has an important segment, called the China-Pakistan Economic Corridor (CPEC), passing through Pakistan.

Pakistan, through a Quadrilateral Traffic in Transit Agreement (QTIA), is already in the process of finalising a deal between Kyrgyzstan, Pakistan, China and Kazakhstan to facilitate the

transportation of goods and flow of traffic from Central Asia to South Asia and China.

Therefore, in future, there could be direct bilateral agreements between Pakistan and these Central Asian countries to expand the existing network of rail and road tracks in Central Asia for smooth transit of goods across these countries and to provide the economic channel for the scientific-technical, educational and cultural exchanges.

### **Conclusion**

India's association with the Shanghai Cooperation Organization immensely helps the country to enhance the much desired connectivity with

Eurasia and provide a fillip to trade and commerce.

The ambit of SCO also very importantly covers counter-terrorism cooperation and provides India with a regional platform to strongly air its views and expose Pakistan's dubious designs.

Lastly, the Shanghai Cooperation Organization is also being seen as a means by the Eurasian bloc to establish "balance of power" through the expansion of this regional organizations in a West-dominated world order.

## 18. Indian Economy

### Introduction

India surpassed China as the fastest growing economy of the world, with its projected gross domestic product (GDP) growth at 7.3 per cent during 2019-20. As a sharp contrast, China has reported its slowest growth in the past seven years at 6.7 per cent last year. Presently, India is the Fifth largest Economy in the world.

It is believed that Indian economy has bounced back owing to consistent low oil prices, improvement in electricity generation, better mining production, rebound in the farm output and higher inflow of foreign investments.

The figures that reinforced India's position as the world's fastest, growing large economy, came on the back of a strong 7.9 per cent growth.

Notwithstanding, the issues that need to be given attention so as to maintain a sustained higher growth trajectory include, prevent faltering of private investments, improve exports and capital goods growth, bringing about taxation reforms and make the market more investor friendly.

### Economic Policies Post Independence

The post independence period of India was marked by economic policies which tried to make the country self sufficient.

The economic reforms of India somewhat followed the democratic socialist principle with more emphasis on the growth of the public and rural sector.

New roads were built, dams and bridges were constructed, and electricity was spread to the rural areas to improve the standard of living.

Therefore, in the mid 1950's huge scale nationalization was done to industries like, telecommunications, mining, electricity, etc.

### Economic Reforms During 1960s to 1980s

During the mid 1960s, the government initiated the 'Green Revolution' movement and stressed on better agricultural yield through the use of synthetic fertilizers, improved seeds and mechanised techniques of agriculture.

New irrigation projects were undertaken and the rural banks were also set up to provide financial support to the farmers.

The first step towards liberalization of the economy was taken up in mid 1980s. The government of India took some bold decisions and started easing restrictions on capacity expansion, reduced corporate taxes and removed price controls, etc.

These led to enhancement in growth rate, which in turn also led to high fiscal deficits and aggravating current account, because of increased imports and Indian companies were 'earning in rupees and paying in dollars'.

### Economic Crisis of 1991

As India eased restrictions for foreign investments and its economy was primarily import driven, in 1991, the country faced a serious economic crisis due to high balance of payments which India was incapable of paying up and **foreign exchange reserves were depleted to the extent that it was enough only for three weeks of essential imports.**

India was only weeks away from defaulting on its external balance of payment obligation, when it asked IMF for the bailout loan, by pledging 67 tons of India's gold reserves as collateral.

To get out of the adverse financial situation, the then Finance Minister, initiated the economic liberalization reform in the year 1991.

Under the liberalization programme, foreign direct investment was encouraged, public monopolies stopped. Service sector with businesses started providing services, rather than manufacturing products was encouraged and developed.

### Initiation of Liberalisation Policy

India was compelled to adopt the liberalisation policy as per the IMF guidelines enunciated while sanctioning the bailout loan. Given below are the salient highlights of the Liberalisation, Privatisation and Globalisation (LPG) Policy:

- Foreign Technology Agreements were initiated to allow transfer of technology for setting up production lines of foreign equipments and products in India.
- Foreign Investment was encouraged through easing regulatory norms to boost economy.
- Industrial licensing policies were relaxed and made investor friendly.
- Deregulation of centralised control was done to speed up business processes.
- Beginning of privatisation commenced through public-private partnerships, especially of non-profit making public sector undertakings.
- Opportunities for overseas trade were facilitated by removing certain trade barriers.
- Steps to regulate inflation were instituted.
- Tax reforms were proposed and work on uniform taxation policy was initiated.
- Except for 18 sectors that required licensing, the License -Permit Raj was abolished to curtail red tapism and build up trust of investors.

#### **Economic Reforms Post Crisis**

- Doing away with the Controller of Capital matters in 1992 that determined the rates and number of stocks that companies were supposed to issue in the market.
- Launching of the National Stock Exchange in 1994 in the form of a computerised share buying and selling system. By the year 1996, the National Stock Exchange surfaced as the biggest stock exchange in India.
- In 1992, the equity markets of the country were made available for investment through overseas corporate investors. The companies were allowed to raise funds from overseas markets through issuance of Global Depository Receipts.
- Promoting FDI (Foreign Direct Investment) by means of raising the highest cap on the contribution of international capital in business ventures or partnerships to 51 per cent from 40 per cent. In high priority

industries, 100 per cent international equity was allowed.

- Reorganisation of the methods for sanction of FDI in 35 sectors was laid down. The boundaries for international investment and involvement were demarcated.
- Cutting down duties from a mean level of 85 per cent to 25 per cent, and withdrawing quantitative regulations. The rupee was turned into an exchangeable currency on trading account.

#### **Outcome of Reforms**

The outcome of these reorganisations was mostly positive and can be estimated by the fact that the overall amount of overseas investment (comprising portfolio investment, FDI, and investment collected from overseas equity capital markets) rose to **\$5.3 billion in 1995-1996** in the country from a mere **\$132 million in 1991-1992**.

The global financial meltdown affected Indian economy as follows:

- As a consequence of global liquidity squeeze, reversal of capital flows took place which put pressure on forex markets and rupee started to depreciate. There was rapid depreciation of exchange rate and surge in short-term interest rates.
- Immediately after Lehman Bank failure in September 2008, the risk aversion of financial system increased and banks became highly cautious about lending.
- India's oil import bill swelled, exports slumped, credit dried up and investors took their own money out, leading to fiscal deficit rise to 12.7 percent. All these led to:
  - Reduction in Capital Flows (foreign direct investment reduced by 54% in the first quarter of 2009).
  - Pressure on Balance of Payments as the global trade contracted.
  - Monetary & Liquidity Impact due to massive reversal of private capital flows.
  - Reduction in flows from non-banks because of increasing volatility and falling prices for primary commodities.

- Perceptions of credit crunch made the investors and policy makers nervous and public confidence on financial institutions declined.
- Growing budget deficits, falling tax revenues and reduction of fiscal space, because of Oil, Fertiliser & Food subsidies, Pay Commission, Debt Waiver, NRE, Stimulus Packages.
- Reduced ability to maintain social security and provide other social services, such as health and education. Resulting in increased infant and maternal mortality.
- Collapse of housing markets.
- Finally, leading to large increase in market borrowings, deceleration of growth, economic contraction and volatile movements in exchange rates.

### **Present Status of Indian Economy**

India is the world's 5<sup>th</sup> largest economy. It is the 12<sup>th</sup> largest in terms of the rates of market exchange and stands 128th in the world on per capita basis.

India is a \$2.2trillion economy and is the world's 10<sup>th</sup> largest importer and 19<sup>th</sup> largest exporter.

Around 54% of the GDP comprises the service industry, while 29% is the industrial sector and 17% is the agricultural sector.

The main occupation in India is agriculture which employs 60% of the population. Around 28% of the population is employed in the service sector and the rest 12% are in the industrial sector.

The work force amounts to half a billion workers, which is the 2<sup>nd</sup> largest after China.

### **Why is Rupee Depreciating Against Dollar?**

Value of currency like all other traded goods is dependent upon its demand and supply.

If the demand of Dollar is higher in the currency market than the supply as against the Rupee, the Rupee will depreciate. Conversely, if the supply of Dollar is higher in the market as against the Rupee, the Rupee will appreciate.

India buys products from the foreign markets in Dollars and sells them in Rupees.

When the goods and services are imported, the payments to the exporter have to be made in Dollars and hence, the demand of Dollars increases, with the result Rupee depreciates against the Dollar.

Since, India imports more than it exports, the Rupee is continuously depreciating.

### **Why is Inflation Rising in India?**

The rising inflation is a function of imbalance in the demand and supply of commodities. It basically occurs in a situation when the aggregate demand in the economy has exceeded the aggregate supply.

The economic development in the country, over the years, has improved the living standards and increased the population of middle class and the upper middle class, whose purchasing power has improved.

Inflation is demand driven, due to scarcity in supply of desired commodities.

The recent surge in the global oil prices has resulted in the hike in the domestic oil and LPG prices.

The agricultural scarcity accruing due to climate change, damage in transit and lack of cold chains/warehouses for storing food grains creates a scarcity causing high inflationary pressures.

The high cost of labour eventually increases the production cost and leads to a high price for the commodity.

In order to pursue the desired development agenda, various taxes have to be levied by the government.

**Hence, enhanced demand due to a growing middle class population and reduced supply due to scarcity of commodities or its high production cost has resulted in rise in inflation.**

### **Conclusion**

In order to maintain a sustained growth path for the Indian economy the following steps may be considered:

- Focus on promoting the manufacturing sector.
- Deregulation of processes and decentralisation of authority to speed up

- results on the ground and make business processes easy.
- India being an agrarian society, impetus needs to be given to Agriculture sector to put money in the pockets of the farmers.
- Stricter regulations for import of mass consumption commodities like food, consumer goods, electrical products and light engineering goods on quality clearances to compel such brands to 'manufacture in India' for 'consumption in India'.

- Manufacturing clusters need to be created with proper habitat for the workforce and all basic amenities must be catered for in these ecosystems, like, labour markets, liveable spaces, and access to markets, etc.
- Retrospect taxation, or 'Tax Terrorism' as it is being called by foreign companies creates a sense of mistrust in the mind of investors. The taxation policies must be clear, concise, binding and standardised.

## 19. Insurgency in Manipur

### Introduction

Manipur is one of the seven states of Northeast India, called the “seven sisters”. The State is bound by Nagaland in the north, Mizoram in the south, Assam in the west, and shares a 398 km border to its east and south with Myanmar. The state capital of Manipur is Imphal.

Manipur has an approx population of 23 lakh. Out of which, 61.5% live in the valley and the remaining 38.5% live in the hills.

The people of Manipur are predominantly Mongoloid, and speak Tibeto-Burman languages. They can be classified as hill tribes and non-tribal, who live in the valley.

The hill tribes can be further broken up into the **Naga** group of tribes, the **Kukis-Chin-Mizo** group of tribes, and the **intermediary group** of tribes.

Currently there are 29 recognised tribes.

Most of the non-tribal's live in the valley; and tribal's in the hills. Non-tribal's are barred from buying land in the hills. The non-tribal communities are the **Meiteis(43%)**, **Meitei-Muslims (8%)** and other **immigrant communities (10%)**.

Christianity is the major religion in the hills; and Sanamahi and Hinduism (46%) in the valley.

The State of Manipur has been in a state of conflict for many years now and the conflict is not merely between the State and the various non-state armed groups, but also between these armed groups that are polarised along ethnic lines.

### Historical Perspective

The people of Manipur want to aggressively protect their independence and the reason for that is that its people have had ‘histories’ and ‘memories,’ of being an independent entity longer and deeper than those of most other Indian people when India attained independence. Manipur was an “independent kingdom” since 1st century AD.

Manipur ceased to be an “independent kingdom” in 1891 when, Britain took over the Kingdom in the Battle of Khongjam, a major battle in the conflict, which is even now officially commemorated every year on April 23.

The defeat at the hands of Britain came to be accepted as part of British India’s expansion to secure its eastern frontier in which the independence of Manipur became an inescapable casualty.

Thereafter from 1892 onwards Manipur became a princely native state under the political control of the British India.

After the British rule ended, Manipur State Constitution Act, 1947 established a government with the Maharaja of Manipur as the Executive Head and an elected legislature. The first Manipur State Assembly was opened on 18 October 1948.

In 1949, Manipur was formally merged within the Indian Union through a Merger Agreement signed between the then king, Bodhachandra Singh, and the Government of India.

After its merger, Manipur was placed as a part ‘C’ state which was administered by the President of India through a Chief Commissioner.

In 1956, Manipur became a union territory. Manipur became a full-fledged state of India in 1972 with a Legislative Assembly consisting of 60 elected members.

### Major Issues of Conflict and Prime Contenders

#### Opposition to the 'Merger with Union of India'

The revolutionary movement in Manipur was started by HijamIrabot Singh. He opposed Manipur’s merger with India. Several non-state armed groups, also declared it ‘illegal and unconstitutional’ as it was widely believed that king, Bodhachandra Singh signed the Merger Agreement under duress from India.

HijamIrabot Singh proposed a Purbanchal state which was to include Manipur, Tripura, Cachar and Mizo hills. He further advocated that Manipur should be assigned the status of a republic and

Kabaw Valley, which is believed to have been given away by Nehru to Burma should be restored to Manipur.

The public of Manipur, particularly the youth, were very unhappy with the way Manipur, a princely state with a Constitution of its own and an elected Assembly was "annexed" to the Indian Union and felt humiliated by the way the state was put as a Part-C state after the merger.

Feeling slighted and deeply hurt some groups of Meiteis took up arms to fight for restoration of pre-merger status of Manipur.

#### **Insecurity Emerging from Demand for Greater Nagaland or 'Nagaland'**

The Naga armed conflict began in 1950s and had a tremendous impact on Manipur. The NSCN-IM, a prominent Naga armed group, has been pressing for the formation of 'Nagaland' comprising all Naga-inhabited areas of Arunachal Pradesh, Assam, Manipur and some areas of Myanmar which it believes to be the rightful homeland of the Nagas.

Four districts of Manipur (Chandel, Senapati, Tamenglong and Ukhrul) are included in 'Nagaland' and Manipuris believe that the Nagas are trying to destroy their state.

The inclusion of Manipuri districts in Nagaland has led to a serious polarisation between the Nagas/Kukis living in the hills and the Meiteis/ Muslims living in the valley.

Consequently, the Meiteis in the valley called for violent demonstrations against the administration and the Naga insurgent groups as a repercussion imposed a 52-day-long (June 19 to August 11, 2005) blockade of the Mao-Imphal section of the NH-39.

#### **Ethnic Divisions within Manipur**

Given the nature and magnitude of ethnic diversity of Manipur, the plurality of its population and the shared geographical and cultural spaces it is virtually impossible to come up with an acceptable division of territory.

There have been many major conflicts between various groups based on ethnic lines to meet their political aspirations and gain dominance, e.g. conflict between the Nagas and the Kukis,

between the Paites and the Kukis; as well as those between the Meiteis and the Meitei-Muslims.

#### **Conflict between Hill Tribes and Valley People**

The basic source of income for the local people is Agriculture and handloom industry. Though the landmass of valley is much smaller as compared to the hilly region, land in the valley is more fertile and productive.

The valley people are better educated, more skilled, have better access to jobs and are contributing more and hence, have greater say in the running of the affairs of the State.

The hilly tribes are less equipped to earn a comparatively better quality of lifestyle. Hence, they feel like a minority in their own State. Besides, they have greater affinity with the Nagaland (has a sizable Naga population), which have been a constant reason for rivalry amongst them.

#### **Repealing of Armed Forces Special Powers Act 1958**

Manipur was declared a 'disturbed area' in 1980 and AFSPA was imposed and has been in place ever since. But recently in 19 Police Stations in Manipur, the areas have seen abolishing of AFSPA.

This removal has contributed to increased violence in the region.

#### **Foreign Support to Insurgents**

It has been a known fact that countries like Bangladesh and China have been funding, arming and supporting insurgency in the North Eastern states.

Myanmar, shares a huge and a very porous border of 398km with Manipur. Though Myanmar, like Bhutan has supported India on previous occasions also to conduct joint operations (Operation Somtal launched in 2007) to seek and destroy militant camps operating from their country.

However, considering approximately 1600 kms long border, it is almost next to impossible to have a proper vigil all along. India has expressed its concern to Myanmar sponsored infiltrations from its soil.

### **Sources of Funding Hurts the Local Population**

The first and foremost source of funding is the regular levy of 'revolutionary taxes' on the people based on their economic status. Even the government organisations are accused of paying a fixed percentage of their revenues to the armed groups.

Further, the militant groups, also directly or indirectly interfere in the award of government contracts and execution of developmental projects.

Besides this, funds are raised through gunrunning; drug trafficking, extortion and kidnapping, etc.

The harassment caused and the fear psychosis generated in the minds of the local population further ferments anti-establishment feelings.

### **Insurgent Groups Operating in Manipur**

In 1964 state's first separatist group *United National Liberation Front (UNLF)* was formed. In 1978 another outfit called *Peoples Liberation Army (PLA)* came into existence. Another insurgent group that surfaced around the same time was the *People's Revolutionary Party of Kangleipak (PREPAK)*.

By mid 1979 the three groups unleashed a fierce spell of urban and semi-urban guerrilla warfare in the Imphal valley. New rebel groups like *Kangleipak Communists Party (KCP)* and *KangleiYawoKannaLup (KYKL)* also appeared in the horizon some years later, KYKL was formed after a split in the UNLF.

Many smaller outfits mushroomed in the valley in the last one decade including an outfit of Manipuri Muslims (Meitei Pangals) under the name of *Peoples United Liberation Front (PULF)*.

In the hill areas of Manipur the Kukis formed many rebel groups under the acronyms of *KNA, KNF, KLA*, etc. In 2008 the Indian army signed a Suspension of Operation (SoO) with eight Kuki groups in an effort to use them against the valley insurgent groups.

Presently, in Manipur, both in the valley and the hills, there are more than two-dozen rebel outfits. Objectives of quite many of these outfits are divergent and often obscure.

### **Details of Insurgent Attack on Army Convoy on 04 June 2015**

Naga insurgent outfit Nationalist Socialist Council of Nagaland-A (NSCN) along with Manipuri outfit Kangleipak Communist Party (KCP) and KangleiYawoKannaLup (KYKL) has claimed responsibility for the attack on an Indian Army convoy in which 18 soldiers were killed and 11 injured in Chandel district of Manipur on 04 June 2015.

The attack, the deadliest in the last three decades, took place when the 6 Dogra Infantry Regiment was being deinducted from the area.

The Army convoy was on a road opening patrol, when it was ambushed and was attacked with rocket propelled grenades (RPGs) and improvised explosive devices (IEDs).

After the army vehicle was damaged, at least 50 terrorists using automatic rifles fired indiscriminately at the soldiers resulting in the heavy casualty. Some terrorists were also killed in the retaliatory fire by the soldiers.

It is being assessed by experts that the rocket propelled grenades (RPGs), and weapons used by regular Armies, were probably smuggled through Kunming, China.

There are indications that these groups were being prompted to operate together to share resources and manpower, who are believed to have moved back to Myanmar to strike at an opportune time. As has been pointed out above, India shares an unguarded and unfenced boundary with Myanmar.

The border with Myanmar in the area was sealed and a massive combing operation was launched by the security forces in which more than 150 insurgents were killed.

### **Insurgency to end in next few years through Political dialogue : Manipur CM**

As 13 Cadres belonging to two valley – based proscribed underground groups laid down arms and ammunition on 24 Nov 2022, Manipur Chief Minister exuded confidence that the BJP Government will bring an end to insurgency over the next five years through political dialogue.

The present government is committed to ending insurgency from Manipur in the next five years and has already taken up initiative to convince the insurgency groups through political dialogue, the CM said and warned that no one should try to sabotage the situation.

Speaking at the homecoming ceremony of 13 cadres of two different valley based proscribed underground outfits, KCP (PWG) and KYKL, at the Banquet Hall of 1st Manipur Rifles, Imphal, the CM said that with the modified 'Scheme for surrender - cum - rehabilitation' the number of surrendered UG cadres have been increasing in the last five years.

### **Conclusion**

Recent cases of uncontrolled violence left the state of Manipur in utter turmoil. The districts of Chureichandpur, Imphal East & West, Bishnupur, Tengnoupal & Kangpokpi witnessed reports of arson & mayhem.

The ultimate solution to this turmoil include fostering open communications, promoting reconciliation and inclusivity among diverse communities, each with their own unique cultural, social & political ambitions. The profound importance of the State's geopolitical position must be quickly realized. A holistic approach is imperative to address the underlying causes of this upheaval.

## 20. Integrated Missile Technology Programme

### Introduction

Integrated Guided Missile Development Programme falls under the ambit of Ministry of Defence with the objective of developing a range of guided missiles that provides India with a stellar military might and also, serve as a deterrent for our not so friendly neighbours, like China and Pakistan.

Dr APJ Abdul Kalam, who worked with the ISRO and was closely involved in the development of Satellite Launch Vehicle, SLV-3, was inducted into the IGMD programme in 1980. Because of the success achieved by India in the guided missile development programme under his stewardship, he came to be known as the 'Missile Man of India'.

The programme kick started in 1980 and ended in 2008, when Defence Research and Development Organisation (DRDO), formally announced on 08 January 2008, that the strategic integrated guided missile program had achieved its stated objective of developing the missiles listed in the program and the missiles after having been duly tested, inducted into the armed forces.

India's prowess with regard to guided missile development came into prominence when Prithvi missile was test fired in 1988 and Agni missile in 1989.

Meanwhile, the Missile Technology Control Regime (MTCR), (an informal grouping was established in 1987 to restrict proliferation of missile technology to restrict arms race amongst nations) found the potential of India's strides into this field gigantic.

Its member countries, Canada, France, Germany, Italy, Japan, the United Kingdom and the United States, decided to restrict access to any technology that would help India in its missile development program.

In order to counter the move of MTCR, the IGMDP, made a consortium of DRDOs laboratories, industries and academic institutions to indigenously develop these sub-systems, components and materials. Though, it delayed the

progress of the programme, but India made a slow, but sure ascends towards success.

### The Missile Inventory of India

- **Prithvi Missile System.** It is a surface-to-surface, short range ballistic missile. It was test fired on 25 February 1988 from Sriharikota. It has three variants:
  - **Prithvi-I.** Range – 150 km with a 1000kg payload of Nuclear, High Explosive (HE), sub munitions and chemical warhead. Missile inducted into service in 1998.
  - **Prithvi-II.** Range – 350 km with a 350 to 750 kg payload of Nuclear, HE, sub munitions and chemical warhead. Missile inducted into service in 1996.
  - **Prithvi-III.** Range – 350-600 km with a 500 to 1000 kg payload of Nuclear, HE, sub munitions and chemical warhead. Missile inducted into service in 2004.
  - The naval operational variant of Prithvi I and Prithvi II class missiles are code named **Dhanush** (meaning Bow) and are meant for surface targets.
- **Agni Missile System.** These are medium (< 5,500 km range) to intercontinental (>5,500 km range) ballistic missiles. The Agni series comprises of the following missile variants:
  - **Agni-I.** Range 750-1250 km with 750-1000kg payload of Nuclear, HE, penetration, sub-munitions warhead. Missile inducted into service in 2002.
  - **Agni-II.** Range 2000-3500 km with 1000kg payload of Nuclear, HE, penetration, sub-munitions warhead. Missile inducted into service in 1999.
  - **Agni-III.** Range 3500-5000 km with 2000-2500kg payload of Nuclear, HE, penetration, sub-munitions warhead. Missile inducted into service in 2011.
  - **Agni-IV.** Range 3000-4000 km with 800-1000kg payload of Nuclear, HE,

- penetration, sub-munitions warhead. Missile inducted into service in 2014

    - **Agni-V.** Range 5,500-5800 km with 1500kg payload of Nuclear, HE, penetration, sub-munitions warhead. This is an Intercontinental Ballistic Missile (ICBM). Agni-V was tested in 2012 and again in 2013. A canisterised test fire of this missile was successfully conducted from Wheeler's Island at 8.09 am on 31 January 2015. The induction of this missile into the armed forces will put India into the select club of countries with such a military prowess.
    - **Agni-VI.** Range 6000-8000 km with 1000kg payload of Nuclear, HE, penetration, sub-munitions warhead. This missile is still under development.
  - **Akash Missile System.** The indigenously developed Akash missile is a medium range surface-to-air missile. It has a range of 27 km and an effective ceiling of 15 km. It was successfully test fired from the Integrated Test Range at Balasore on 19 June 2014. The 700 kg all weather Akash missile can carry a warhead of 60kg at speeds up to Mach 2.5. It can operate autonomously and simultaneously engage and neutralise different aerial targets.
  - **Trishul Missile System.** This is a short range surface-to-air missile, with a range of 9 km, with a payload of 5.5 kg warhead. Designed to be used against low-level (sea skimming) targets at short range, the system has been developed to defend naval vessels against missiles and also as a short range surface to air missile on land. Though it has been developed and test fired by IGMDP, its development costs were exorbitant and touched almost US\$70 million, so the project has been officially shut down on 27 February 2008.
  - **Nag Missile System.** This is a third generation fire and forget anti-tank missile. Nag missile, is an all weather, top attack missile, with a range of 3km-7 km. Missile uses 8 kg of tandem High Explosive Anti-Tank warhead, capable of defeating modern armours like Explosive Reactive Armour and Composite Armour. The user trial of Nag was completed in 19 March 2005.
  - **BraMos Cruise Missile.** In 1998, the Government of India signed an agreement with Russia to design, develop, manufacture and market a Supersonic Cruise Missile System which has been successfully accomplished in 2006.
- It is a super-sonic (higher than the speed of sound) cruise missile that can be launched from submarines, ships, aircraft or land. At speeds of Mach 2.5 to 2.8, it is the world's fastest cruise missile with a range of 290 km and is about three and a half times faster than the American subsonic Harpoon cruise missile. The missile was successfully test fired on 09 June 2014 for induction into the Indian Navy.
- While the BrahMos is currently surface and aircraft launched weapon, it has been tested for launch from a submarine, and the sub-launched version has been offered to Vietnam for use on Vietnam's Kilos.
- **Shaurya Missile.** A Canister launched hypersonic (highly supersonic i.e. above Mach 5) surface to surface tactical missile developed by DRDO in 2011.
  - **Sagarika Missile/K-15.** This is a nuclear capable submarine launched ballistic missile with a range of 700 km to provide retaliatory nuclear strike capability to India. The missile is being tested for integration with INS Arihant.
  - **K4 Missile.** India successfully test fired the nuclear-capable ballistic missile launched from an underwater platform, with a range of 2000km in February 2014. With this India completed the nuclear triad available with only a few nations of having the capability of launching surface, air and underground nuclear-capable ballistic missiles.
  - **Surya Missile System.** This is India's very ambitious plan of developing ICBM with a

range of 8000-12000 km. The missile system is still under development.

- **Nirbhaya Missile.** This will be India's first all weather, low cost, long range cruise missile. The subsonic Nirbhay is said to be 6 m in length with a 520 mm diameter, weigh 1,000 kg and have a 1,000 km range with a speed of 0.7 mach. This missile was test fired for the first time in March 2013 and is in the final stages of development.
- **Astra Missile.** India successfully test fired its first indigenously developed air -to-air missile, Astra missile, from a Sukhoi-30 Mk1 combat jet on 24 May 2014. The missile has a range of around 40 km, which will be extended to 100 km in the next phase. Air Force will have this missile as its future mainstay missile system and DRDO is aiming to arm the complete fleet of Aircrafts with this missile, including Sukhoi's and Tejas, Light Combat Aircraft, which is still under development.
- **Prahar Missile.** It is a multi-missile launcher system with a range of 150 km that will have the capability to fire six missiles from its multi-launcher system. This missile system is also under development.

#### Difference between Ballistic and Cruise Missiles

A **Ballistic missile** follows a free-fall or ballistic trajectory to deliver one or multiple warheads at the target end. Ballistic missiles are primarily intended for use against ground targets.

The missile is only briefly guided during the initial phase and most of its trajectory is unpowered and governed by gravity and air resistance.

The long range ICBMs spend most of their flight out of the earth's atmosphere (hence, ballistic missiles can achieve longer ranges than the cruise missile of the same size) and re-enters the atmosphere in its terminal phase. The short range ballistic missiles, however, stay within the earth's atmosphere.

The initial phase is powered by either a liquid or solid fuel rocket and the flight of a ballistic missile includes three phases:

- (a) **Boost phase**, where the rocket generates thrust to launch the missile into flight.

(b) **Midcourse phase**, where the missile coasts in an arc under the influence of gravity, and

(c) **Terminal phase**, in which the missile descends towards its target.

Prithvi, Dhanush and the Agni are examples of ballistic missile held with India. Pakistan inventory has ballistic missiles such as Hatf, Ghauri and Shaheen.

In contrast a **Cruise missile** is an aerodynamically guided missile that remains within the earth's atmosphere, flying at approximately a constant speed throughout its flight and is used against terrestrial targets.

The cruise missiles are powered by more economical jet engines instead of rocket motors as in the case of ballistic missiles, which requires large amount of fuel, making the launch vehicles of ballistic missiles larger and easier to detect and intercept.

The accuracy, and circular error probability of a Cruise missile is better than the Ballistic missile. It is for this reason that the cruise missiles are used to attack high value targets at long ranges, like ships, command and communication centres, bridges and dams.

Cruise missiles are designed to deliver large warheads over long distances using ramjet engines with high accuracy. It is capable of travelling at supersonic or subsonic speeds, has inbuilt navigation system and fly at extremely low altitude trajectory to avoid detection.

The cruise missiles are overall cheaper, more mobile, accurate and versatile as compared to the ballistic missiles. However, the ballistic missiles have greater terminal speed and become difficult to be intercepted at that stage.

BrahMos, Shaurya and Nirbhay are examples of Cruise missiles held with India. Pakistan currently has three cruise missiles, air-launched Ra'ad, ground-launched Babur and sea-launched Zarb.

#### Differences between: Unmanned Aerial Vehicle (UAV), Drones and Remotely Piloted Vehicle (RPV)

UAVs are basically planes that do not have a cockpit, hence no pilot. UAVs rely on a pre-programmed flight plan for remotely sent heading

changes. It is the on-board computer of the plane that actually controls it and reacts to changing conditions in order to reach the desired location.

UAVs are being extensively used for aerial reconnaissance, mapping, etc.

The Indian armed forces has been operating UAVs for more than a decade now, initially the Searcher Mark I, was obtained, followed by the Searcher Mark II which could operate at an altitude ceiling of 15,000 ft and finally the Heron, from Israel which can operate at an altitude ceiling of 30,000 ft. Besides the Nishant UAV developed by the DRDO is also in service.

The indigenously developed Rustom-I and Rustom-II, by DRDO will replace/supplement the Heron UAVs in service with the Indian armed forces.

The term "drone" was originally applied to pilotless airplanes used in target practice. These are machines/vehicles that are piloted through pre-programmed computer software or a remote pilot. Hence, a Drone can also be called an Unmanned Aerial Vehicles (UAV).

Drones are semi-autonomous vehicles that may be incorporated in larger spacecraft to expand its launching capabilities.

The subtle difference that has emerged during recent times is that the UAVs are invariably unarmed and used mostly for surveys, mapping, visual and thermal imaging of a region and other less lethal tasks, whereas, Drones are generally armed with lethal weapons and have more of military application like inflicting casualties to militant leaders and destruction of their war waging machinery.

Thus, any flying drone has to be a UAV, but not every UAV has to be a drone.

India's primary concern is to keep a hawk's eye on the long porous border with Pakistan and thwart incursions in the Northeast by the Chinese PLA, and also, monitor the presence of Chinese submarines and warships in Indian Ocean.

In 2015, the US government had cleared General Atomics' proposal to market the unarmed Predator XP in India, which can remain airborne

for 35 hours at a stretch and is equipped with lethal air-to-air and air-to-ground missiles.

The Predator XP can take to the skies in any weather condition, day/night and strike pre-designated targets with pin-point accuracy from a height of 26,000 feet. Besides, it can provide effective intelligence, surveillance and reconnaissance (ISR) capability using high-definition radar and electro-optical/infrared (EO/IR) coverage along our borders.

The DRDO is also working on using the American RQ-1 Predator template for the Rustom program and convert a robust surveillance drone into a combat drone in the form of Rustom-H. The same is underdevelopment and will have a great deal of mission flexibility.

Lastly, the Remotely Piloted Vehicle (RPV) is a type of UAV with similar basic design and structure. However, in case of a RPV, the pilot is not really eliminated but just relocated to a remote and safe location.

The RPV still functions like a typical airplane, and the pilot still has a cockpit with all the necessary controls except that the inputs provided by the pilot are now transmitted to a military satellite which then sends it to the RPV.

Therefore, it can still be tasked with missions that are typically done by piloted planes, like surgical strikes on high value, high risk targets, without any risk to the pilot.

### Conclusion

India, while it embarked upon its nuclear programme, had advocated and still maintains its policy of 'No First Use' and justifies the development of its nuclear and guided missiles capability only for 'Credible Minimum Deterrence'. India has come a long way since the 1970's and today exhibits a clear strategic vision of its futurist endeavour in this field.

The Guided missile programme has not only become central to India's 'minimum deterrent' policy, but more significantly, it is indicative of an independent, self-reliant, and strategically autonomous Indian state.

## 21. Inter-State River Water Disputes

### Introduction

Water constitutes two-thirds of the planet earth, which is in the form of oceans, underground water and even as part of the air that we breathe.

A total of 85 percent of Indian Territory lies within its major and medium inter-State rivers. There are 14 major rivers (with a catchment area of 20,000 square kilometres or more), which are all inter-State rivers and 44 medium rivers (with catchment area of between 200 and 20,000 square kilometres), of which nine are inter-State rivers.

It needs to be understood that the amount of portable water which is available for drinking and irrigation is limited and while our demand for it is ever increasing, it is not possible to increase the supply.

It is believed that one of the cardinal causes of all future conflicts between nations and also between states within the same nation will be "water wars".

In order to address this issue, the **Interstate River Water Disputes Act, 1956** (IRWD Act) was enacted by the Parliament of India under Article 262 of Constitution of India. The same was carried out concurrently with the reorganising of the states on the linguistic basis.

The primary motive of having this legislation is to resolve the water disputes that could arise in the use, control and distribution of an interstate river or river valley.

Article 262 of the Indian Constitution defines the role for the Central Government, which it can play while addressing the conflicts arising out of sharing of the waters of inter-state rivers. Many amendments have since been made to this Article, to meet the aspirations of the people from different states.

### Application of the Inter-State River Water Disputes Act, 1956

The **Interstate River Water Disputes Act, 1956** (IRWD Act) is applicable only to interstate rivers / river valleys.

The premise of this Act is that the actions by one state in terms of usage of a common water resource available with it, should not adversely affect the interests of one or more other states.

In order to understand the techno-legal implications of the application of the IRWD Act, it can be divided into two parts:

**Actions of a Downstream State Affecting the Interests of an Upstream State:** A downstream state may build a dam / barrage near its state boundary and submerge the territory of an upstream state on permanent / temporary basis.

**Actions of an Upstream State Affecting the Interests of a Downstream State:**

Construct water storage reservoirs and subsequently use the river water for one or more of the following purposes, which is beneficial only to that state: irrigation, drinking water, industrial, recreation, recharging of ground water, ground water use, enhancing rain water use efficiency, obstructing non-flood flows of the river, transferring water to outside the river basin, etc.

It may restrict the flow of water to the downstream state during lean periods and release excessive water during flood situations.

It also alters the ecology of the river located in downstream states affecting its riverine vegetation and aquatic flora & fauna.

Alter, or through certain controlled actions diminish the quality of water while using it, e.g. increasing salt content of water after consumption or by adding more salt during anthropogenic activity, and also water quality may get altered by mining and deforestation activities.

If the river is artificially blocked from reaching the Sea (i.e. basin closure), the ecology / fisheries of the surrounding Sea / river mouth area gets adversely affected.

### Mechanics of Dispute Resolution

Pursuant to the power conferred by the Constitution (Article 262), Parliament enacted the

Inter-State Water Disputes Act, 1956. Its main features are summarised below:

- (a) A State Government which has a water dispute with another State Government may request the Central Government to refer the dispute to a Tribunal for adjudication.
- (b) The Central Government, if it is of opinion that the dispute cannot be settled by negotiation, shall refer the dispute to a Tribunal.
- (c) The Tribunal's composition is laid down in the Act. It consists of a Chairman and two other members, nominated by the Chief Justice of India from among persons, who, at the time of such nomination, are Judges of the Supreme Court.
- (d) The Tribunal can appoint assessors to advise it in the proceedings before it.
- (e) On the reference being made by the Central Government, the Tribunal investigates the matter and makes its report, embodying its decision. The decision is to be published and is to be final and binding on the parties.
- (f) Jurisdiction of the Supreme Court and other courts in respect of the dispute referred to the Tribunal is barred.

#### **Factors Governing Distribution of Inter-State River Water**

- (a) The doctrine of 'equitable apportionment' is the standard formula adopted while allocating the use of river water to the concerned states.
- (b) In determining the just and reasonable shares of the interested States, due regard is given to whatever previous agreements, judicial decisions, awards and customs that are binding upon the parties.
- (c) As to any aspects not covered by these factors, the allocation may be made according to the relative economic and social needs of the interested States.
- (d) The other matters to be considered include the following:
  - (i) The volume of the stream;
  - (ii) The uses already being made by the concerned States;

- (iii) Respective areas of land, yet to be watered;
- (iv) Physical and climatic characteristics of the States;
- (v) Relative productivity of the land in the States;
- (vi) State-wise drainage;
- (vii) Population which is dependent on the water supply and degree of their dependence;
- (viii) Alternative means of satisfying the needs;
- (ix) Amount of water, which each State contributes to the inter-State stream;
- (x) Extent of evaporation in each State; and
- (xi) Avoidance of unnecessary waste in the utilisation of water by the concerned States.

#### **Various Inter-State River Water Disputes**

##### **Krishna Water Disputes**

**States Involved:** Maharashtra, Karnataka and Andhra Pradesh.

##### **Reasons of Dispute:**

In 1951, in the backdrop of major development proposals formulated by the States of Bombay, Hyderabad, and Madras, (among the total of four riparian States, including Mysore), an agreement was drawn up, apportioning the available supply among them.

However, dispute arose, as Maharashtra and Karnataka refused to ratify the agreement and disowned the Agreement of 1951.

These states demanded the reference of the matter to a Tribunal and asked for equitable distribution of the waters. Accordingly, the Krishna Water Disputes Tribunal was constituted in April 1969.

##### **Final Order of the Krishna Water Dispute Tribunal:**

The Tribunal issued its final order in 1976, which stipulated that the rights of States in inter-State rivers will be determined by applying the rule of equitable apportionment, and that no State has a

proprietary interest in a particular volume of the water of an inter-State river on the basis of its contribution or irrigable area.

### **Narmada Water Disputes**

**States Involved:** Madhya Pradesh, Maharashtra and Gujarat.

#### **Reasons for Disputes:**

The Central Water & Power Commission (C.W. & P.C), prepared a Project Report for a dam site at Navagam, in Madhya Pradesh in 1955 and Government of the composite state of Bombay (later Maharashtra and Gujarat) endorsed it.

However, after bifurcation of the States in May 1960, Navagam fell in Gujarat. So, to facilitate water sharing, Gujarat and Madhya Pradesh came to an agreement, called the Bhopal Agreement, in November 1963 about the height of the dam. This Agreement was later repudiated.

Khosla Committee was constituted by the Centre, to suggest measures for integrated development of the Navagam dam, which was endorsed by Gujarat, but not agreed to by Madhya Pradesh.

In the meantime, Madhya Pradesh and Maharashtra reached an agreement called the Jalsindhi Agreement, about the construction of a dam between Navagam and Harinphal.

Since no consensus on the issue was being arrived at, on 06 July 1968, Gujarat asked for the appointment of a Tribunal under the Inter-State Water Disputes Act, 1956, and the Narmada Water Disputes Tribunal was constituted on 06 October 1969 and the disputes referred to that tribunal.

### **Final Order of the Narmada Water Disputes Tribunal**

The Narmada Tribunal gave its interim Report in August 1978 and its Final Report, in December, 1979.

The Narmada Tribunal apportioned the waters among Madhya Pradesh (97.59%) and Gujarat (0.56%). It was also decided that excess as well as distress should be shared by the two States in the same proportion as their shares.

The Tribunal in its award expressed intricate details like fixing of the full supply level of Navagam Canal, its bed gradient, determination of

the height of Sardar Sarovar Dam, the quantum of the re-generated flow and return flow etc.

Rajasthan, being a non-riparian State (Narmada does not flow through Rajasthan), was not entitled for a share in the Narmada waters and its claim for share was turned down.

However, between Rajasthan and Maharashtra, excess or scarcity was decided to be distributed in the proportion of 1/56:1/12.

Further, it was decided that the allocations should be subject to review after a period of 45 years from the date of order of the Tribunal.

### **Godavari Water Disputes**

**States Involved:** Maharashtra, Andhra Pradesh, Karnataka, Madhya Pradesh and Orissa.

#### **Reasons for Disputes:**

The Government of India formulated a scheme for re-allocation of water, after the boundaries of states changed owing to enactment of the Andhra Pradesh Act, 1953, and the bifurcation of Bombay in 1960.

However, all the states, who were a party to the above decision, rejected the government proposal in a conference held in 1960.

In 1961, the Government of India set up the Krishna Godavari Commission to deal with the problems in the Godavari, as also in the Krishna River. However, the commission was found ineffective as accurate assessment of dependable flow in the river could not be made without further data-collection and discharge observations.

Therefore, the Godavari Water Disputes Tribunal was constituted under the Inter-State Water Disputes Act, in April 1969.

### **Final Order of the Godavari Water Disputes Tribunal**

The Godavari Water Disputes Tribunal gave out its final report on 07 July 1980 and issued the following orders:

The sharing of water was based on the doctrine of equitable apportionment to various states.

Each of the States concerned were given the liberty to divert any part of the share of the

Godavari waters, allocated to it from the Godavari basin, to any other basin.

The final order of the Tribunal envisaged alteration, amendment or modification of all or any of its provisions through agreements between parties or legislation by the Parliament.

### Cauvery Water Disputes

**States Involved:** Kerala, Tamil Nadu, Karnataka, and the Union Territory of Pondicherry.

#### Reasons for Disputes:

The dispute with respect to sharing of Cauvery water between Kerala, and erstwhile princely states of Madras and Mysore dates back to pre-independence era.

The States Reorganisation Act of 1956, which changed the boundaries and configuration of the states made the issue even more complex.

The State of Kerala strove hard to assert its claims on the Cauvery waters for developing the basin resources, mainly for two Hydro-electric projects in Kabini and Bhavani basins. However, Tamil Nadu and Karnataka vigorously opposed the proposal.

Similarly, Pondicherry projected its traditional requirement of water for the Karaikal area, mainly for agricultural purposes as its principal demand. Besides, also demanding water for Industrial and drinking purposes.

#### Final Order by the Cauvery Water Disputes Tribunal

The Cauvery Water Disputes Tribunal held sittings for more than 500 days, over 17 years, and gave its final award in February 2007.

The Tribunal recommended that Tamil Nadu would get 419 tmcft (against the demand for 562 tmcft); Karnataka 270 tmcft (465 tmcft); Kerala 30 tmcft; and Puducherry 7 tmcft.

The actual release of water by Karnataka to Tamil Nadu will be 192 tmcft a year and from it, Tamil Nadu will release 7 tmcft to Puducherry.

The Final Award was notified by the centre Government on 05 February 2013.

### Reaction of States to Final Award

The people of Tamil Nadu, Kerala and also that of Puducherry have hailed the final order of the Tribunal, calling it fair and equitable.

Karnataka, on the other hand feels that it has got a raw deal, especially, as its water needs have grown over the years. The announcement of the final order led to massive protests in the state.

### Ravi Beas Water Disputes

**States Involved:** Punjab, Haryana and Rajasthan.

#### Indus Treaty – 1960

India and Pakistan post the division into separate entities, signed an agreement, called the Indus Treaty, with respect to the sharing of river water in 1960.

As per the agreement the waters of the Western rivers (the Indus, the Jhelum and the Chenab) would be reserved for the exclusive use and benefit of Pakistan, whereas the entire flows of the three Eastern Rivers (The Ravi, the Beas and the Sutlej) would be available for the exclusive use and benefit of India.

It was further agreed upon that India would allow the use of Eastern Rivers for next 10 years to Pakistan, who would be given time for the construction of replacement canals in Pakistan till 31 March 1970.

After this transactional period, India would have the exclusive rights over the water of the Eastern Rivers, namely, the Ravi, the Beas and the Sutlej.

At the domestic front, the State Governments of Punjab, Jammu and Kashmir and Rajasthan were required to prepare a development programme for the utilisation of the waters of the Eastern Rivers.

Based on an agreement reached between the states and the centre, the following allocation of water to the states was made:

Punjab: 7.2 MAF, Rajasthan: 8.0 MAF and Jammu and Kashmir: 0.65 MAF.

#### Reasons for Disputes:

The Punjab Reorganisation Act, 1966, led to the bifurcation of the State of Punjab into separate entities, viz. Punjab and Haryana.

The State of Haryana laid claim over 4.8 out of 7.2 MAF (which was the entitlement of the composite Punjab State), on the principle of equitable distribution.

The new State of Punjab, on the other hand, conceded nothing to Haryana, mainly on the plea that, Haryana was not a riparian State, i.e. none of these rivers flow through Haryana.

Acting under section 78 of the Punjab Reorganisation Act, 1966, the Union Government, allocated 3.5 MAF each to Punjab and Haryana and 0.2 MAF to Delhi.

In order to ensure full utilisation of the water allotment to Haryana under this statutory decision, proposal to link River Sutlej and Yamuna was mooted under the Sutlej-Yamuna Link (SYL) Canal scheme.

Punjab moved the Supreme Court against the statutory decision. Haryana, on the other hand, moved the same Court for compelling Punjab to implement it.

#### **Conclusions by the Ravi Beas Water Disputes Tribunal**

The Tribunal held the plea of Punjab unsustainable, that the waters of the Ravi and Beas belonged to it absolutely, and in its entirety, to the exclusion of both Haryana and Rajasthan.

The Doctrine of Riparian Rights, as also the Theory of ownership Rights of a State in river waters, was rejected.

The Tribunal agreed with the contention of Rajasthan, that its share had been settled by the previous Agreements and that it was not a party to the second reference.

The Tribunal pointed out that Haryana was a part of composite Punjab before 1966 and it had the same right over the waters of Ravi and Beas as the present day Punjab.

The Tribunal made an allocation of 5 MAF to Punjab, and 3.83 MAF to Haryana, the total quantity apportioned being 8.33 MAF, including 1.11 MAF, which was surplus available.

Any fluctuations in flow were to be shared in the same ratio as the allocation.

Finally, the Ravi-Beas Waters Tribunal upheld the legality and validity of prior Agreements that had been entered into, by the respective States.

#### **Developments Leading up to the Present Status of the Issue**

In 1996, Haryana filed a suit in the Supreme Court, seeking directions to Punjab, to complete the SYL Canal that was 90% ready after Rs 700 crore of taxpayers' money had been spent on it.

On January 15, 2002, and June 4, 2004, the Supreme Court ordered the Centre to complete the SYL Canal in Punjab.

On July 12, 2004, the assembly enacted the Punjab Termination of Agreements Act, annulling all inter-state agreements signed by the state relating to sharing of the Ravi and Beas water, including the December 1981 tripartite agreement.

On 17 March 2016, Supreme Court directed status quo on the land meant for Sutlej-Yamuna Link (SYL) canal after Haryana alleged that attempts have been made by Punjab government to alter its use by levelling it.

On 18 March 2016, Punjab Assembly unanimously passed a resolution against the construction of SYL Canal, saying that the state does not have water to share with Haryana.

#### **The Inter-State River water disputes (Amendment) Bill 2019**

It was introduced in Lok Sabha on 25th July 2019 by the Minister of Jal Shakti. It amends the Inter-State River water Disputes Act 1956. The Act provides for the adjudication of disputes relating to waters of interstate river valleys.

Under the Act, a state Govt. may request the central Govt to refer an interstate river dispute to a Tribunal for adjudication. If the Central Government is of the opinion that the dispute cannot be settled through negotiations, it is required to set-up a Water Dispute Tribunal for adjudication of the dispute, within a year of receiving such a complaint. The bill seeks to replace this mechanism.

Once made into law, it will ensure greater cohesion among states and help in effective utilization of water resources.

## **Conclusion**

Water being an invaluable resource needs to be conserved and judiciously utilised. In order to prevent inter-state disputes, a good way could be to inter-link all rivers and create a national water grid.

The same will allow the use of water from different rivers as a national asset. You could go through the previous blog on the subject of National River Interlinking Project by clicking this link:

<http://www.olivegreens.co.in/blog/significance-of-national-river-inter-link-project>

## **22. Indian Space Research Organisation (ISRO)**

### **Introduction**

**The Indian Space Research Organisation (ISRO) is the premier space agency of India, which is committed to "harness space technology for national development, while pursuing space science research and planetary exploration.**

The headquarters of ISRO is at Bengaluru. The Chairman carries the titles of Secretary of the Department of Space and Chairman of the Space Commission.

Today, the Indian Space Research Organisation (ISRO) is amongst the world's best in space technology. The space programme has been the fore-runner to the coveted Integrated Missile Technology Programme of India and encompasses interdisciplinary areas of space technology, rocket research, testing, launch and tracking.

### **Advent of Space Research Programme**

In 1950, India set-up the Department of Atomic Energy.

Indian National Committee for Space Research (INCOSPAR) was established at Bangalore in 1962 with Viram Sarabhai as its Chairman.

In 1969, INCOSPAR was superseded by the Indian Space Research Organisation (ISRO), which is the world's largest Government space agency. Its objective is to advance space technology and use its applications for national benefits.

### **Milestones in the Journey of ISRO**

#### **First Indian Satellite**

India built its first satellite, 'Aryabhatta' that was launched into space by Soviet Union on 15 April 1975. In 1979, ISRO successfully developed Satellite Launch Vehicle (SLV-3).

#### **First Satellite Launched Indigenously**

In 1980, 'Rohini', was the first satellite placed into orbit by the Indian SLV-3.

India was dependent on Russia for the commercial launch of satellites. Therefore, in order to achieve self sufficiency in this field, the period from 1980 - 1990's was dedicated to the development of Polar

Satellite Launch Vehicle (PSLV) and Geostationary Satellite Launch Vehicle (GSLV).

#### **Polar Satellite Launch Vehicle**

India developed this capability for launch of Indian Remote Sensing (IRS) 'satellites into Sun synchronous orbits. PSLV can launch small size satellites into geostationary transfer orbit. PSLV was first launched on 20 September 1993.

The PSLV has launched 93 satellites (36 Indian and 57 foreign satellites of 20 different countries) into a variety of orbits.

**Polar Satellite Launch Vehicle broke the Russian held world record of launching ten satellites at one time in 2008.**

On 30 June 2014, PSLV successfully launched five satellites (besides its own, Canada, Singapore, Germany and France) into orbit.

Polar Satellite Launch Vehicle successfully placed six satellites from Singapore in orbit after launching from Indian Space Research Organisation's space port in Sriharikota on 16 December 2015.

#### **Geostationary Satellite Launch Vehicle (GSLV)**

GSLV is meant to launch heavy satellites like the INSAT series, with a payload of 500 tons (in comparison Aryabhata which was 40 kgs only) to low earth orbit.

GSLV has been built by India with the cryogenic engine purchased from Russia. The transfer of technology for cryogenic engines from Russia was withheld due to the UN Resolution imposing sanctions against India after the Pokaran Nuclear Test conducted by India in May 1998.

**On 05 January 2014, GSLV D5 successfully launched GSAT-14 into its intended orbit putting India into the elite 'Cryo Club', a select group of space-faring nations.** The other countries that possess this capability are USA, Russia, France, Japan, and China.

This capability was crucial for India as it has been paying \$85-90 million (500 crores) as fee to

foreign agencies for launching communication satellites weighing 3.5 tons.

**Satellites launched by ISRO for national benefit include:**

**INSAT Series.** Multi-purpose geostationary satellites commissioned in 1983. It satisfies the need for telecommunication, broadcasting, metrology and search and rescue missions. INSAT is the largest domestic communication system in the Asia Pacific region.

**IRS Series.** Indian Remote Sensing Satellite System is the largest Remote Sensing constellation for civilian use in operation in the entire world. It provides useful data to undertake relevant national development programmes.

**RISAT Series.** Radar Imaging Satellites RISAT-1 and RISAT-2 have been launched to obtain high resolution data.

**GSAT Series.** These are experimental satellites launched from GSLV. **GSLV D5 successfully launched GSAT-14 into its intended orbit on 05 January 2014.**

**GSAT-16.** A multi-application satellite for telecommunication was successfully launched from on board Arianespace rocket from the space port of Kourou in French Guiana on **07 December 2014.**

**GSAT-16 has 48 transponders, which is the largest ever carried by a communication satellite.**

The satellite has been built by Indian Space Research Organisation (ISRO), and is designed to provide direct-to-home (DTH) television broadcast covering the complete Indian Sub-continent.

**Kalpana-1.** ISRO dedicated its Metrological satellite launched on 12 September 2002, originally called MetSat to Kalpana-1 after her unfortunate demise.

**IRNSS Series.** It is an independent regional satellite system developed by India to provide accurate position information to users in India and up to a distance of 1500 km of its boundary.

This autonomous regional satellite navigation system has been indigenously developed by ISRO and will be under the exclusive control of the Indian government.

**It has been developed to offset reliance on global navigation satellite system like GPS, the availability of which cannot be guaranteed during hostile conditions.**

**The Indian Regional Navigation Satellite System or IRNSS with an operational name of NAVIC stands for Navigation with Indian Constellation.**

The fully deployed NAVIC system consists of 3 satellites in GEO orbit and 4 satellites in GSO orbit, approximately 36,000 km altitude above earth surface. Besides these seven, two satellites will be on the ground as stand-by.

The constellation comprising of these seven satellites are called IRNSS-1A to IRNSS-1G. The last satellite to complete the constellation was successfully launched on 28 April 2016 using PSLV-C33.

The navigational system so developed will be a regional one targeted towards South Asia. The satellite will provide navigation, tracking and mapping services.

The Standard Positioning Service will be open for civilian use, while, there will be some restricted services with encryptions for authorised users only, like the military. It may be highlighted here that, missile targeting could be an important military application for the constellation.

Once the NAVIC is declared operational after checking the systems – space (satellites), ground (ground stations) and the user-end signal receivers, India will formally join a select group of nations owning their own Navigational Satellite system.

The NAVIC constellation of seven satellites are now already in the orbit and is expected to commence operations from June 2016 onwards.

#### **Lunar Exploration**

**Chandrayan-1** First unmanned mission to moon was launched using modified version of PSLV from SD Space Centre, Srihaikota on 22 October 2008.

It comprised a Lunar Orbiter that orbited the moon to survey the lunar surface to produce a complete map of its chemical characteristics and 3-dimensional topography and a Lunar Impactor for the moon impact probe.

**Chandrayan-1** became the first lunar mission to discover the traces of water on moon.

**Chandrayan-2** Is being planned to be launched using GSLV-MkII in 2017 was a failure.

**Chandrayan-3** This mission for soft landing on lunar surface places India as the fourth country in the world to achieve the feat.

### Mars Exploration

ISRO launched its \$74 million first Mars Orbiter Mission called the **Mangalyan** on 05 November 2013. It carries 15-kilogram suite of five science instruments to study the Martian upper atmosphere, surface features and mineralogy.

Indian scientists on 22 September successfully tested the main engine of the country's Mars mission spacecraft and completed a course correction that put the probe on track to enter the red planet's orbit on September 24.

ISRO achieved the unattainable on 24 September 2014, and India became the **first country in the entire world** to put the Mars Orbitter into its intended orbit at a distance of 423 km from Mars in its **first attempt** and became the **fourth country** in the world to achieve this commendable feat.

### ISRO's PSLV Launch Oceansat-3

ISRO's PSLV mission of the year 2022 was launched. It is Oceansat -3, 8 nano satellite (E05-06). The ISRO launched Earth observation Satellite (EOs-06) and eight Satellites.

The 1117 KG earth observation satellite was built by UR Rao Satellite Centre, ISRO. The nano satellites included India's first privately built earth observation satellite Anand.

After placing EO-06 in Orbit, PSLV-C54 travelled around the earth in less than an hour and placed eight nano satellites in their orbit. These included two Thy bolt satellites, communication payloads made by Dhruva space to enable rapid technology demonstration and constellation development for multiple users.

It was followed by INS 2 B Satellite (India-Bhutan Sat) which was to be injected into a 528.8 KM altitude. The ISRO nanosatellite -2 for Bhutan (INS-2B) has two payloads including nano MX, a multispectra optical imaging payload developed by space applications centre.

## Futuristic Technologies

### Reusable Launch Vehicle (RLV)

It may be understood that, 80 per cent cost of the launch vehicles is structural while only 20 per cent is spent on fuels or expendables. RLV can help save the structural costs by 10 times, as their body can be used for future missions too.

However, the exact cost saving can only be assessed, when it can be estimated as to how many missions a single RLV can handle or it can be reused for.

ISRO has predicted that the much cheaper RLV is likely to replace PSLV in about a decade. However, the GSLV might continue to be operational for a few more years, as it is substantially cheaper than the PSLV.

Adding another feather to its cap, The Indian Space Research Organization conducted the test trial of its Reusable Launch Vehicle (RLV-TD) on 23rd May, 2016.

It has taken five years for a team of 600 scientists at the Vikram Sarabhai Space Centre in Thiruvananthapuram to build the RLV at a cost of Rs 95 crore. The final cost of development will only get revealed, once the RLV becomes operational in about ten years' time.

To launch the spacecraft at Sriharikota, a nine-ton rocket engine was designed to vertically lift the winged body to an altitude of 70 km, after which it took off on a free-gliding flight. Its initial velocity was five times the velocity of sound. It landed about 500 km from the launch-site, in the waters of the Bay of Bengal.

### SCRAMJET Technology

Super Sonic Combustion RAM Jet or SCRAMJET, a new rocket engine was test fired by ISRO from Sriharikota, off the coast of Andhra Pradesh, on 28 August 2016.

This rocket, also called the Advanced Technology Vehicle (ATV), lift-off a weight of 3,000 kg during its testing. Usually, the rockets carry both fuel and oxidiser for the combustion. However, this new engine takes in oxygen from the atmosphere as its fuel, thus, reducing the overall weight of the rocket and increasing its efficiency.

The aim of ISRO is to place this new rocket alongside the Re-usable Launch Vehicle (RLV) to make rocket launches more affordable. Currently it costs around \$20,000 to send one kg of matter into space and this new technology could bring down launch costs by as much as ten times.

The successful testing of SCRAMJET, has placed India amongst the only two other nations who posses this technology, i.e. America and Australia.

#### **Utilisation of SCRAMJET for Launch of Weather Satellites**

The Indian weather satellite, INSAT-3DR will be launched using the SCRAMJET engine on 08 September 2016.

The geosynchronous satellite launch vehicle (GSLV-MkII) rocket on which the weather satellite INSAT-3DR will be mounted has been fully assembled.

Another weather monitoring and forecasting satellite, ScatSat will be launched with polar satellite launch vehicle (PSLV) in future.

The Indian satellite, ScatSat will be a co-passenger to an Algerian satellite. Both these satellites will be put into different orbits. The fourth engine of the rocket will be switched off after ejecting ScatSat first, and then, after a gap of around 30 minutes, the engine will be switched on and put the Algerian satellite into its intended orbit.

The scramjet engine, which will be used only during the atmospheric phase of the rocket's flight, will help to bring down the launch cost of weather satellites by reducing the amount of oxidiser to be carried along with the fuel.

The Indian Space Research Organization (ISRO) has carried out 116 spacecraft missions, 86 launch missions and planned several missions including the Aditya, Gaganyaan and MOM-2.

**Aditya-L1 :** Aditya L1 is the first Indian observatory class mission to study the solar corona, using a solar coronagraph and also chromosphere using near UV instrument. X-ray spectroscopic instruments will provide flare spectra while the in - situ payload observes the Solar events during their passage from Sun to earth.

**X-ray Polarimeter Satellite :** This is a ISRO planned space observatory to study polarization of Cosmic X-Rays. Based on a small satellite launch vehicle (SSLV) and to provide a service tune of at least five years.

**Chandrayaan-3:** This is mission repeat of chandrayaan-2 with lander, rover and a propulsion module to attempt a soft landing of the Lunar surface.

**Gaganyaan - 1 :** This is unmanned space craft flight test.

**Gaganyaan – 2 :** This is second of two unmanned flight tests prior to the inaugural crewed mission.

**NISAR :** This is Nasa Isra synthetic Aperture Radar (NISAR) and a joint product between NASA & ISRO to co-develope launch a dual frequency synthetic aperture radar satellite to be used for remote sensing. It is the first dual band radar imaging satellite.

**Gaganyaan – 3 :** GSLV MK III by IRO projected to launch from Sriharikota.

**XPOSAT SSLV** by ISRO projected to launch from Sriharikota by ISRO.

#### **Conclusion**

Indian Space Research Organisation is the finest example of an efficiently run Public sector organisation. It has functioned with meagre resources and shoe string budgets to contribute exceptionally in the field of space research.

The high level of technological expertise available with ISRO and its functional model of planning, designing, management, execution and man-management, can be replicated in other fields that require immediate attention like, efficient transportation, water management, pollution control, power generation and distribution that are vital to country's growth.

The recent developments like the completion of **Navigation with Indian Constellation (NAVIC)**, **testing of Reusable Launch Vehicle (RLV)** and the incorporation of **SCRAMJET Technology** are truly unparallel feats demonstrated by ISRO within the constraints of available resources.

## **23. Juvenile Justice (Care and Protection of Children) Act – 2015**

### **Introduction**

The Juvenile Justice (Care and Protection of Children) Bill, 2015 was debated in the Rajya Sabha on 22 December 2015, with the aim of permitting juveniles between the ages of 16-18 years to be tried as adults for heinous offences and replaces the existing Juvenile Justice (Care and Protection of Children) Act, 2000.

The issue came into limelight when it was discovered that the most gruesome individual involved in the 2012, Nirbhay case was below the age of 18 and was hence tried by the Juvenile Court.

As per the law of the land, he was given three years of imprisonment in a Reform Home on 31 August 2013. The individual completed his term and was released in 2016.

Further, there has been a sharp rise of 13% in the cases of juvenile crimes during 2012-13 and cases of assault on women by juvenile criminals has reportedly gone up to 132.3%.

National Crime Records Bureau (NCRB) statistics show that around 3,887 juveniles had allegedly committed heinous crimes during the year 2013.

In view of the foregoing, a need was felt to amend the existing Juvenile Justice Law and make it more stringent, though it has its own pros and cons.

Hence, Juvenile Justice (Care and Protection of Children) Bill, 2015 was drafted by the Ministry of Women and Child Development in 2014.

The proposed Bill went through the scrutiny of a Standing Committee and was thereafter passed in Lok Sabha on 07 May 2015 and in Rajya Sabha on 22 December 2015.

### **Establishment of Justice J.S. Verma Committee**

Consequent to the Delhi rape case of 2012, a three-member Commission, headed by former Chief Justice of India, was assigned to review the laws pertaining to sexual crimes committed against women.

Justice Verma Committee submitted its report to the Government in January 2013.

### **The Criminal Law (Amendment) Act, 2013**

Based on the recommendations of the Justice Verma Committee Report on 12 April 2013, the **Criminal Law (Amendment) Act**, popularly known as the **Anti Rape Law** was passed after the Presidential assent.

The Act provides for amendment of Indian Penal Code, 1860, the Code of Criminal Procedure, 1973, the Indian Evidence Act, 1872 and the Protection of Children from Sexual Offences Act, 2012.

### **Salient Aspects of the Anti Rape Law**

**Age of Consent** or the legal age at which a person is considered competent to give sexual consent (sexual intercourse) has been lowered to 16 years from 18 years.

**Marital Rape** or the forceful sexual acts committed without the consent of the partner would not qualify as offence if the wife is more than 16 years of age.

Protection against disclosure of identity is provided to the victim. The same would also extend to victims of repeat offenders.

Judicial magistrate will undertake special procedures to assist differently-abled persons in identification of the accused and the identification process to be video-graphed.

In case of acid attack, sexual harassment, disrobing, voyeurism, outraging a woman's modesty, rape (of all kinds) information would be recorded by a woman officer.

Men below 15 years of age and women are not required to give evidence at a police station. In such case evidence may be taken from home.

Judicial Magistrate to record statement of the victim immediately after the police is informed in case of acid attack, rape, sexual harassment, disrobing, voyeurism etc.

In case the victim of rape or a sexual offence is less than 18 years of age care would be taken that she is not confronted by the accused.

**Fast track the Trials**, i.e. trial must be completed within two months of filing of the charge sheet.

All marriages in India (irrespective of the personal laws under which such marriages are solemnized) will be mandatorily registered in the presence of a magistrate.

### **Highlights of the Juvenile Justice (Care and Protection of Children) Act - 2015**

The Bill replaces the Juvenile Justice (Care and Protection of Children) Act, 2000 and addresses children in conflict with law and children in need of care and protection.

It provides for juveniles between the ages of 16-18 years to be tried as adults for heinous offences.

A Juvenile Justice Boards (JJB) and Child Welfare Committees (CWC) are proposed to be constituted in each district with psychologists and sociologists on its panel.

The JJB will conduct a preliminary inquiry to determine whether a juvenile offender is to be sent for rehabilitation or be tried as an adult.

The CWC will determine institutional care for children in need of care and protection.

Penalties for cruelty against a child, offering a narcotic substance to a child, and abduction or selling a child have been prescribed.

### **Juvenile Justice (Care & Protection) Amendment Act 2021**

**Non-cognizable offence** : Crime against children, which are mentioned in the chapter 'other offences against children' of the JJ Act 2015, that

allow an imprisonment between 3 and 7 years, will be deemed as 'non-cognizable'.

The Act defines orphaned, surrendered and abandoned children. It also gives definitions for petty, serious and heinous crimes by children. A heinous offence is one that attracts a maximum punishment of 7 years imprisonment under any existing law. A serious offence is one that attracts imprisonment of 3 to 7 years.

There are two types of juvenile punishments. Incarceration and non-incarceration. One non-incarceration in particular forms the backbone of the Juvenile Justice Act and system.

The minimum age is ten (10) for secure detention of Juvenile unless it is a capital offence.

A juvenile is a child who has not completed the age of 16 years in the case of boys and the age of 18 years (1960) in the case of girls. A delinquent juvenile cannot be sentenced to imprisonment under the POCSO Act, a child is defined as any person, who is below the age of 18 years. The Act does not recognize the possibility of any form of consensual sexual activity among or with minor adolescents.

Parliament had approved a landmark bill that will allow trial of offenders aged 16-18 years, for rape murder etc.

Under the IPC, crimes such as rape, murder, dacoity and acid attack, which can invite jail term of 7 years or more are defined as 'heinous crimes'.

The Juvenile Justice board (JJB) will determine if the offender should be tried as an adult.

## 24. Make in India

### Introduction

On 25 September 2014, the Indian PM unveiled the Brochure and the Logo for the 'Make in India' campaign, in the capital, at the Vigyan Bhawan.

The campaign aims to turn India into a global manufacturing centre. About 3,000 top global companies are being targeted in this ambitious campaign.

This initiative is directed towards facilitating, setting up and running businesses with greater ease and to draw foreign investors to India with an overall aim of providing an impetus to the beleaguered manufacturing sector and generation of employment opportunities in India.

### Sectors Covered Under the Programme

The programme lays emphasis on promoting 25 sectors. The programme would facilitate skill development and hence, quality job creation.

The sectors covered under the programme include: automobiles, chemicals, IT, pharmaceuticals, textiles, ports, aviation, leather, tourism and hospitality, wellness, railways, auto components, design manufacturing, renewable energy, mining, bio-technology, pharmaceuticals and electronics among others.

### Highlights of Vision for Manufacturing Sector

- An increase in manufacturing sector growth to 12-14% per annum over the medium term.
- An increase in the share of manufacturing in the country's Gross Domestic Product from 16% to 25% by 2022. While, manufacturing sector contributes is in the range of 25% to 30% in countries like China, Thailand and Malaysia.
- To create 100 million additional jobs in manufacturing sector. The Prime Minister recommends handing over Industrial Training Institutes (ITIs) to the Industry to enhance trade specific training and generation of quality employment.
- Creation of appropriate skill sets among rural migrants and the urban poor for inclusive growth. National Skills Development Centre

will play a decisive role in identification and imparting training of skill sets required.

- Providing heightened domestic value addition and technological depth in manufacturing to ensure high end products that are competitive in the world market are manufactured and also are affordable..
- Inspire self reliance and competitiveness for sustainable growth, especially, of the national manufacturing units.

### Plans for Making Business Easier

- New de-licensing and deregulation measures: Process of applying for Industrial License & Industrial Entrepreneur Memorandum made online on 24x7 basis through eBiz portal.
- Validity of Industrial license extended to three years.
- Empowering States by decentralising authority to introduce self-certification and third party certification to avoid delays and red tapism in the name of scrutiny.
- Major components of Defence products' list excluded from industrial licensing to encourage and speed up indigenisation of weapon/equipment components.
- In order to encourage private parties to invest and assist in early procurement in dual use items having military as well as civilian applications, the items have been deregulated.
- Services of all Central Govt. Departments & Ministries will be integrated with the E-Biz – a single window IT platform for services. This would provide regular updates and prompt information about the policies and procedures.
- Process of obtaining environmental clearances made online to save time and curb politically motivated tendency to create an issue out of it, as is usually found to be done.
- Advisories sent to all Departments/ State Governments to simplify and rationalize

regulatory environment. Presently, the entrepreneurs are harassed to the limit of exiting their planned venture.

- All returns should be filed on-line through a unified form, to prevent subsequent manipulation and malpractices.
- A check-list of required compliances would be placed on Ministry's/Department's web portal for the ease of preparing the requisite paperwork.
- All registers required to be maintained by the business should be replaced with a single electronic register to cut down excessive documentation to be maintained by the entrepreneur.
- No inspection to be undertaken without the approval of the Head of the Department to avoid harassment and arm twisting by government departments.
- States given the liberty, for all non-risk, non-hazardous businesses, a system of self-certification could be introduced.

#### **Imperatives for Effective Implementation of Programme**

- Effectively implementing the idea of laying the 'Red Carpet' instead of the 'Red Tapes' as was pronounced by PM Modi.
- Deregulation of processes and decentralisation of authority to speed up results on the ground.
- It is unlikely that foreign companies will share the technology, otherwise they will lose monopoly and hence India must cater to huge investments in R&D to upgrade own manufacturing sector, so as to stand in competitive comparison to the foreign products being manufactured in India.
- The workforce required to be employed in the industries identified in the programme must be trained concurrently to facilitate the success of the programme.
- Stricter regulations for import of mass consumption commodities like food, consumer goods, electrical products and light engineering goods on quality clearances to

compel such brands to manufacture in India for consumption in India.

- Manufacturing clusters need to be created with proper habitat for the workforce and all basic amenities must be catered for in these ecosystems, like, labour markets, liveable spaces, and access to markets, etc.
- Retrospect taxation, or 'Tax Terrorism' as it is being called by foreign companies, e.g. in the case of Vodafone and some other service providers creates a sense of mistrust in the mind of investors. The taxation policies must be clear, concise, binding and standardised.
- Invariably, entrepreneurs use the tax benefit region for packaging and shipping of their goods and then wait for the next region to be granted the benefit for planning their investment. Hence, the methodology adopted for such concessions must encourage more and more entrepreneurs to set up businesses.
- Goods and Services Tax (GST) must be implemented earliest to create a better investment climate.

#### **China's Made in China Campaign**

China's 'Made in China' campaign coincided with India's global launch of 'Make in India' campaign. China's intention appears to be, that it wants to send a message to the world that China will continue to hold technological edge over India in the manufacturing sector.

#### **Make in India : Success or Failure**

Make in India was to increase job opportunities and skill development by boosting job sectors. Modi's policy project intention is substituting import of manufactured products with domestic production. The main focus on manufacturing has made the thinkers consider it the best way to develop rural and agrarian economies. It was with this approach of raising foreign investments, increasing the contribution of the manufacturing sector to GDP by 25% and developing modern infrastructure.

The sectors which are covered under this are automobiles, biotechnology, constructions, food processing, IT & IBM, Leather, mining, railway, renewable, energy, space, thermal power, tourism and hospitality.

## The Achievements & Progress

**Biotechnology:** A virtual centre has been operationalized for development of technology in biofuels areas. In 2015, Rotaract was manufactured. 30 bio-incubators & biotech parks are launched.

**Chemicals/Petrochemicals** : An increase of 107% in FD equity is noticed in this sector.

**Constructions:** PM Awas Yojana Gramin Houses have led to the construction of 7 million houses. The Construction sector secures 2nd position in terms of boost in providing employment.

**Defence:** With 95% local source, defence products are manufactured in India. There was export also to 28 countries.

**Electronic System:** This industry has witnessed a 27% increase, with around 38300 created jobs with the setup of 38 mobile manufacturing units, 99.56 lakh candidates have been enrolled for training.

**IT & IBM:** There has been significant growth from 2.3 billion to 5.9 billion in the computer software & hardware sector.

**Oil & Gas:** Investments in refineries has also been put forth for more and more export.

**Railways:** The fastest train in India is Gatimaan Express, which covers 188 Kms in 1 hour and 40 Minutes. The speedup of the other 51 trains by more than an hour has already been achieved.

**Space:** Antrix corporation limited has managed the marketing of space services & products globally. The successful example is Mangalyaan- India's first attempt at space craft to reach Mars successfully.

## 25. Nagaland Insurgency

### Introduction

Nagaland is one of the seven states of NE India, called the 'seven sisters', which are surrounded by four countries, viz. China, Myanmar, Bangladesh and Bhutan. These states are connected with mainland India through only a 22 km wide corridor at Siliguri, called the 'chicken's neck'.

The people of Nagaland, like the rest of the NE states, belong to the Indo-Mongoloid group and speak the Tibeto-Burman dialects. Traditionally, the people followed animistic religion until their recent rapid conversion to Christianity.

Nagaland was carved out of 'greater Assam' in 1963. The Tuensang Tract was also included in Nagaland, which was a part of North Eastern Frontier Area (NEFA) at that time.

The delineation of the inter-state boundary has been ever since disputed and has led to frequent violent clashes between the two states.

Naga community is divided into various tribes, sub-tribes and clans with different customs, traditions, dresses, languages and orientation, which has led to major intra community conflicts amongst tribes and also with non tribals of neighbouring states, like Assam and Manipur.

The problem of insurgency in Nagaland has existed ever since independence from the British Raj. Numerous attempts by various governments were made to negotiate and amicably resolve the issues.

The British annexed Assam in 1826, which at that time also included the areas of the present day states of Arunachal Pradesh, Meghalaya, Nagaland and Mizoram. In 1881, the Naga Hills too became a part of British India.

The annexation of the region fitted well into the scheme of the colonial rulers, as it could be eventually used as a springboard to further its interests into Myanmar, India and China.

The first sign of Naga resistance was seen in the formation of the Naga Club at Kohima, in 1918, by a few leading Naga chiefs, that provided an effective political forum for different Naga tribes.

In 1929, a strong delegation representing different tribes of Nagas submitted a memorandum to the Simon Commission demanding that their hills be excluded from the proposed reform scheme, so that these regions continue to remain directly under the British rule.

Consequently, the Simon Commission, under the Government of India Act, 1935 Naga Hills, excluded this area from the reform scheme. It was declared as an "Excluded Area" that continued to be administered by the Government of Assam (British).

World War II helped to bring about unity amongst various Naga tribes, as it was fought in Nagaland itself. Nagas were introduced to modern guerrilla fighting, to which they instinctively adapted. The dumps of arms and ammunition left by the retreating Japanese Army provided ready material to be used against the security forces later.

### Advent of Insurgency in Nagaland

In 1946 the Naga National Council (NNC) was formed under the leadership of Angami Zapu Phizo.

In response to fears of secession to India after it was granted independence, Phizo declared Nagaland an independent state on August 14, 1947. The NNC resolved to establish a "sovereign Naga state" and conducted a "referendum" in 1951, in which "99 per cent" supported an "independent" Nagaland

On March 22, 1952, Phizo formed the underground Naga Federal Government (NFG) and the Naga Federal Army (NFA). The Government of India sent in the Army to crush the insurgency and, in 1958, enacted the Armed Forces (Special Powers) Act.

### Series of Peace Proposals

In order to bring about peace in this very hostile region, in April, 1964, Jai Prakash Narain, Assam Chief Minister and Rev. Michael Scott formed a Peace Mission, and got the government and NNC to sign an agreement to suspend operations.

However, the NNC/NFG/NFA continued to indulge in violence, and after six rounds of talks, the

Peace Mission was abandoned in 1967, and massive counter-insurgency operations were launched.

To give peace another chance, the Government of India signed the Shillong Accord on November 11, 1975, with a section of NNC leaders, who agreed to ask its armed cadres to give up arms.

Thuingaleng Muivah, with his group of about 140 insurgents, along with Isak Chisi Swu and S S Khaplang, refused to accept the Shillong Accord, and formed the National Socialist Council of Nagaland (NSCN) in 1980.

In 1988, the NSCN split into NSCN (IM), i.e. Isak and Muivah group and NSCN (K), i.e. Khaplang group, after a violent clash.

Meanwhile, the NNC began to fade away, and Phizo died in London in 1991, the NSCN (IM) came to be seen as the "mother of all insurgencies" in the region.

Muivah, Isak Swu and other top NSCN (IM) leaders had escaped to Thailand in the early 1990s.

Peace talks have happened many times, but, on the foreign soil, like in November 1995, then MoS (Home) met them in Bangkok. Later, the then Prime Minister met them in Zurich on February 3, 1997.

A ceasefire agreement was signed between the Government of India and NSCN (IM) on July 25, 1997, which came into effect on August 1, 1997.

More than 80 rounds of talks between the two sides have happened ever since, including meetings with officers in Geneva and Bangkok and even the Prime Minister met them in Paris on September 30, 1998.

The last major effort to garner support for peace in the region was sponsored by the then Prime Minister, who visited Kohima on 29 October 2003 and made a public speech.

#### **Demand for Greater Nagaland or "Nagaland"**

The NSCN (IM), has been pressing the demand for an independent Nagaland, comprising "all contiguous Naga-inhabited areas", of mainly Manipur (Senapati, Ukhrul, Chandel and Tamenglong), some areas of Assam, Arunachal Pradesh, and Myanmar along with the present Nagaland.

The map of "Greater Nagaland" has about 1, 20,000 sq km, while the present state of Nagaland consists of 16,527 sq km.

The Nagaland Assembly has also endorsed the 'Greater Nagaland' demand to "Integrate all Naga-inhabited contiguous areas under one administrative umbrella" on the following previous occasions: in December 1964, August 1970, and September 1994, December 2003 and as recently as on July 27, 2015.

As per the **Sixteen-point Agreement** signed in July 1960, between the Government of India and the Naga People's Convention, The Naga leaders expressed the view that other Nagas inhabiting contiguous areas should be enabled to join the new state. It was pointed out to them on behalf of the Government of India that Articles 3 and 4 of the Constitution provided for increasing the area of any state, but it was not possible for the Government of India to make any commitment in this regard at this stage.

Consequently, Nagaland has passed a bill in the Assembly demanding the merger of Naga inhabited areas of Manipur under terms of 16-points agreements of 1960 as interpreted by them.

However, the merger, if it takes place would not only include the hill areas of Manipur into Nagaland, but also the Dimapur-Imphal Road, which is in the true sense the life-line of Manipur.

Considering the adverse effect that such a merger will cause to the sentiments of the people of Manipur, as well as the threat of insurgent groups, it is unlikely that any such demands will be favourably addressed for Nagaland.

#### **Signing of Peace Accord**

A peace accord has been signed in 2015 between NSCN (IM) and the Centre government in the presence of Prime Minister and home minister.

Thuingaleng Muivah, of the NSCN's parallel "Government of the People's Republic of Nagaland" or GPRN, has held several rounds of talks with interlocutor and his predecessors through 18 years of a ceasefire that began 1997. Muivah, incidentally hails from Manipur's Ukhrul District.

The accord is actually a "framework of agreement" that lays the broad contours under which the new rules of the game will be written and is likely to be finalised.

The Agreement is said to include aspects that are, in part, commitments to the Nagas and also assurances to neighbouring states about their territorial integrity.

### Conclusion

Though the peace accord has been signed with the main insurgent group, however, there are a lot of complexities involved in forging a lasting peace commitment in the region.

Some of the imponderables involve:

- A fight for supremacy between various militant factions and inter group rivalries has

often resulted in derailment of previous peace processes.

- It will be very difficult to appease the aspirations of all stake holders without a clash of interests.
- Considering the large dimensions of the border and a very hostile terrain, it will be a major challenge to restrict foreign support that plays a major role in flaring up militancy.
- Unless the root cause of trouble in the North Eastern states is addressed by the government, such peace accords are unlikely to be long lasting..

## 26. National Institution for Transforming India (NITI) Aayog

### Introduction

The National Institution for Transforming India (NITI) Aayog was established on 01 January 2015 and replaced the Planning Commission of India, which was abolished after 65 years of its functioning.

The Prime Minister chaired a crucial meeting of NITI Aayog's Governing Council on 23 April 2017.

The meeting was attended by chief ministers of all the states, whom the PM addressed as 'The Team India'.

The vice-chairman of NITI Aayog, presented the 15-year Vision Document, comprising the seven-year strategy document and the three-year action plan.

In order to give stability to the funding estimates of both the Centre and states, the three-year action plan will be aligned with the 14th Finance Commission award period.

### Salient Features of the NITI Aayog

**NITI Aayog or the National Institution for Transforming India** is an institution of the Government of India, which is responsible for formulating economic policy recommendations for the central, state and union territory governments of India.

NITI Aayog serves as a 'Think Tank' of the Government and provides Centre and states with relevant strategic and technical advice across the spectrum of key elements of policy.

The states have the liberty to tailor their plans to suit their needs under more than 40 centrally sponsored schemes.

Hence, unlike the erstwhile Planning Commission, the NITI Aayog has adopted a 'Bottom Up' approach, where decisions are being taken at the local level and then endorsed at the Central level.

### Organisational Structure

- **Chairperson:** The Prime Minister
- **Vice Chairman:** As nominated from time to time.

- **Governing Council:** CM's (States) & Lieutenant Governors (Union Territories).
- **Regional Councils:** Formed on need-basis, incorporates CM's & Lt Governors of the region.
- **CEO:** Appointed by PM for fixed tenure.
- **Secretariat:** Appointed by nomination.
- **Part-Time Members:** Max 2, Rotational, from relevant institutions.
- **Ex-officio Members:** Max 4 from council of ministers, nominated by PM.
- **Special Invitees:** Experts, specialists, practitioners with domain knowledge.

### Objectives

- Foster cooperative federalism through structured support initiatives and mechanisms with the states on a continuous basis, recognizing that strong states make a strong nation.
- Develop mechanisms to formulate credible plans at the village level and aggregate these progressively at higher levels of government.
- Pay special attention to the sections of our society that may be at risk of not benefitting adequately from economic progress.
- Design strategic and long term policy and programme frameworks and initiatives, and monitor their progress and their efficacy.
- Provide advice and encourage partnerships between key stakeholders and national and international like-minded Think Tanks, as well as educational and policy research institutions.
- Create a knowledge, innovation and entrepreneurial support system through a collaborative community of national and international experts, practitioners and other partners.
- Offer a platform for resolution of inter-sectoral and inter-departmental issues in

The accord is actually a "framework of agreement" that lays the broad contours under which the new rules of the game will be written and is likely to be finalised.

The Agreement is said to include aspects that are, in part, commitments to the Nagas and also assurances to neighbouring states about their territorial integrity.

### Conclusion

Though the peace accord has been signed with the main insurgent group, however, there are a lot of complexities involved in forging a lasting peace commitment in the region.

Some of the imponderables involve:

- A fight for supremacy between various militant factions and inter group rivalries has

often resulted in derailment of previous peace processes.

- It will be very difficult to appease the aspirations of all stake holders without a clash of interests.
- Considering the large dimensions of the border and a very hostile terrain, it will be a major challenge to restrict foreign support that plays a major role in flaring up militancy.
- Unless the root cause of trouble in the North Eastern states is addressed by the government, such peace accords are unlikely to be long lasting..

## 26. National Institution for Transforming India (NITI) Aayog

### Introduction

The National Institution for Transforming India (NITI) Aayog was established on 01 January 2015 and replaced the Planning Commission of India, which was abolished after 65 years of its functioning.

The Prime Minister chaired a crucial meeting of NITI Aayog's Governing Council on 23 April 2017.

The meeting was attended by chief ministers of all the states, whom the PM addressed as 'The Team India'.

The vice-chairman of NITI Aayog, presented the 15-year Vision Document, comprising the seven-year strategy document and the three-year action plan.

In order to give stability to the funding estimates of both the Centre and states, the three-year action plan will be aligned with the 14th Finance Commission award period.

### Salient Features of the NITI Aayog

NITI Aayog or the National Institution for Transforming India is an institution of the Government of India, which is responsible for formulating economic policy recommendations for the central, state and union territory governments of India.

NITI Aayog serves as a 'Think Tank' of the Government and provides Centre and states with relevant strategic and technical advice across the spectrum of key elements of policy.

The states have the liberty to tailor their plans to suit their needs under more than 40 centrally sponsored schemes.

Hence, unlike the erstwhile Planning Commission, the NITI Aayog has adopted a 'Bottom Up' approach, where decisions are being taken at the local level and then endorsed at the Central level.

### Organisational Structure

- **Chairperson:** The Prime Minister
- **Vice Chairman:** As nominated from time to time.

- **Governing Council:** CM's (States) & Lieutenant Governors (Union Territories).
- **Regional Councils:** Formed on need-basis, incorporates CM's & Lt Governors of the region.
- **CEO:** Appointed by PM for fixed tenure.
- **Secretariat:** Appointed by nomination.
- **Part-Time Members:** Max 2, Rotational, from relevant institutions.
- **Ex-officio Members:** Max 4 from council of ministers, nominated by PM.
- **Special Invitees:** Experts, specialists, practitioners with domain knowledge.

### Objectives

- Foster cooperative federalism through structured support initiatives and mechanisms with the states on a continuous basis, recognizing that strong states make a strong nation.
- Develop mechanisms to formulate credible plans at the village level and aggregate these progressively at higher levels of government.
- Pay special attention to the sections of our society that may be at risk of not benefitting adequately from economic progress.
- Design strategic and long term policy and programme frameworks and initiatives, and monitor their progress and their efficacy.
- Provide advice and encourage partnerships between key stakeholders and national and international like-minded Think Tanks, as well as educational and policy research institutions.
- Create a knowledge, innovation and entrepreneurial support system through a collaborative community of national and international experts, practitioners and other partners.
- Offer a platform for resolution of inter-sectoral and inter-departmental issues in

order to accelerate the implementation of the development agenda.

- Maintain a state-of-the-art Resource Centre, be a repository of research on good governance and best practices in sustainable and equitable development as well as help their dissemination to stake-holders.
- Actively monitor and evaluate the implementation of programmes.
- Focus on technology upgradation and capacity building for implementation of programmes and initiatives.
- Undertake other activities as may be necessary in order to further the execution of the national development agenda, and the objectives mentioned above.

## 27. NRC Updation in Assam

### Introduction

The first draft of the National Register of Citizens (NRC) for the State of Assam was published by the Registrar General of India at the stroke of midnight on 31 December 2017.

The main objective of this exercise is to identify illegal migrants, mostly from Bangladesh, in the State.

The first draft of the NRC that has been published, includes the names of 1.9 crore people, out of the total 3.29 crore applicants in Assam, recognizing them as legalized citizens of the State.

The application process for NRC commenced in May, 2015 the schedule to publish the next draft will be decided as per the guidelines enunciated by the Supreme Court in April 2018.

The Registrar General of India has assured that the entire process of updating the NRC by scrutinizing the 6.5 crore documents received from 68.27 lakh families across Assam will be completed in due course of time.

### What is National Register of Citizens (NRC)?

The National Register of Citizens (NRC) contains the names of Indian citizens across India and was prepared after the Census of 1951.

As per the directions of Government of India, this document was kept in the offices of Deputy Commissioners and Sub Divisional Officers and was later transferred to the custody of Police department in early 1960.

The updating of NRC will establish the citizenship rights of all Indian citizens. This process has commenced in Assam since May, 2015.

### Reasons Leading up to NRC Updation in Assam

Assam, especially, the area north of Brahmaputra River is well endowed with natural resources like oil, natural gas and Assam tea. Right from the British era, the poor peasants from East Bengal, now Bangladesh, started drifting for better opportunities to Assam and West Bengal.

However, the problem got aggravated when the Government of India decided to open the floodgates for refugees seeking asylum in India from East Pakistan (now Bangladesh), before its separation from Pakistan in 1971.

Moreover, originally Assam was a mega-State with Arunachal Pradesh, Nagaland, Meghalaya and Mizoram all a part of the State.

Nagaland was carved out of Assam in 1963 and Arunachal Pradesh and Mizoram became UTs in 1972 and assumed Statehood in 1987, Meghalaya was formed in 1972 to accommodate territorial aspirations of Nagas, Khasis, Mizos and Garos, respectively.

Consequently, Assam has seen a number of clashes between the original inhabitants and the outsiders on territorial issues.

The worst was the one that happened at Merapani, Golaghat, when 70 Assamese were killed in 1979 and 50 died during the clashes in 1985. Also, in July-August 2012 violent Bodoland Muslim clashes led to the death of 103 and displaced 4.85 lakh people belonging to both communities. Please read blog on the Bodoland issue for further information: <http://www.olivegreens.co.in/blog/genesis-of-the-bodoland-issue-and-reasons-for>

Hence, marginalization of the original inhabitants of the region due to the mass influx of many affluent and also, desperate outsiders to exploit the resources of Assam became the root cause of the 'Assam Movement' during the late 70s and early 80s.

The All Assam Students Union (AASU) and the All Assam Gana Sangram Parishad (AAGSP) spearheaded the 'Assam Agitation' against illegal immigrants in Assam.

The demand for updating the 1951 NRC was formally put forth by AASU-AAGSP in the form of a memorandum to the Centre on 18 January 1980. This request came in the wake of a two month long anti-illegal foreigners' Assam Movement.

Though it was agreed in principle in 1985, but it was only on 17 November 1999 that the Centre sanctioned 20 lakh for the purpose of NRC updation and released Rs 5 Lakh to commence the exercise.

The Dr Manmohan Singh's government created a Directorate for updating the NRC on 05 May 2005 and the process of computerization of 1951 NRC and voters list up to the year 1971 commenced.

#### **Assam Accord - 1985**

The agitation program that carried on from 1979 to 1985 compelled the government to sign the 'Assam Accord' with the leaders of AASU-AAGSP in 1985.

This peace accord amongst other things prescribed the cutoff date to accept legal citizens of Assam, as midnight of 24<sup>th</sup> March 1971. It means that all persons who have entered Assam after this date will become illegal migrants.

In other words, those persons (or their descendants), whose name appear in the NRC 1951, or in any of the Electoral Rolls up to the midnight of 24<sup>th</sup> March 1971, can be verified as legal citizens of Assam.

The NRC 1951 and the Electoral Rolls up to the midnight of 24<sup>th</sup> March 1971 together are collectively called 'Legacy Data'.

However, there is a provision available to submit other admissible documents in the ongoing verification for updating NRC in case someone's name is not found in the Legacy Data, like, land records, or permanent citizenship certificate issued by another Indian state, etc.

Government has setup 2500 NRC SewaKendras throughout the State for obtaining Legacy Data and to update personal records.

The updated NRC shall contain the names of persons eligible for inclusion in the updated NRC by virtue of being original inhabitants of Assam.

#### **Opportunities and Challenges of Updating the NRC of Assam**

##### **Opportunities**

- The updating of NRC will lead to identification of illegal migrants and the resources of the indigenous Assamese people will be rightfully secured.

- It will be possible for the state and centre government to carry out targeted Public Distribution of basic necessities and amenities to the deserving.
- A huge chunk of vote bank, especially Muslims from Bangladesh, will become invalid.
- Implementation of a number of very ambitious development projects in Assam and other North East states that are in the pipeline will need workforce.
- Assam will become violence-free.

##### **Challenges**

- The errors in exclusion and inclusion while the NRC is being updated owing to doubts over the credibility of 1951 census and the difficulties involved in proving an indigenous citizen could cause injustice to many people.
- The exercise is likely to result in a major upheaval and cause severe inconvenience to common people.
- Bangladesh is already struggling to accommodate a colossal influx of Rohingya Muslims from Myanmar; it is unlikely to accept any more illegal migrants from India.
- India's image in international arena could be tarnished as the status of these citizens would remain unsettled.
- There are already six detention centres for the D-Voters (Dubious Voters) in Assam located at Goalpara, Kokrajhar, Silchar, Dibrugarh, Jorhat and Tezpur. It will become a massive exercise for administration to accommodate a large number of illegal migrants after the NRC has been updated.

##### **Conclusion**

NRC is a process carried out in Assam to detect undocumented immigrants, which led to the exclusion of around two million people from the NRC.

No decision has been taken yet on preparing a National Register of the Indian Citizens (NRC) at the National level, partly due to out-breaks of Covid & postponement of first phase of Census.

The updation of NRC is essentially required to ensure that the cultural and ethnic integrity of

Assam is restored and the Assamese people can access and utilize the resources that are rightfully theirs.

However, it will also be important to find a via-media to safeguard the human rights of thousands of migrants who will become illegal citizens or perhaps stateless, in many cases because their ancestors had illegally migrated.

National Register of Citizens (NRC) directorate in Assam has submitted a poroposal for creation of an Adhaar like regime for NRC to the Register General of India (RGI).

The Supreme Court, which is monitoring NRC process has disallowed sharing of NRC data unless an Aadhaar like regime is set up. The supplementary list of inclusions and exclusions for NRC, Assam have been published on 31st August 2019.

## 28. Reasons for Rise in Communal Divide and Steps to Check it

### Introduction

The cases of communal violence in India has shown a sharp rise, i.e. nearly 25% more in the first half of this year as compared to the corresponding period of the previous year.

A comparative study of the annual data for the years 2012, 2013 and 2014 shows the following figures: 668, 823, and 644 incidents of communal violence nationwide (of which UP's share of the total is 18%, 30% and 20%, in these three years respectively).

There was slight ebb in communal violence during the year 2014. However, 2015 appears to be the 'Year of Communal Intolerance'.

The divisive forces operating in the country are constantly consuming innocent human lives, damaging public property built from tax payer's money and creating an environment of desperation and uncertainty, where safety concerns negate viable growth prospects.

### Causes for Up scaled Communal Divide

Communal forces flourish in an environment of mutual mistrust and feeds for its survival on hatred for other communities. The under mentioned reasons mainly attribute towards the creation of the aforesaid conditions:

**Vote Bank Politics.** The politicians use the communal card to align themselves to a particular community or for the purpose of breaking up the vote bank of another party often indulges in instigating a communal riot.

**Turf War for Dominance by Religious Heads.** The religious leaders belonging to different religions and many a time different sects from the same religion wage a so called holy war to protect their religious practices.

**Struggle for Identity or Class Conflict.** In order to ensure their relevance in a system that appears to be highly biased, various classes of people, like the dalits, the tribals and other minorities tend to cling together to project a collective front. Any threat to their class is furiously opposed, so as to make their voices heard in this oblivion.

**Conflict of Interests.** Communal conflicts are a means for communities to assert their communal identities and to demand their share in economic, educational and job opportunities.

Especially in the present times of economic downturn the struggle for ensuring that the interests of their community is appropriately safeguarded is very firmly contested.

**Reports of Threat to Religious Ideologies.** The examples of these are; Burning down of Churches in Delhi and other parts of India, Hindu-Muslim riots in Muzzafarnagar, Uttar Pradesh in 2013, Hindu groups were accused of forcibly converting several Muslims and Christians to Hinduism (GharWapisi) in December last year, ethnic clashes over the disputed Nagaland-Assam border in August, rumours of beef consumption, i.e. Dadri lynching, sacrilege of holy book, Guru Granth Sahib in Punjab a few days ago, Caste-based violence was also reported in several states including Uttar Pradesh, Bihar, Karnataka and Tamil Nadu.

**Irresponsible Reporting by Media.** Many a times media broadcasts unconfirmed, sensitive and often biased reports on national television, just to sensationalise the issue and improve their TRP. This often adds fuel to the fire and increases animosity between the two communities, as the minority community feels threatened and the majority community feels victimised.

**Resource Crunch.** As the availability of natural resources like land, water, minerals, etc is reducing due to an exponentially growing population, the clamour for ownership of the available resources, which are there at the disposal of various community's is also increasing.

**Growing Intolerance Levels.** The social insecurities arising out of a life of deprivation and mistrust for everyone around has made the common man edgy, irritable and intolerant and lets go at the smallest provocation.

**Modi Government's Leaning towards the RSS and the Sangh Pariwar.** Many actions, which were also being followed as a standard practice by the

previous UPA Government, e.g. the Beef Ban during certain days of the year, is now being highlighted due to the BJP Government's closeness with the RSS. Unfortunately, the Government does not come clear on its stand on various such issues. Consequently, the anti-social elements take benefit of the same and flare up the issue further.

**Inability of the Government to Contain the Hindutva Agenda.** PM Modi has not been able to adequately snub the religious leaders and Sadhus from making irresponsible statements and also his silence on many communal issues puts a question mark on his actual intent, thus creating an environment of uncertainty.

**Foreign Hand.** India has many hostile neighbours, who wish to make it weak through a communal divide. Pakistan and China prefer to fight an unconventional war, which is cost effective and more damaging to the national stability in the long term.

#### **Consequences of Communal Violence**

The greatest sufferers of communal violence are the innocent common people who get caught inextricably into circumstances beyond their control.

There is an avoidable loss of life and essential public property gets damaged. It leads to hooliganism, and the situation is often exploited by anti social elements by plundering and indulging in activities only for their personal gains.

The anti-national elements get adequate opportunity to fan anti-national feelings and work on creating an atmosphere to break the cohesiveness of our society.

The atmosphere of uncertainty and internal turmoil dissuades the foreign investors to set up their businesses in India.

Lawlessness accruing out of communal disharmony is exploited by the divisive forces operating in the country because of which internal security risks gets heightened.

The social fabric of the society gets irreparably damaged and the conditions of mistrust serve as a catalyst for future conflicts on flimsy grounds.

Deployment of large scale security forces dissipates the state exchequer and may result in occasional Human Rights abuses. The Human Development Index of the society is adversely affected by these hampering restrictions that are laid on the basic right to freedom of people.

#### **Steps to Handle Communal Violence**

- Quick and appropriate decisions by the administration.
- Police forces especially trained for the purpose must be promptly deployed in adequate numbers with requisite equipment and proper gear to handle situation at the physical, as well as emotional level.
- Proper delegation of responsibility and authority must be defined so that no one looks over the shoulder at the time of crisis.
- Prior to the actual build-up of tension, licensed weapons such as revolvers, guns and corrosive materials must be seized.
- During the outbreak of a riot, the local people must be regularly kept updated regarding the prevailing situation through various forms of media, which must be controlled to ensure it does not aggravate the situation further.
- Prompt and fair probe into all incidents that may take place during the riot be conducted and locals apprised of the action taken by the administration/ government.
- Ensure the protection of identity and security of informers and witnesses to encourage more and more people to come forward.
- States must maintain emergency funds for the procurement of basic items such as medicines and food or for compensating the losses of the people.
- Law and Order is a state subject, however during an exigency like a communal riot, the district collector may not be able to control the situation effectively at panchayat and block level. Hence, the Sarpanch should be given magisterial powers and bestowed with justifiable duties to stop spreading of communal tensions.
- Victims who have been 'internally displaced' should be registered with the government via

a single window system as proposed in the PCTB, 2013 Bill and rehabilitated appropriately. They should have the right to claim their compensation for property, life and livelihood loss from the government.

- The states must be proactive to stock required items in adequate quantities and supply without delay such as blankets, napkins, syringes, soaps, sanitary pads, medicines, bandages, scissors, food, water, books, stationary items, kitchen items etc.
- The safety and security of the most vulnerable section, i.e. women, children, old and infirm must be the top most priority.
- The Election Commission should closely watch public speeches and parliamentary addresses of leaders and serve notices or file FIRs against anyone who makes provocative statements in relation to the communal riot incident.
- Cyber police should be watchful of posts made in the social media and websites carrying any provocative content with the aim of spreading communal tension and bring to book such people.

Suggestions for Eradication of Communalism are as given below :

- (a) Abolition of Communal Parties in India.
- (b) Transmission of the past Heritage.
- (c) Healthy Public Opinion.
- (d) Inter-religious Marriages
- (e) Declaration of National Festivals.

### **Conclusion**

Finally, the basic reason for all communal disturbances is the communal atmosphere pervading the country and the communal tension built up between different communities.

The communal atmosphere provides a ready-tilled soil for communal minded people to sow seeds of communal hatred and nurture them until the bitter harvest of communal violence is reaped.

We, as an evolving society, especially the youth, need to unite together to fight the communal

## 29. Remedial Measures to Prevent Farmers Suicide

### Remedial Measures to Prevent Farmers Suicide

#### Introduction

Farmers suicides account for 11.2% of the overall all suicides committed in India. The multiple and diverse reasons that are being ascribed to this trend that has seen a sharp rise over the previous few years are:

Climate change has made the weather unpredictable, leading to monsoon failures or unseasonal and / or excessive rains, high debt burdens, high cost of cultivation of genetically modified crops, government policies, public mental health, personal issues and family problems.

#### Historical Perspective

Farmers in India have been at the receiving end from times immemorial. Historical records relating to frustration, revolts and high mortality rates among farmers in India, particularly cash crop farmers, date back to the 18<sup>th</sup> and the 19<sup>th</sup> century.

**The Izaredari System** was introduced by Warren Hasting in 1773, wherein, Izaredars were appointed by the East India Company to collect revenue from the peasants and farmers. These "Thekedars" squeezed the money out of the poor farmers to pay the Company.

Later on in 1799, Lord Cornwallis introduced the **Permanent Settlement System**, in which the Zamidars were made the permanent owners and landlords, who could keep 11% of the total produce for themselves and pay the balance 89% to the Company.

The actual cultivators were reduced to tenants and were deprived of all rights over the land that they physically tilled.

Permanent settlement fixed the revenue for 10 years. Irrespective of the vagaries of weather or any calamities, the peasants had to pay up the Landlords, who treated them very harshly.

Naxalism is actually an outcome of harassment of peasants by the landlords, who took up arms against them and called for equal rights for all.

**The Deccan Riots of 1875-1877** were an outcome of high land taxes of 1870s, payable in cash regardless of the effects of frequent famines on farm output or productivity, combined with colonial protection of usury, money lenders and landowner rights.

In the present times, the policies of globalization and trade liberalization have created the farm crisis for the following reasons:

- A shift from 'food first to trade first' and 'farmer first to corporate first'.
- The cost of agricultural production has increased immensely because of heavy reliance on chemicals, capital intensification of production through dependence on mechanised farming and the de-regulation of the input sector, like, sale of seeds, pesticides and fertilizers leading to rising costs of production.
- De-regulation of markets and lack of effective price regulation, has led to collapse in prices of the farm commodities.
- The present agriculture policies are facilitating establishment of agro-processing industry and agri-business through subsidies, e.g. subsidies are being given to cold storage and transport. These subsides do not go to the farmers and producers.

#### Major Reasons for Farmers Suicides

**Failure of Institutional Credits for Small and Marginal Farmers:** It is highly cumbersome for a farmer to get loan and the loans disbursed to the farmers are at an interest rate of 14 per cent, while the rate of savings today get a meagre 5.75 per cent rate of interest.

What is highly provocative is that the consumer loans for purchase of luxuries are available at around 10 percent of interest.

**Heavy debts on farmers** owing to increased dependence of small farmers on moneylenders, at rates of interest from 24 to 60 percent per annum, sometimes even more, which they are unable to pay and get harassed by the goons of the moneylender.

**Government's Inadequacies to implement functioning of safety nets** such as fair price shops (FPS), various forms of food for work schemes and proper regulation of public distribution system in the country.

**Delayed and ridiculously meager compensation** for the crops damage caused due to a calamity.

**Minimum Support Price (MSP) does not support the increased inflation and the farmers are duped by the private buyers on behalf of Food Corporation of India (FCI)**, as they do not conduct the quality tests properly and purchase from the cultivators well below the MSP.

Finally, they end up selling the produce at the procurement centres, and thereby picking up undeserving profits, which should have rightfully gone to the farmers.

**Increasing cost of agriculture inputs** like seeds, fertilizers, pesticides, etc and reduced price of agriculture produces.

**Unpredictable weather** conditions owing to climate change and cumulative crop loss prevents the farmers from repaying their debts, as a result they suffer harassment from the moneylenders.

**Reduced land holdings** due to successive property division has made agriculture as a profession totally unviable. The small landowners still continue to cultivate low-value conventional crops, which make their farming unsustainable.

**Inappropriate land use and cropping pattern** has led to cultivation of commercial crop, the loss of yield of the same gets magnified because of the high cost of cultivation as well as a greater requirement of cash inputs, whereas in subsistence crops the loss of yield can be tolerated, as the share of cash input is much lower.

#### **Remedial Measures**

**Introduction of National Agricultural Insurance Schemes** to provide insurance coverage and

financial support to farmers in the event of failure of any of the notified crops as a result of natural calamities, pests and diseases. Specific attention needs to be given to cover cash crops – like cotton, sugarcane and edible oils.

**Government must incentivise farmers to adopt progressive farming practices**, with high value inputs and improved technology, besides stabilizing farming income, particularly in the disaster years.

**Sankata Harana** is a novel scheme introduced by IFFCO during 2001-02, under which, any farmer purchasing fertilizers through cooperative societies would qualify for relief in case of an accidental death.

**Personal Accident Insurance Scheme** covers Kisan Credit Card Holders, to provide relief in the eventuality of an accident.

**To sustain the family of the deceased**, all the financial help should be provided as 'Fixed Deposit' in the bank, with quarterly payment of interest.

**Encourage farmers for adopting low cost organic farming** based on cost-effective technology with most suitable crop patterns and indigenous pest management practices.

**Biodiversity, through crop rotation must be the basis of production** to reduce vulnerability to climate and markets.

**Strongest action under Indian Penal Code** should be taken against suppliers of spurious seeds and manufacturers of spurious pesticides.

**Integrated Pest Management (IPM)** should be popularized among farmers so that the crop of neighbouring farmers, not using pesticides, does not get damaged.

**Government should provide community implements and machinery** at panchayat / block level so that small and marginal farmers can also use mechanised techniques of farming at lesser cost to improve productivity.

**Institutionalized Credit System** (e.g. Jan Dhan Yojana and MUDRA banks) must be simplified and farmers be made aware of their rights and government incentives.

**Moneylenders charging the farmer's exorbitant rate of interest must be punished.**

**Gram Panchayats should evolve a mechanism to identify the indebted and suicide prone farmers and help them to overcome the crisis.**

**Government/ NGOs with a vision of eco-friendly sustainable development should guide the farmers to make the efficient use of water, electricity, pesticide and other inputs.**

**The role of commission agents, traders and intermediaries should be minimized to facilitate the farmers to fetch maximum price of their produce.**

**Finally, agriculture policy needs to shift from its current bias of 'corporates first' to 'farmers first'.**

#### **Farmer Suicides: Way Forward**

1. Reducing the reliance of agriculture on nature.
2. Making institutional finance available to every farmer, especially the BPL ones.
3. Effective & timely counselling be given to Farmers on economic methods of cultivation.
4. Technology advancements in agriculture should be made available to poor farmers as well.
5. The Government should also try to pool lands of BPL and small farmers and convert them into bigger chunks of economically cultivable land.
6. Small farmers should be advised on alternate and additional sources of subsidiary income & given training for the same. eg Fish farming, Honey-bee keeping, earthworm manure cultivation.
7. Provision of relief should enable farmers to sustain a livelihood rather than as just relief.

## 30. National Water Grid

### Introduction

India's population is growing at an exponential rate and all the natural resources, including water are being consumed at a much faster rate than it is getting replenished through natural ways.

The scarcity of water is at the heart of many an inter-state and inter-national conflicts and at the same time excess of rainfall during the monsoon season brings about havoc, causing huge loss of life and public property, due to Floods etc.

Hence, there is an urgent need to judiciously harness the water resource so as to prevent its wastage, dispel flood fury and increase irrigable land to ensure food security.

Towards this end, the National River Inter-link Project, envisaged to create a National Water Grid, in the form of a network by inter-linking rivers is a well conceived plan.

### Background Information

The desirability of interlinking rivers was first visualised by a British engineer, Sir Arthur Cotton, who designed the provisions for linking Godavari and Krishna rivers.

The idea was to speed up movement of import and export from the British colonies in South Asia and also to cater to water deficiency in south eastern India, now the state of Andhra Pradesh.

The proposal to interlink rivers got an impetus in 1970's, when Mr KL Rao was the Irrigation Minister. Taking a cue from the several already successful projects of inter-basin transfer of river water, he proposed that the Brahmaputra and Ganga basins, which are water surplus, and result in floods during the monsoon season nearly every year, could divert water to central and south India, which is water deficient. Thus the proposal of a "National Water Grid" took birth.

The Water Resources Ministry in the early 1980's submitted a report called the "National Perspectives for Water Resources Development".

The Report suggested that the overall water development project be categorised into two sub-parts, namely the Himalayan Rivers Inter-link Component and the Peninsular Rivers Inter-link

Component. Later in 2005, the Intra-State River Linking Component was also added.

In order to carry out a detailed feasibility study by experts in respect of surveys, identification and alignment of canals, inter-linking of Peninsular Rivers, a committee called the **National Water Development Agency (NWDA)** was set up in 1982.

Though the NWDA has produced a number of reports right from its inception, nothing concrete has happened on the ground.

### Understanding the Need for Creation of the "National Water Grid"

There are primarily two major reasons that warrant Water Resources Management in India:

- Certain areas receive excessive rains as compared to others resulting in floods and famine conditions during the same period, i.e. the north-eastern region of the country receives heavy precipitation, in comparison with the north-western, western and southern parts.
- India receives 85% of its precipitation during a limited monsoon season in the Himalayan catchments of the Ganges-Brahmaputra-Meghna (GBM) basin.

The catchment areas are unable to retain adequate water to cater for the explicit demand of water during the dry period (9-10 months).

Hence, it emerges that this excess - scarcity regional disparity and flood-drought cycles have created a very genuine need for Water Resources Management and the most appropriate way to address the issue, is to implement the proposal of inter-linking rivers and creating a "**National Water Grid**".

### Advantages of Inter-linking of Rivers

India receives about 4,000 billion cubic meters of rain annually, or about 1 million gallons of fresh water per person every year. However, the growing demand for irrigation, drinking and industrial water creates a demand-supply gap. Inter-linking of rivers will ensure water is evenly and judiciously distributed across the country to reduce the demand-supply gap.

It will help to increase the irrigable area, so as to enhance the production of food-grains to ensure food security for a population that is growing at an annual rate of about 10 to 15 million.

India can use the inter-linked rivers for speedy movement of freight from one part of the country to the other, thus reducing the stress on other means of surface communication. The same would promote a 'cleaner and greener' means of transportation.

A very significant advantage of inter-linking of rivers will be that an additional generation of hydro-power to supplement our energy needs and reduce reliance on conventional forms of energy that increase our carbon imprint.

Inter-linking of rivers will enhance the amount of water that we can store for consumption and irrigation purposes. Presently, we are capable of storing only up to 30 days of requirement of the complete population in basins and lakes, as compared to 900 days that some of the other more advanced countries can store in their reservoirs.

Presently we rely heavily on ground water and nearly 15% of the crop production uses this source which is rapidly depleting. Inter-linking of rivers will help to reduce the strain on the usage of the ground water.

Every year the conditions of floods and famine brings about avoidable catastrophe in various parts of the country resulting in loss of life and property, suicide by farmers and the resultant strain on the state exchequer for relief and rescue operation. Inter-linking of rivers will be able to divert excessive water to draught hit areas and mitigate the losses at both ends.

### **Disadvantages of Inter-linking of Rivers**

The creation of water storage facilities like water barrages, dams and reservoirs, will result in the displacement of people from those areas. Proper rehabilitation of the displaced persons has always remained an area of concern.

Rampant corruption in the country will aggravate the situation and those displaced may join the anti national cadres like the Naxals.

Disturbing the ecology by man-made actions may result in certain unforeseen conditions, e.g. aquatic ecosystems could migrate from one river to another, which in turn may affect the

livelihoods of people who rely on fishery as their income.

The creation of large dams, inter-basin transfers and water withdrawal from rivers is likely to have negative as well as positive impacts on freshwater aquatic ecosystem.

In some cases neighbouring countries will also get affected by our inter-linking projects and in the absence of any legal international framework, the proposal may have international ramifications.

Lastly, disturbing the ecosystem may have adverse environmental effects, like on aqua life, deforestation and submerging of areas.

### **Highlights of the Proposal**

#### **Himalayan Component**

A total of 14 inter-links are being considered and feasibility study for most of these has been completed.

Proposal entails transfer of surplus flows of the eastern tributaries of the Ganga to the West apart from linking of the main Brahmaputra with the Ganga through inter-linking canal systems.

The project will reduce the chances of floods in the Ganga- Brahmaputra basin, irrigate additional 22 million hectares of wasteland and generate 30 million kilowatts of hydro-power.

#### **Peninsular Component**

The main aim of this project would be to send water from the eastern part of India to the south and west, for which the following interlinks are envisaged:

- **Phase-I:** Mahanadi-Godavari-Krishna Pennaiyar- Cauvery to transfer surplus water from Mahanadi and Godavari to southern states.
- **Phase-II:** Connect west flowing rivers, north of Bombay and south of Tapi to provide additional drinking water to Mumbai and for irrigation purposes to the coastal regions of Maharashtra.
- **Phase-III:** Inter-linking of Ken with Chambal to cater to the regional needs of water for Madhya Pradesh and Uttar Pradesh.
- **Phase-IV:** Diversion of some water from west flowing rivers in the Western Ghats towards the east flowing rivers like Cauvery and Krishna for irrigation purposes in those usually drought affected areas.

The feasibility study for 16 river inter-linking projects in the Peninsular Component has been nearly completed.

These projects are likely to irrigate an additional 25 million hectare by surface water, another 10 million hectares due to increased use of ground water.

Further, it will assist in the generation of hydro power and also provide a means of flood control and regional navigation.

#### Intra-State Interlinking of Rivers

The National Water Development Agency (NWDA), in 2005 adopted the proposal of conducting a feasibility study for inter-linking of rivers within the states, in respect of 37 recommended projects.

The States Government of Bihar proposed 6 inter-linking projects, Maharashtra 20 projects, Gujarat one project, Orissa three projects, Rajasthan two projects, Jharkhand three projects and Tamil Nadu proposed one inter-linking proposal between rivers inside their respective territories.

Since 2005, NDWA completed feasibility studies on the projects, found one project infeasible, 20 projects as feasible, one project was withdrawn by Government of Maharashtra, and others are still under study.

#### Latest Developments on the Issue

In a historic development and as a first step towards the mission to inter-link rivers, River Godavari was formally connected with River Krishna in Andhra Pradesh on 16 September 2015.

The water from Godavari River has been lifted to flow and link with Krishna River at Krishna District nearly 174 km away to supply water to the parched Rayalaseema region of Andhra Pradesh.

The farmers of the Krishna Delta, mainly in Krishna and Guntur districts have been facing an acute shortage of water due to the increased height of the Almatti Project (hydroelectric project on Krishna River in north Karnataka, completed in July, 2005).

The inter-linking of Godavari and Krishna will serve as a great boon for the farmers in the region, which was once referred to as the 'rice bowl' of the country.

Inter-linking of rivers was one of the election manifestos of the present government and the

Finance Minister had allocated Rs 100 crore for conducting the feasibility study in their first budgetary allocation.

So far a detailed project report has been prepared only for Ken-Betwa project. Approximately 8,650 hectares of forestland in Madhya Pradesh is likely to be submerged for the project; and a portion of that forestland is a part of the Panna National Park.

The Ken-Betwa link project includes a dam and a 221 kilometer canal. Work has already commenced on the Damanganga-Pinjal link to boost water supplies for Mumbai and surrounding industrial areas.

The Tribal Community has intensified their protest against the Par-Tapi-Narmada River linking project under NRLP after it was mentioned in the budget speech 2022-2023 of the Finance Minister.

The budget speech included five river linking projects to be taken-up after consensus among states :

1. Damanganga - Pinjal
2. Par-Tapi-Narmada
3. Godavari – Krishna
4. Krishna – Pennar
5. Pennar - Cauveri

#### Conclusion:

The inconsistency in the national policy on the inter-linking of rivers has been a major reason for undue delay in the execution of the project. While the NDA has supported the proposal, the UPA has been against it as they feel that it will have disastrous environmental fallout.

It may be noted that the initial cost of inter-linking of rivers will be prohibitive in terms of ecological, geological, hydrological and economical (estimated at 5, 60,000 crore). However, it is felt that the long term net benefits may outweigh the initial cost and losses.

It is envisaged that once these 30 projects have been implemented, it will make water available for irrigating 35 million hectares, to favourably address the issue of food security, generate hydroelectricity to the tune of 34,000MW and control floods in many states across the country.

## 31. Sports in India

### India's Performance in International Sporting Events

#### Introduction

India finished at the 8<sup>th</sup> spot at the 2018 Asian Games in Jakarta with a total of 69 medals, which included 15 gold, 24 silver and 30 bronze. This was India's best ever performance in the Asian Games, since the first Asiad in 1951.

#### India Disposed to Become a Sporting Nation?

The bright spot in India's performance in international sporting events is that the athletes have won medals across the spectrum, rather than the traditional games like hockey, tennis, badminton, etc, which speaks of an impressive progress.

Moreover, medals won by teenagers like Saurabh, Shardul, NaoremRoshibini Devi, etc were extremely encouraging as they have many years to further hone their skills and continue to bring laurels to the country.

Indian contingent has enough potential to shine internationally, provided the sports culture is given the requisite impetus, encouragement, government support and funding. It is being widely acclaimed that India has finally arrived on the sporting stage.

#### Suggestions to Improve Medal Tally in International Sporting Events

The Sports Authority of India's budget is inadequate to provide freedom to be spent liberally on various national sports federations. The national federations on the other hand have monumentally failed in terms of futuristic planning or even putting in visible efforts to inspire sportspersons.

In order to circumvent the problem of funding and regionalism, each state could be asked to voluntarily pick up just one sport, that the state government feels the people of that state have an aptitude for and go all out to prepare a medal winning squad.

The state, with additional support from the centre could then create multiple and world class facilities and hire the best coaches only for that

discipline. Budding players from other states could also be co-opted without any regional bias. It is cardinal to focus on getting world class coaches and trainers. It is high time that we move beyond institutes like National Institute of Sports (NIS). Their curriculum is perhaps decades behind the present times.

Ex-players of repute in respective sports could be incorporated to form a part of talent hunt teams that could go to every nook and corner of that state to identify potential and then ensure that the future of the recruits so selected is adequately secured.

The progress of their training could be closely monitored by eminent sportspersons or selected personnel from the disciplined organisations, like the armed forces.

Besides funding by the state/centre government, major industrial/ corporate houses could be asked to provide sponsorships.

It is heartrending to learn that majority of Asian Games medallists are looking forward to secure their future in terms of jobs or other forms of social security's by winning the medal. Therefore, the incentives for the players and their mentors should be so attractive that everyone goes all out for success, without the burden or stress of their future well being.

Lastly, inculcating a deep sense of national pride and developing a 'killer instinct' in the sportspersons to give their last ounce when the need arises has to be the bedrock of their training, for which an attachment with the army training centres initially will be a good idea.

#### Conclusion

India is an emerging market for sports. The industry has experienced rapid growth across-all segments in the last few years. There are millions of sports enthusiasts in India and this number is set to spiral with the increasing viewership of these sports on television. The Indian Government has made significant investments in athletic facilities & training which will pump out more athletes and sports persons in times to come.

## 32. Start-up India

### Introduction

The Prime Minister formally launched the Start-up India Movement at Vigyan Bhawan, New Delhi on 16 January 2016.

The prime motive of launching this movement is an endeavour by the government to promote entrepreneurship in India by encouraging innovations and 'out of the box' thinking, which would catapult the overall development of the country.

The Prime Minister in his inaugural speech urged the budding entrepreneurs to look beyond the realms of just Information Technology.

He unveiled a slew of incentives to boost start-up businesses, like, permitting a tax holiday, with no inspection by the departments for the next three years, offered capital gains tax exemption and announced that Rs 10,000 crore corpus has been earmarked to fund this movement.

It is envisaged that the precursor to Start-up Movement should be a creation of a pool of skilled workforce.

Considering that 54% of India's population is less than 25 years of age, rising aspirations of the youth seeking better jobs, and growing expectations of employers for an efficient, well trained workforce, the government recognised the need for skill development in India.

The Government of India notified the formation of Department of Skill Development and Entrepreneurship on 31 July, 2014, that became a full-fledged Ministry of Skill Development and Entrepreneurship (MSDE) on 09 Nov, 2014.

### Salient Features of Start-up Movement

In order to facilitate the implementation of the proposed 'action plan' of the government, a start-up India hub will be created as a single point of contact for the entire start-up ecosystem to enable knowledge exchange and access to funding.

The creation of a strong ecosystem will ensure sustainable development and generation of large

scale employment opportunities, which would further generate the need for skill development in the desired skill sets.

As a direct fallout of this movement, large scale skill development of youth will take place. Consequently, it would empower the huge workforce at our disposal.

Self-certification will be allowed in respect of nine labour and environment laws, thus reducing the gestation period for the launch of an enterprise, besides, curtailing red tapism and avoidable harassment to entrepreneurs.

A much liberalised patent regime is being brought in, so as to help start-ups to register their patented product for a fee which will be slashed by 80% of the fee being charged at present for patent.

In this regard, government is considering to provide legal support for fast-tracking patent examination and to promote awareness regarding adoption of Intellectual Property Rights (IPRs) in terms of patents, designs, trademarks, etc, to help start-ups protect and commercialise their products under IPRs.

The relaxed norms like tax exemptions, reducing regulatory burden, speedy availability of funds, etc, will provide the new start-ups with a level playing field and equal opportunities vis-a-vis experienced entrepreneurs and established companies.

In order to ensure adequate funding for the campaign, government has initially kept a corpus of Rs 2,500 crore and plans to hold a total corpus of Rs 10,000 crore over the next four years. Funds will be managed by private professionals drawn from the industry and LIC will be a co-investor in the fund.

Further, in order to boost financing, the entrepreneurs can sell their private assets to fund their enterprises. They will be exempted 20% tax on the capital gains made from selling such an asset, provided the money is invested in their own start-up.

An exit option under the Bankruptcy Act has been left as a safety valve for the entrepreneurs, under which anyone can close down within 90 days of the launch of the enterprise.

In order to provide quick redressal to issues and swift dissemination of information, a mobile app and portal will be rolled out for interacting with the government and regulatory bodies.

Lastly, a Credit Guarantee Trust Company is envisaged to be formed with a budgetary allocation of Rs 500 crore per year over the next four years. The credit guarantee fund would help flow of venture debt from banking system and serve as a guarantor against risks for start-ups.

#### **Salient Features of Pradhan Mantri Kaushal Vikas Yojana (PMKVY) Scheme**

The Skill India mission was formally launched by the PM on the occasion of first ever World Youth Skills Day on 15 July 2015 at the Vigyan Bhawan, New Delhi. The tagline for Skill India is: 'Kaushal Bharat, Kushal Bharat'.

The Skill India mission is expected to be the backbone for important government initiatives like Digital India, Smart Cities, Make in India and now, Start-up India campaign.

The National Policy for Skill Development and Entrepreneurship, 2015 is the country's first integrated national policy for developing skills and promoting entrepreneurship on a large scale.

The Government, under the Skill India mission has set a target of training over 40 crore people in various skills.

The skills of young people who lack formal certification, such as workers in India's vast unorganised sector, will be recognised, through an initiative known as 'Recognition of Prior Learning' (RPL). A total of 10 lakh youth will be assessed and certified for the skills that they already possess.

The government, under the Skill Loan Scheme will be giving loans ranging from Rs 5,000-1.5 lakhs, initially to 34 lakh youth of India seeking to attend skill development programmes over the next five years.

#### **Startup India - Way Ahead**

- Softbank vision Fund loses \$7.2 billion on back of tech write downs.

- Largest ever contingent of India participated in Gitex Global 2022.
- India's rich club grows to 1103.
- IIT-K startup incubator chosen as lead co-ordinator of ASEAN India Festival.
- Indian startups raised \$6.9 billion in the June Qr of 2022, down 33% subsequently.

#### **Conclusion**

The Skill India mission also includes entrepreneurship, and it is expected to play a pivotal role in further development of the booming ecosystem for first generation entrepreneurs in the country.

Towards this end, action is on at various levels, including the launch of schemes like the Atal Innovation Mission (AIM) for promotion of research and development, including 500 tinkering labs, 35 public-private sector incubators, 31 innovation centres at national institutes, 7 new research parks, 5 new bio-clusters are being planned.

The Skill India and Start-up India initiatives will go a long way to harness the indisputable potential of the young workforce of our country in the most appropriate manner and will not only make India the 'human resource capital' of the world, but usher our economy from being import driven to becoming an export driven economy.

### 33. Surrogacy

#### Introduction

Surrogacy means through which another woman carries and gives birth to a child for a couple who want to have a baby, but are unable to do so, because either or both partners are medically unfit to conceive.

The first scientifically documented test tube baby in India was born in 1986 and India legalised surrogacy in 2002.

The next decade saw mushrooming of IVF clinics in the country and India earned the tag of the 'surrogacy capital' of the world. In 2012, surrogacy tourism in India was valued at approximately \$500 million annually.

Anand in Gujarat with its countless IVF clinics and ready availability of surrogates emerged as Ground Zero for Surrogacy for childless foreign couples.

The domestic factors that attributed towards the creation of a surrogacy market in India were poverty, relatively low medical costs, skilled medical personnel and lax laws.

Clinics charged patients between \$10,000 and \$28,000 for the complete package, including fertilization, the surrogate's fee, and delivery of the baby at a hospital, which is believed to be just one third of the total cost for similar procedure to be carried out in UK.

The procedure required to be followed by the foreign childless couple for surrogacy is fairly simple. They need to register with the Indian embassy, get documents from their doctor saying that they are unable to have a child and carry a medical visa.

Once the sanction has been obtained from the Indian Embassy, they could go ahead with the surrogacy agreement with the surrogate (invariably through a middle-man) and commence the process.

**Important Terms Related with Surrogacy**  
Surrogacy is a means of carrying the pregnancy by a woman in her womb for the intended parents. It is primarily of two kinds:

**Gestational Surrogacy:** In this type of a surrogacy, the ovum or the egg from a woman's ovaries is fertilised by a sperm outside the body in a liquid, in a laboratory.

This process is called in-vitro ('vitro' means glass) fertilisation (IVF) and the embryo so created is placed into the uterus of the surrogate, who carries the child to term and delivers it.

Hence, the resulting child is genetically unrelated to the surrogate, as she is just a carrier of the developing foetus.

**Traditional Surrogacy:** In this type of a surrogacy, the surrogate is impregnated naturally or artificially by using the sperm of the intended father or when the father's sperm cannot be used, a donor sperm can also be used.

Hence, the resulting child is genetically related to the surrogate.

This type of surrogacy is sought by the intended parents when either pregnancy is medically impossible, or pregnancy presents high risk or an unacceptable danger to the mother's health. This is a usual method adopted by the same sex couple's as their preferred method of procreation.

**Commercial and Altruistic Surrogacy:** The surrogacy arrangement adopted by the intended parents may or may not involve monetary compensation.

If the surrogate receives money for the surrogacy the arrangement is considered **Commercial Surrogacy**, if she receives no compensation beyond reimbursement of medical and other reasonable expenses it is referred to as **Altruistic Surrogacy**.

In India, the entire medical procedure, stay, legal contracts, etc costs about Rs 12-18 lakh in a reputed clinic. And the surrogate gets between Rs 2-5 lakh. Though the amount is meagre, but it is attractive for surrogate mothers come from the vulnerable and deprived section of Indian society.

The Surrogacy (Regulation) Bill being proposed by the government of the day will ban **Commercial Surrogacy** and will permit only **Altruistic Surrogacy**.

## **Indian's Surrogacy Laws**

The booming business of Surrogacy was not regulated by any legislations or guidelines', which resulted in many unethical practices.

In 2005, Indian Council for Medical Research gave its Guidelines on Assisted Reproductive Technology procedures. Though, these guidelines have no legal standing.

In order to streamline the procedures for surrogacy further, the Law Commission of India submitted the 228th report on Assisted Reproductive Technology procedures discussing the importance and need for surrogacy, and also the steps taken to control surrogacy arrangements.

### **Salient Features of the Law Commission Guidelines:**

Surrogacy arrangement will continue to be governed by contract amongst parties, which will contain all the terms and conditions encompassing the surrogacy procedure and mandates that such an arrangement should not be for commercial purposes.

A surrogacy arrangement should provide for financial support for surrogate child in the event of death of the commissioning couple or individual before delivery of the child, or divorce between the intended parents and subsequent willingness of none to take delivery of the child.

A surrogacy contract should necessarily take care of life insurance cover for surrogate mother.

One of the intended parents should be a donor as well, because the bond of love and affection with a child primarily emanates from biological relationship. In case the intended parent is single, he or she should be a donor to be able to have a surrogate child.

Legislation itself should recognize a surrogate child to be the legitimate child of the commissioning parent(s) without there being any need for adoption or even declaration of guardian.

The birth certificate of the surrogate child should contain the name(s) of the commissioning parent(s) only.

Right to privacy of donor as well as surrogate mother should be protected.

Sex-selective surrogacy should be prohibited.

Cases of abortions should be governed by the Medical Termination of Pregnancy Act 1971 only.

The Supreme Court of India in its ruling clarified that commercial surrogacy is permitted in India with a direction to the Legislature to enact appropriate law governing surrogacy in India.

However, as more and more surrogacy rackets, legal intricacies and cases of exploitation of surrogates came to light, need was felt to make the regulations on surrogacy sterner.

In 2010 a draft Assisted Reproductive Technologies (Regulations) Bill was prepared.

### **Salient Features of ART (Regulations) Bill-2010:**

The Draft Bill gave gays, singles the legal right to have surrogate babies. It defines a 'couple' as two persons living together and having a sexual relationship.

A woman in the age-group of 21-35 years can become a surrogate mother. She will be allowed five live births, including her own children. She will not be allowed to donate oocytes more than six times in her life.

In case of a single man or woman, the baby will be his/her legitimate child..

A child born to an unmarried couple using a surrogate mother and with the consent of both parties shall be the legitimate child of both of them.

During the gestation period, the couple will bear the surrogate's expenses and give monetary help to her. The couple may enter into an agreement with the surrogate.

Foreign couples must submit two certificates — one on their country's surrogacy policy and the other stating that the child born to the surrogate mother will get their country's citizenship.

Foreign couples have to nominate a local guardian who will take care of the surrogate during gestation.

ART banks, accredited by the government, will maintain a database of prospective surrogates as well as storing semen and eggs and details of the donor.

State boards will give accreditation to ART banks — private and government. The board will have a registration authority which, in turn, will maintain

a list of all In-vitro Fertilisation (IVF) centres and monitor their functioning.

In 2012, the Ministry of Home Affairs issued new visa rules that stipulated a number of conditions, including a bar on single people, unmarried couples, or gay couples from receiving a medical visa for commissioning surrogacy in India.

In 2013, in order to accommodate suggestions made by different Ministries and departments, the government made further modifications to the draft Assisted Reproductive Technology (Regulation) Bill.

Once again, in 2014, an Australian couple was reported to have abandoned one of the twins it had through a surrogacy arrangement because they already had a child of the same sex.

In 2014 a surrogacy ban was placed on homosexual couples and single parents and the **Surrogacy (Regulation) Bill-2016** proposed to be passed by the present government has made commercial surrogacy illegal in India.

The lack of regulations has raised a number of ethical concerns, particularly regarding the exploitation and abuse of surrogate mothers.

Hence, comprehensive legislation regulating surrogacy and ART clinics is actually the need of the hour.

### **Reasons of Opting for Surrogacy**

The primary reasons that have been identified for intended parents to opt for surrogacy are:

When traditional means of conceiving a child have failed, including, in-vitro fertilisation, or medical conditions necessitate that the couple to get pregnant and give birth may be life threatening for the mother.

Besides the above, the so called 'cool' trend of single parenting, like Tushar Kapoor, careerist women avoiding pregnancy and LGBTs wanting to procreate are other reasons for opting for surrogacy.

### **Surrogacy (Regulation) Bill-2016**

The draft Surrogacy (Regulation Bill) 2016, passed by the Health Ministry, was cleared by the Union Cabinet on the 24th of August 2016; and is now all set to be introduced in the Parliament soon.

The new law will be notified ten months after it is cleared by the two Houses to allow mothers, who

are already pregnant then, to have the surrogate baby. It will apply to the whole of India.

The major provisions of the Bill are as follows:

- Ban on commercial surrogacy.
- Non Resident Indians(NRI's) and Persons of Indian Origins(PIO's) holding Overseas Citizens of India (OCI) cards have been barred from opting for surrogacy.
- Surrogacy is allowed for only heterosexual couples with proven infertility. Single people or homosexual partners cannot have a baby through surrogacy.
- Married couples who have a child naturally or through surrogacy cannot opt for surrogacy to have another baby.
- Married couples can go for surrogacy only after 5 years of their marriage. Also, the married woman should be between 23 and 50 years and for the man 26 and 55 and are required to produce their medical certificate regarding their infertility.
- Children born through surrogacy would be granted the same rights as any other biological or adopted child of the woman who carries the pregnancy.
- The Bill allows a couple with a mentally or physically challenged child to go for surrogacy.
- Couples cannot compensate the surrogate mother with financial benefits. Only the medical bills of the surrogate mother can be paid by the couple.
- Heterosexual couples with proven infertility can approach surrogacy only if the surrogate mother is in close relation to the couple and shall not be paid for becoming a surrogate mother.
- Surrogacy clinics under the Bill will have to maintain their record for 25 years to ensure that documents are made available in case of a legal dispute.
- Establishment of a National Surrogacy Board which will be run by the Health Ministry, Surrogacy Boards of States and Union Territories to keep a strict check on all the surrogacy cases done in fertility hospitals and clinics.

- Commercial surrogacy, abandoning the surrogate child, exploitation of surrogate mother, selling/ import of human embryo have all been deemed as violations that are punishable by a jail term of at least 10 years and a fine of up to Rs 10 lakh.
- It also makes it illegal for doctors to do procedures that hurt the surrogate mother and the baby's physical and mental health.

### Critical Analysis of the Surrogacy (Regulation) Bill-2016

In India, Infertility is generally known as a social stigma. It is hypothesized that the agony and trauma of infertility is best felt and described by the infertile couples themselves.

Surrogacy is the union of science, society, services and person that make it a reality. Surrogacy leads to a win-win situation for both the infertile couple and the surrogate mother.

The Assisted Reproductive Technology has helped millions of infertile couples to have a child, who has their genetic links through surrogacy.

Those couples who have medical complications and pregnancy could result in threat to life of the mother; surrogacy comes to their rescue, which is generally used as the last resort.

It is now a worldwide accepted reality that every person is unique and should be given the liberty to live his/her life according to personal choices.

A natural corollary to the said statement is that single parents, same-sex couples or even women who are pursuing high commitment careers could also make their parenthood dream a reality through surrogacy.

However, the Bill is highly discriminatory and against the very tenets of "equality", as it discriminates between married and unmarried couples, between heterosexual and homosexual couples, between single parents and double parents, between divorcee and non-divorcee, between foreigner couples and Indian couples.

It is agreed that celebrities of the likes of Shahrukh Khan and Tushar Kapoor may be etching a style statement by having a surrogate child. They could have very well adopted a child if they felt that urge.

In order to highlight that some of the directives mentioned in the Bill are a bit out of context like, allowing a couple with a mentally or physically challenged child to go for surrogacy may result in neglect of the first child who actually needs more attention.

Rather than safeguarding surrogacy through strict and transparent mechanisms, government has introduced a Bill to ban surrogacy.

The surrogacy law can still be exploited by wrongfully using the "close relative" clause for surrogacy. Besides, if surrogacy is banned, a black market will surely emerge where middle-men would reap the financial benefits and women would lose both income and access to adequate prenatal care.

Nonetheless, Surrogacy Bill will curb unethical practices and protect and prevent the exploitation of surrogates by middle-men, but at the same time will also hurt so many of them who were making a living out of it.

Estimates put the value of the practice in the country known as the "surrogacy hub" of the world at \$2 billion. This colossal amount of revenue and foreign exchange that was coming into the state exchequer through surrogacy will now come to a nix.

The new law bans commercial surrogacy which means there must be no exchange of money. The surrogate must be genetically related to the intending couple and must be a married woman between the age of 25 and 35 with a child of her own.

### Surrogacy Act 2021

The Act defines surrogacy as a practice where a woman gives birth to a child for an intending couple with the intention to hand over the child after the birth to the intending couple.

Surrogacy is permitted when it is for intending couples who suffer from proven infertility, only for altruistic purposes and not for commercial purposes, producing children for sale, prostitution or other forms of exploitation.

## 34. Concept of Theatre Commands

### Introduction

The future battlefields will be non-linear and multi-dimensional and will be characterised by high tempo of operations conducted in a compressed time and space coupled with a high degree of transparency using cutting edge technology.

Considering that the nuclear dimension will further limit the depth and duration of the future conflicts in the sub-continent, the wars will be short and intense.

Thus, it will be an operational imperative that the response to an aggression by the three Services is highly swift, precise and in concert. Every element deployed in the battle space will have to mesh, synchronise and move in a clockwork precision.

In order to address the issue, the concept of Integrated Theatre Commands is being considered. The concept entails having a unified command of the three Services for geographical theatres that are of military security concern.

The commander of such a force will be able to bring to bear the resources at his disposal with seamless efficacy, e.g. a 'theatre command' in the east will integrate components of the IAF and the Army and also have flotilla of the Navy integrated with it.

Let us understand the nuances of structuring our armed forces into these Theatre Commands.

### Inception of the Concept

The three Services presently have 17 single Service Commands and two Tri-Service Commands, i.e. Andaman and Nicobar Command (ANC) and Strategic Forces Command (SFC).

These 19 Commands have considerable duplication in terms of overlapping geographical zones of responsibilities and operational objectives.

Since, none of the Command HQs are co-located; it results in challenges of coordination in intelligence sharing, planning and execution of assigned tasks.

The need for greater integration amongst the three Services came for serious consideration after the Kargil conflict.

Both the Kargil Review Committee and the follow-up Group of Ministers (GoM) recommended the appointment of a Chief of Defence Staff (CDS), essentially to synergise the response of Indian Armed Forces and provide single point military advice to the political authority of the country.

It was felt that the change will need to be implemented from top down, so as to take root and be effective.

It must be understood that no single weapon or force reaches its full potential unless employed with complementary capabilities of the other Services. Actually, integration is a corollary for 'jointness'.

In other words, the concept of Integrated Thatre Commands as is being proposed for institution is based on the premise that, "complementary operations will be built around a key force rather than a key Service".

### The Chiefs of Staff Committee (COSC) & the Integrated Defence Staff (IDS)

The Chiefs of Staff Committee was appointed on 01 October 2001. The primary aim of setting up the COSC was to fulfil the need of providing an institutionalised framework for Defence Management at the highest level.

All the three service chiefs, i.e. Army, Navy, Air Force and the chief of the Integrated Defence Staff (IDS) compose the Chiefs of Staff Committee. The Scientific Adviser to the Minister of Defence is invited to attend, as and when required.

The member of the Chiefs of Staff Committee, who has been the longest on the Committee, holds the appointment of the Chairman of COSC.

The Chiefs of Staff are the authority for advising the Defence Minister and normally through him the Cabinet Committee on Political Affairs on all military matters which require ministerial consideration.

As brought out above, the senior most chief from any of the three services assumes the appointment of the chairman of COSC. Hence, there is no permanency in this "single point contact" agency, which was created with the view to bring about synergy in tri-service operations. Also, the tri-service command is headed by a three-star officer junior to the military chiefs who are four-star.

The Integrated Defence Services (IDS) is in effect the principal functional arm and Secretariat to the Chiefs of Staff Committee. It was created by the Government on 23 November 2001, based on the recommendations of the Group of Ministers which was set up in 2000 (post-Kargil) to review India's defence management.

### **Chief of Defence Staff (CDS)**

The post of the Chief of Defence Staff is being proposed to be of a four-star General, who would be in-charge of the tri-services command at Andaman and Nicobar islands, the strategic command in-charge of nuclear weapons along with the upcoming cyber and space command.

The HQ IDS is staffed by officers and personnel from all the three services, with the primary aim of bringing about a high degree of synergy between the Armed forces. The IDS is headed by the Chief of Integrated Staff as the Chairman.

### **Advantages of Integrated Theatre Commands**

Conceptually, a theatre needs to be identified on the basis that it shares a contiguous geographical boundary with a competing entity or an adversary, say Pakistan or China.

This geographical area must also include adjoining seas and space that may be essential for manoeuvre of own forces to address the threatening entity/adversary and also its geographically contiguous collaborator(s).

The major advantages of having integrated theatre commands will be as follows:

- Better acclimatisation of troops to the given battle space, which will assist them to comprehend the operational requirements correctly in the assigned area of operation.
- Training needs and administrative requirements of the troops can be better

understood, which would allow specialisation and suitable honing of battle drills at all levels.

- Equipment can be procured, maintained and pre-positioned for quick mobilisation and apt application during the envisaged, short duration, high intensity war.
- The allocation of military hardware, in terms of weapon systems, command, control and communication equipment and combat support elements will be theatre specific and result in optimisation of the resources.
- Unified command of the three Services under one designated commander will allow for prompt and precise decision making and will remove unnecessary tri-services one-man-ship.
- The unified commander will not have to look over his shoulder for resources and will be able to apply the assets at his disposal, swiftly at the time and place of his choosing. The same will also lend to economy of effort, as the resources will not lie idle or get committed unduly.
- Hence, it goes without saying, that the theatre commands will afford better coordination, intelligence sharing, apt advice and seamless conduct of operations in a given theatre of operation.

### **Integrated Theatre Command Concept: Challenges**

The exercise of identifying geographical theatres of military security concern and arrive at a common politico-military-economic strategy will be a mammoth task, which has to be undertaken by the Indian strategists and military planners.

China restructured its forces into theatre commands in October 2015. However, in their case the re-organisation was presumably done with the aim to bypass the military bureaucracy & establish direct political control over the military. Hence, the context needs to be carefully understood.

The challenges envisaged in the implementation of this concept are discussed below:

- The recommendation of the Naresh Chandra Committee for appointing a Permanent

Chairman of the Chiefs of Staff Committee (COSC) itself is facing bureaucratic opposition from within the Ministry of Defence (MoD).

- The latent fear amongst the bureaucrats and the politicians of allowing military leadership from becoming too powerful stems from witnessing frequent military coups in Pakistan, who's military was formed out of breakaway units from the Indian military and follows similar ethos.
- The bureaucrats-turned-politicians, the police lobby, IPS turned politicians and the craving to maintain primacy by playing on Inter-Service rivalry and exercising overt control over financial expenditures, equipment acquisitions and appointments have not permitted institution of a CDS.
- It is suspected that even the service chiefs want to perhaps maintain their own turfs and have never been united in telling the government forcefully that the appointment of a CDS is necessary for the good of the military and the country.
- At the strategic and tactical levels also there could be some challenges, like the distribution of certain specialised resources which are held in limited numbers, e.g. multi-role combat aircrafts, command, control and communication equipment, early warning assets, etc.
- Division of such meagre resources will reduce combat efficiency at the point of decision.
- Besides, interoperability of troops and equipment from dormant sectors to the active areas during war will be difficult and less effective.
- Another serious challenge that could be faced is that the concept of a theatre command may promote a sense of "fighting battles, rather than fighting a war", which in turn may reduce our ability to either win a battle or the war.

## Conclusion

The prevailing geo-political scenario in the sub-continent, with multifarious threats, calls for jointness and synergy in every sphere.

However, the notion to not let go off power prevents the country from taking progressive decisions, e.g. the institution of National Counter Terrorism Centre (NCTC), a centralised body to counter terrorism threat was objected to by the states.

Finally, it must be clearly understood that, jointness and integration of the Military is an inevitable requirement for the modern day battlefield. The armed forces will have to consider 'jointness' as a cardinal pre-requisite while embarking upon its futuristic modernisation plan.

However, the establishment of Integrated Theatre Commands will require an attitudinal shift by turning the sense of insecurity and mutual suspicion into a sense of belongingness amongst the Services as well as the politico-bureaucratic establishment.