

**CURRENT EVENTS  
AND  
ANALYSIS  
(April 2021)  
PART-2**

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# CURRENT EVENTS AND ANALYSIS

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# **NATIONAL POLITY**

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## **Naxalism:**

### **22 Security Personnel Killed in Naxalite Attacks in Chhattisgarh**

- 22 security personnel lost lives in an encounter with Naxalites in Sukma district, Chhattisgarh State in the first week of April 2021.
- The slain personnel belong to the Central Reserve Police Force (CRPF), its elite unit CoBRA (Commando Battalion for Resolute Action), the District Reserve Guard (DRG) and the Special Task Force (STF) who were involved in the operation launched from five places - Tarrem, Usoor and Pamed (Bijapur) and Minpa and Narsapuram (Sukma) in Chhattisgarh against Naxalites.
- The Naxalite Movement which began more than 50 years ago in 1967 in West Bengal continues to be **a major internal security threat to the country.**
- **Government security forces personnel, civilians as well as Naxalites** are losing lives in this protracted battle.
- The following information provides information about the evolution of Naxalism in India and the strategy of the Government to tackle the problem.

### **Who are Naxalites?**

- The term Naxalite is derived from the Naxalbari village in West Bengal. It is located in Siliguri subdivision of Darjeeling district.
- Relations between Landlords and peasants were under strain in Naxalbari, West Bengal after independence. Landlords had huge tracts of agricultural land under their ownership. Many small peasants cultivated the lands of landlords as sharecroppers. The percentage of sharecroppers was more than 60 per cent in the Darjeeling district. The peasants were unhappy that they were being exploited by landlords who take major share of the produce and make them dependents on them. They were also illegally evicted from the lands by the landlords whenever differences crop up between them.
- In 1967, a tribal peasant who was a sharecropper was illegally evicted by the landlord in Naxalbari. He got a judicial order in his favour to continue as a sharecropper with the land. The landlord did not honour the judicial order while the tribal youth attempted to cultivate the land. The landlord and his supporters killed the tribal youth.
- After this incident, a small group of Communist Party of India (Marxist) leaders decided to break away and launch their own armed struggle against big landowners. These leaders were Charu Mazumdar, Kanu Sanyal and Jangal Santhal.
- They believed that a real socialist revolution was possible only when the workers and peasants would launch an armed uprising against the moneyed classes.
- Their objective was to free Naxalbari from the clutches of landlords. They wanted to snatch the lands from big zamindars (landlords) and re-distribute the same among the tilling farmers and landless labourers.

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- The killing of the tribal youth in Naxalbari convinced them it was time opportune time to launch the peasant uprising against landlords.

#### **Inspiration from Maoism:**

- Naxalite Movement was inspired by **peasant revolution** launched by **Mao Zedong in China** against the ruling elite. The revolution was successful and led to the establishment of Communist rule in China in 1949.
- Hence Naxalites are also called Maoists and their ideology is called Maoism.

#### **Methods adopted by Naxalites:**

- They believed in **armed revolution** and **violent methods** to achieve their objective.
- Their famous slogan was 'Power comes from the barrel of the gun not by slogans and non-violence.
- They organised peasants and instigated them **to forcefully takeover lands belonging to rich landlords**. This forceful takeover by peasants **sparked clashes** between the landlords and the peasants and set off a spiral of killings and counter-killings. Landlords were murdered, and peasants were killed by the landlords' musclemen.
- The Government launched a major offensive against the movement and crushed it. But the Naxalbari Movement inspired armed revolution in many other parts of India like Andhra Pradesh, Telangana, Bihar, Chhattisgarh, Madhya Pradesh, Orissa, Maharashtra etc. in the later years.
- Many splinter groups were formed with similar objectives. People War Group (PWG) in Andhra Pradesh set by Kondapalli Seetaramaih was one such important group.
- In a significant development in 2004, the People's War Group (PWG), operating in Andhra Pradesh, and the Maoist Communist Centre of India (MCCI), operating in Bihar and adjoining areas, merged to form the Communist Party of India (Maoist).
- The **Communist Party of India (Maoist)** is the **major Left Wing Extremist outfit responsible** for a **majority of incidents of violence and killing of civilians and security forces in the country**.

#### **What is the Present Ideology of the Communist Party of India (Maoist)?**

- It believes that the existing social structure is exploitative controlled by landlords and supported by bureaucratic structures.
- A new egalitarian social structure can be heralded only by overthrowing the existing Government (which supports exploitative social structure) through mass uprisings by peasants.
- It believes in violent armed struggle through mass mobilisation to achieve its objective.
- They aim to achieve their objective through the following stages inspired by Mao ideology of protracted struggle. (The Chinese Communist Party carried out the struggle for almost 30 years. The party was founded in 1921 and overthrew the ruling Government in 1949 after a protracted peasant struggle.)
- In the first stage, **a small** revolutionary force starts in a remote area with mountainous and difficult terrain in which the revolutionary's enemy (the presence of the Government) is weak.

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That is why most of Naxal activities are based in tribal areas which are located in rugged and mountainous forest areas (Chhattisgarh, Orissa, Andhra Pradesh, etc).

- In the first stage, the revolutionary force would resort to killing lower-level government officials, police-personnel of the local police stations, the workers of mainstream political parties and the people's representatives of the Panchayati Raj system. After creating a political and governance vacuum, they would coerce the local population to join the movement. A strident propaganda is also carried out against inadequacies of the existing state structure. Thus the objective in the first stage is to liberate the tribal areas and ensure their domination in the area.
- After growing in power in these areas, in the second stage, it is supposed to establish other revolutionary base areas and spread its influence in the surrounding countryside.
- Finally in the third stage, it was expected to have enough strength to encircle and capture urban areas, gradually covering the entire country and overthrowing the Government and **replace the existing socio-economic and political structure.**

#### **States Affected by Naxalism:**

- 11 States are affected by Left Wing Extremism in India. Based on the severity of violence they have been classified as follows.

**Heavily Affected States:** Chhattisgarh, Jharkhand, Orissa, Bihar.

**Partially Affected States:** West Bengal, Maharashtra, Andhra Pradesh and Telangana.

**Slightly Affected States:** Kerala, Uttar Pradesh and Madhya Pradesh.

#### **What is the Problem with the ideology?**

##### **1. Conflicting Ideology:**

The ideology of Naxalites which believes in **armed struggle** brings them in direct conflict with the democratic Government which is elected by the people.

Naxalites do not believe in democracy and rule of law enshrined in the Constitution.

They believe that parliamentary institutions are an impediment bringing in revolutions semi-feudal countries like India and advocate boycotting of elections.

##### **2. Violence on Police and Citizens:**

They ambush police stations killing police personnel and looting weapons.

Naxalites kill civilians in the tribal areas in the name of police informers.

Between 2004 to 2020, 8380 people have been killed by the Naxalites in different parts of India. The majority of the civilians killed are tribals who were branded as 'Police informers' and killed.

##### **3. Damage to Infrastructure:**

Social infrastructure like schools buildings are being exploded by the Naxalites on the ground that there are being used as shelters by policemen for launching operations against them.

Naxalites are obstructing developing works like roads, telecom infrastructure as these development works would erode their influence on tribal people and marginalise their movement.

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#### 4. Recruitment of Children:

There are also instances where Naxalites **forcibly recruit children** in tribal areas and indoctrinate them with moist ideology

#### 5. Extortions:

Naxalites also resort to extortions from contractors and businessmen to fund and sustain their movement.

#### Government Bans CPI (Maoists) under Unlawful Activities Act:

- Due to its ideology which believes in armed struggle to overthrow the democratically elected Government, the Government has banned the Communist Party of India (Maoists) under the Unlawful Activities (Prevention) Act, 1967.
- The Government gave a call to the Naxalites (Left Wing Extremists) many a times to **abjure violence, come for talks and follow non-violent democratic methods by joining the mainstream of the society to achieve their objective**. This plea was rejected by them, since they **believe in ideology of armed violence as the means to capture State power and establish a egalitarian society**.

#### What is Left Wing Extremism?

- People who support left ideology are called leftists.
- Leftists believe in **social equality and egalitarianism**. They are **critiques of social hierarchy** i.e. division of society into upper class, middle class, lower class, etc.
- The present Naxalite Movement is also called Left Wing Extremism because they aim to achieve social equality through **extreme measures** i.e. **armed violence against the State**.

#### What factors facilitated the growth and spread of Naxalism after Naxalbari Movement?

##### 1. Rugged Forest Terrains:

Maoists based their location in hilly and forest areas. The rugged forest terrains provide an ideal location for carrying out Naxalite activities. These areas are located in the interior areas of the country where access to the Government is limited.

##### 2. Limited Reach of the Government:

The reach of the Government through development and welfare activities is also limited. Most of the tribal hamlets are sparsely populated and do not benefit from Government welfare schemes and development activities like access to Public Distribution System (PDS), health centres, education facilities, housing facilities, roads, drinking water, etc.

##### 3. Poor Socio-economic conditions of Tribals:

The poor socio-economic condition of the tribals is also exploited by the Naxalites to recruit its cadre and sustain the movement.

#### How is the Government Tackling the Problem of Naxalism?

The Government has adopted a multi-pronged strategy to address the left Wing Extremism (LWE) problem focussing on security, development, enforcing rights and entitlements of local communities, public perception management and good governance.

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## 1. Security Measures:

'Police' and 'Public Order' are State subjects. Hence, action on maintenance of law and order lies primarily in the domain of the State Governments.

The Central Government closely monitors the situation and supplements and coordinates their efforts in several ways. These include the following.

### Additional Forces and Intelligence:

The Central Government

- a) provides Central Armed Police Forces (CAPFs);
- b) has set up 16 Counter Insurgency and Anti Terrorism (CIAT) schools;
- c) provides funds for modernisation and upgradation of the State Police and their Intelligence apparatus;

Central Government's contribution is aimed at enhancing the capacity of the State Governments to tackle the Maoist menace in a concerted manner.

### Security Related Expenditure (SRE) Scheme:

Under the Security Related Expenditure (SRE) Scheme, the Central Government reimburses the following expenditure to the Left Wing Extremism affected States.

- a) Expenditure relating to **training and operational needs** of security forces,
- b) **ex-gratia payment** to the family of civilians/security forces killed/injured in LWE violence,
- c) **compensation** to Left Wing Extremist cadres who surrender (further details about surrender policy are given in additional information).

## 2. Development Measures:

### Improving Road Connectivity:

To improve the road connectivity in Left Wing Extremism (LWE) affected States, the Central Government laid a total of 5,362 km roads in 8 States i.e. Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Maharashtra, Odisha and Uttar Pradesh.

In 2016, another 9,286 km of roads and 389 bridges are sanctioned with an outlay of Rs. 11,725 crore.

### Improving Telecom Connectivity:

To improve mobile connectivity in the LWE areas, the Government approved installation of mobile towers in LWE affected States.

2335 mobile towers have been installed in Phase-I. Phase-II of the project has been approved by the Government of India, under which 4072 mobile towers, involving an expenditure of Rs. 7330 crore, has been approved.

### Skill Development:

Industrial Training Institutes (ITIs) and Skill Development Centers are being set up in LWE affected districts.

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**Education Initiatives:**

New Kendriya Vidyalayas (KVs) and Jawahar Navodaya Vidyalayas (JNVs) are being set up in the most LWE affected districts, which did not have any KVs/JNVs.

**Financial inclusion:**

New Banks and Post Offices have been set up in the LWE affected districts for increasing financial inclusion.

**Special Central Assistance (SCA):**

The Union Government is also implementing the Special Central Assistance (SCA) for filling critical gaps in public infrastructure and services of emergent nature like schools, health centres in the 35 most LWE affected districts. Each district is given Rs 28.5 crores for year. The District Level Committee headed by District Collector and comprising Superintendent of Police and District Forest Officer will prepare and approve the projects/works to be taken up under the scheme. These funds should be used in convergence with funds under other centrally sponsored schemes and State Plan Schemes.

**3. Enforcing Rights and Entitlements of Local Communities:**

Tribals were frequently evicted from the forest areas under Forest laws. These laws were skewed in favour of protections of forests and discriminatory against forest dwellers which led to their marginalisation and displacement.

The passage of Forest Rights Act, 2006 corrected this historical injustice and gave legal right to traditional forest dwellers.

The Act recognizes and vests the right of tribal communities in forests to use, manage and conserve forest resources, and to legally hold forest land for **cultivation** and **residence**.

It also recognised the integral role that forest dwellers play in the survival and sustainability of forests and in conservation of biodiversity.

**Additional Information:****Surrender-Cum-Rehabilitation Policy for Naxalites:**

- Though the Left Wing Extremists are involved in armed struggle against the State, the Government is implementing the Surrender-Cum-Rehabilitation Policy to
  - a) wean away the misguided youth and hardcore Naxalites who have strayed into the fold of Naxal movement, and
  - b) ensure that the Naxalites who surrender do not find it attractive to join the Naxal movement again.
- As the Naxal problem has arisen on account of real and perceived neglect, deprivation and disaffection, mainly towards the downtrodden, the solution should aim at providing gainful employment and entrepreneurial opportunities to the surrendered Naxalites so that they are encouraged to join the mainstream and do not return to the fold of Naxal movement.
- Naxalites who surrender are imparted training in a trade/vocation of their liking. They shall be paid a monthly stipend of Rs 6000/- each for a maximum period of 36 months.

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- A grant of Rs. 5 lakh (for higher ranked LWE cadres) and Rs. 2.5 lakhs for middle and lower ranked LWE cadres is given. The amount is kept in a bank in the name of surrenderee as a fixed deposit which may be withdrawn by the surrenderee after completion of 3 years, subject to good behaviour.
  - This money can also be utilized as collateral security/margin money against loans to be availed of by the surrenderee from any bank for self-employment.
  - In addition, incentives are also given for surrender of weapons/ammunition by Naxalites.

### **Tribunals:**

#### **Tribunals Reforms Ordinance 2021**

- The Tribunals Reforms (Rationalisation and Conditions of Service) Ordinance, 2021, was issued by Union Government in April 2021. It abolished the tribunals set up under the following acts.
  1. Cinematograph Act,
  2. Copyright Act, Customs Act,
  3. Patents Act, Airports Authority of India Act,
  4. Trade Marks Act,
  5. Geographical Indications of Goods (registration and protection) Act,
  6. Protection of Plant Varieties and Farmers Rights Act, and
  7. Control of National Highways (land and traffic) Act.
- A new provision has been inserted in the ordinance to under which appeals can be made directly to the Commercial Courts or High Courts as provided in the ordinance.

#### **What are Tribunals?**

- Tribunals are quasi-judicial bodies established to adjudicate disputes related to specified matters.
- Each Tribunal is a multi-member body comprising of **trained administrators** and **those with judicial experience**.

#### **Why were these Tribunals Set Up?**

##### **1. Huge Pendency of Cases:**

There was huge pendency of cases in the High Courts which delayed administration of justice.

##### **2. Technical Nature of Adjudication:**

Some of the cases were also technical in nature which involved interpretation of various statutes.

The technical nature of the statutes required adjudicatory forums comprising of **persons having expert knowledge** of the working of these laws.

Hence, the Tribunals were set up with the following objectives.

1. To reduce the mounting arrears of cases in High Courts, and
2. Ensure speedy justice delivery.

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The setting up such Tribunals was also recommended by the **following Commissions and bodies.**

- The **Law Commission of India in its 14th Report (1958)** titled "Reform of Judicial Administration" recommended the establishment of an appellate Tribunal or Tribunals at the Centre and in the States.
- Later, in its **58th Report (1974)** titled 'Structure and Jurisdiction of the Higher Judiciary', the **Law Commission** urged that separate high powered Tribunal or Commission should be set up to deal with the service matters and that approaching the Courts should be the last resort.
- The High Court Arrears Committee set up under the chairmanship of **Justice J. C. Shah** (1969), recommended for setting up of an independent Tribunal to handle service matters pending before the High Courts and the Supreme Court.
- Later on, the **Swaran Singh** Committee which was appointed to study, 'the required changes in fundamental laws', recommended in 1976 that the Administrative Tribunals may be set up under a Central law, both at the State level and at the Centre to decide cases relating to service matters.
- Based on the recommendations of the Swaran Singh Committee, **Part XIV-A was added by the Constitution (Forty-second Amendment) Act, 1976**, titled as 'Tribunals' which provided for the establishment of '**Administrative Tribunals**' under **Article 323-A** and '**Tribunals for other matters**' under **Article 323-B**.

#### **Why are these Tribunals Abolished now?**

- The Government of India has set up a total of 26 Tribunals under various central legislations.
- However, the Central Government began the process of rationalisation of tribunals in 2015.
- By the Finance Act, 2017, seven tribunals were abolished or merged based on functional similarity and total number of tribunals was reduced to 19 from 26.
- The following are reasons for rationalisation.
  1. These tribunals **did not result in faster justice delivery.**
  2. They also impose **considerable cost** on the Government exchequer.

#### **3. Exclusion of Jurisdiction of High Courts:**

These Tribunals bypass the High Courts. Appeals against the decisions of the Tribunals can be made only to the Supreme Court as per the statutory acts under which these tribunals were set up. But, the Supreme Court deprecated practice of tribunalisation of justice and allowing filing of appeals directly from tribunals to the Supreme Court in many of its judgements,

In *L. Chandra Kumar versus Union of India* (1997), the Supreme Court ruled that the **decisions of the Tribunals can be challenged before High Courts.**

It held that the writ jurisdiction of the High Court under Article 226/227 of the Constitution cannot be extinguished by any Act since it is a part of the basic structure of the Constitution. Thus, appeals from judgments of the Administrative Tribunals now lie to the Division Bench of the corresponding High Court.

Many cases do not achieve finality at the level of tribunals and are litigated further till High Courts and Supreme Court. Therefore, these tribunals only add to another additional layer of litigation. Therefore, streamlining of tribunals has become necessary.

#### 4. Controversy over Appointment of Members of Tribunals:

Having separate tribunal requires administrative action in terms of filling up of posts, provision of necessary infrastructure, etc, and any delay in such action further delays disposal of cases.

Appointments made to many Tribunals like Intellectual Property Appellate Board (IPAB), National Tax Tribunals (NTT) were struck down by Supreme Court and High Courts.

The main issue at stake are core principles of an independent judiciary and separation of powers, a part of the basic structure of the Constitution.

The Supreme Court held that the tribunals which were replacing the jurisdiction of the Courts should enjoy the same constitutional protections as them. When the jurisdiction is being transferred from a court to a tribunal, the members of this tribunal should hold a rank, status and capacity which is as close to those of the judges in a court as possible.

In the case relating to appointments made to Intellectual Property Appellate Board (IPAB) case, the Supreme Court struck down the criteria laid down for appointment of judicial members.

Section 85(3)(a) of the Trade Marks Act allows members of the Indian Legal Service holding a post of Grade 1 for at least three years, for appointment as a Judicial Member of the Intellectual Property Appellate Board (IPAB). The Court declared this unconstitutional, suggesting that an officer working with the Executive cannot act in a judicial capacity. After working completing his term in the Tribunal he would go back to his parent department i.e. Ministry of Law and Justice which is an Executive agency. Such appointments affect the independent working of the Tribunals.

#### **Additional Information:**

The following is the list of various tribunals set up under various legislative acts.

S.No	Tribunal	Specified Act
1.	Company Law Board	The Companies Act, 1956
2.	Cyber Appellate Tribunal	The Information Technology Act, 2000
3.	Central Administrative Tribunal	The Administrative Tribunals Act, 1985
4.	State Administrative Tribunal	The Administrative Tribunals Act, 1985
5.	Joint Administrative Tribunal	The Administrative Tribunals Act, 1985
6.	Income-Tax Appellate Tribunal	The Income-tax Act, 1961
7.	Authority for Advance Rulings	The Income-tax Act, 1961
8.	Telecom Disputes Settlement and Appellate Authority.	The Telecom Regulatory Authority of India Act, 1997
9.	Coastal Aquaculture Authority	The Coastal Aquaculture Authority Act, 2005
10.	Appellate Tribunal for Electricity	The Electricity Act, 2003

11.	Appellate Tribunal for Foreign Exchange	The Foreign Exchange Management Act, 1999
12.	Film Certification Appellate Tribunal	The Cinematograph Act, 1952
13.	National Green Tribunal	The National Green Tribunal Act, 2010
14.	.Securities Appellate Tribunal	The Securities and Exchange Board of India Act, 1992
15.	.Customs, Excise and Service Tax Appellate Tribunal	The Customs Act, 1962
16.	.Authority for Advance Rulings	The Customs Act, 1962 (Central Excise, Customs and Service Tax)
17.	Armed Forces Tribunal	The Armed Forces Tribunal Act, 2007
18.	Competition Appellate Tribunal	The Competition Act, 2002
19.	National Consumer Disputes Redressal Commission	The Consumer Protection Act, 1986
20.	Debts Recovery Appellate Tribunal	The Recovery of Debts due to Banks and Financial Institutions Act, 1993
21.	Intellectual Property Appellate Board	The Trade Marks Act, 1999
22.	Railway Claims Tribunal	The Railway Claims Tribunal Act, 1987
23.	National Industrial Tribunal	The Industrial Disputes Act, 1947
24.	Press Council of India	The Press Council Act, 1978
25.	National Highways Tribunal	The Control of National Highways (Land and Traffic) Act, 2002
26.	Airports Economic Regulatory Authority Appellate Tribunal	The Airports Economic Regulatory Authority of India Act, 2008

***Press Freedom:***

**India Ranked 142nd out of 180 Countries in the 2021 World Press Freedom Index**

- India was ranked 142 out of 180 countries in the 2021 World Press Freedom Index released by Reporters Sans Frontieres (RSF) (Reporters Without Borders), a Paris-based non-profit organisation, on April 21, 2021.
- Norway was ranked 1st while Eritrea was ranked last at 180.

**Criteria:**

The ranking is given based on qualitative and quantitative criteria across the following seven indicators.

- 1. Pluralism:** Measures the degree to which opinions are represented in the media.

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2. **Media independence:** Measures the degree to which the media are able to function independently of sources of political, governmental, business and religious power and influence.
  3. **Environment and self-censorship:** Analyses the environment in which news and information providers operate.
  4. **Legislative framework:** Measures the impact of the legislative framework governing news and information activities.
  5. **Transparency:** Measures the transparency of the institutions and procedures that affect the production of news and information.
  6. **Infrastructure:** Measures the quality of the infrastructure that supports the production of news and information.
  7. **Abuses:** Measures the level of abuses and acts of violence against journalists and media during the period evaluated.

#### **Rankings:**

- Rankings are given based on the overall score of the countries in the above criteria.
- Scores are given between 0 and 100 with 0 being the best possible score and 100 the worst.
- Norway was ranked 1st with a score of 6.72 while Eritrea was ranked last at 180 with a score of 81.45.
- India was ranked 142nd with a score of 46.56.
- In the South Asian neighbourhood, Nepal is ranked at 106, Sri Lanka at 127, Myanmar (before the coup) at 140, Pakistan at 145 and Bangladesh at 152.

Countries are also grouped under following **colour categories based on their scores.**

- 0 to 15 points: Good situation (white)
- 15.01 to 25 points: Satisfactory situation (yellow)
- 25.01 to 35 points: Problematic situation (orange)
- 35.01 to 55 points: Difficult situation (red)
- 55.01 to 100 points: Very serious situation (black)
- India continued to be counted among the countries classified "bad" for journalism and is termed as one of the most dangerous countries for journalists trying to do their jobs properly.

#### **Reasons for Poor Ranking of India:**

The Press Freedom Index report gave following reasons for India's poor ranking.

- There is an **environment of intimidation** for journalists critical of the Government. They are marked as "anti-state" or "anti-national".
- Coordinated **hate campaigns are launched on social networks** on journalists who dare to speak or write against Government.
- Criminal prosecutions are also launched to gag journalists critical of the Government with imposition of **sedition charges.**

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- Four journalists killed in connection with their work in 2020.

**Additional Information:**

**Top 5 Countries in the World Press Freedom Index (Countries with high media freedom):**

Rank	Country
1	Norway
2	Finland
3	Sweden
4	Denmark
5	Costa Rica

**Countries at the Bottom of the index (Countries with low Press Freedom)**

Rank	Country
176	Djibouti
177	China
178	Turkmenistan
179	North Korea
180	Eritrea

**About Reporters Sans Frontieres (RSF) (Reporters Without Borders):**

- It is an independent Non-Governmental Organisation (NGO) founded in 1985 by four journalists in France.
- It works for promoting freedom of information as it believes that freedom of information is fundamental in any democracy.
- It has been publishing Press Freedom Index every year since 2002.

**Good Governance:**

**India Ranked 49th in Chandler Good Government Index (CGGI)**

India was ranked 49th in the Chandler Good Government Index (CGGI) which measures the capabilities and effectiveness of governments in 104 countries.

The index was released by the Chandler Institute of Governance (CIG), an international non-profit organisation headquartered in Singapore, in April 2021. The Chandler Institute of Governance (CIG) believes that good governance and prosperity are deeply connected.

Finland was ranked 1st followed by Switzerland, Singapore, Netherlands and Denmark.

Venezuela was ranked at the bottom of the index with rank of 104.

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### Top 10 Countries in the Index:

Rank	Country
1	Finland
2	Switzerland
3	Singapore
4	Netherlands
5	Denmark
6	Norway
7	Sweden
8	Germany
9	New Zealand
10	Canada

#### Criteria:

The rankings in the index are based on the performance of the countries on the following seven pillars:

1. Leadership and foresight,
2. Robust laws and policies,
3. Strong institutions,
4. Financial stewardship,
5. Attractive marketplace,
6. Global influence and reputation, and
7. Helping people rise.

#### ***Additional Information:***

#### **Significance of the Criteria**

##### **LEADERSHIP AND FORESIGHT:**

Good Governance begins with good leadership. Countries which are ranked top in the index have **commitment to integrity, strong vision and plan for their nation's future, and the ability to make the most of their available resources**. These governments look beyond short-term political cycles that reward quick policy fixes.

A Government's performance in leadership and foresight is measured through the following.

##### **1. Anti-Corruption:**

The control and prevention of the abuse of public power for private benefit.

Anti-corruption laws, systems, and agencies are important factors in curbing corruption, but cannot solve the problem by themselves. Strong political will and leadership from the top are crucial in building a culture of integrity and honesty.

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## 2. Long-Term Vision:

The ability to develop and express the desired goals and destination for the nation over a longer period of time

## 3. Adaptability:

Ability to respond to various trends and changes with appropriate strategies, policies and actions

## 4. Strategic Prioritisation:

Developing longer-term plans and decision-making frameworks that focus on important goals and outcomes

## 5. Innovation:

The capacity for learning, and the generation, adaptation, and application of ideas

## 6. Ethical Leadership:

Positive moral values and standards that leaders possess and demonstrate.

## ROBUST LAWS AND POLICIES:

Robust laws and sound policymaking are an important precondition for growth. Economic prosperity stems from the confidence that the rights of businesses, employees and citizens are protected. The codification and consistent implementation of rules creates norms for commerce and interpersonal transactions, and stimulates economic activity at all levels

To measure a country's capabilities in upholding the rule of law and the effectiveness of its policy-making process, the index used the following four indicators:

1. **Rule of Law:** Whether laws are just and impartial, whether governments observe due process and are accountable to the laws, and whether justice is accessible to all
2. **Quality of Judiciary:** Whether courts of law are efficient and independent from external influence
3. **Transparency:** The public availability and accessibility of government information
4. **Regulatory Governance:** The ability of governments to establish clear policies and regulations.

## STRONG INSTITUTIONS:

Public institutions, such as Ministries, public departments, and statutory agencies, are the building blocks of a well-functioning government. How strong institutions are measured through following.

### 1. Coordination:

The ability to ensure that multiple government agencies act coherently and in a collaborative manner

### 2. Data Capability:

The ability to gather and use data, and to provide quality digital and online services

### 3. Implementation:

The degree to which a government can execute its own policies and meet its policy objectives

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#### 4. Quality of Bureaucracy:

The capability and performance of the civil service, regardless of political and policy changes

#### **FINANCIAL STEWARDSHIP:**

Governments are entrusted to oversee a nation's public finances. How they manage budgets, borrow and allocate funds, and distribute resources have far-reaching consequences for their citizens and businesses. **To achieve sustainable prosperity, countries need to ensure sound and prudent management of government revenue and expenditure.**

Financial Stewardship is measured through following sub-indicators

##### 1. Government Debt:

The debt dynamics and risk of a country, based on its debt-to-GDP levels, changes in debt, country credit ratings, and stage of economic development

##### 2. Country Budget Surplus:

A government's average revenue and expenditure position, based on its fiscal balance, over a five-year period

##### 3. Spending Efficiency:

The extent to which public spending translates into outcomes and services with minimal wastage

##### 4. Country Risk Premium:

The risk of investing in a country due to its sovereign debt repayment ability and economic governance

#### **ATTRACTIVE MARKETPLACE:**

There is a close relationship between the attractiveness of a country's market and its ability to generate sustained economic growth and high wages for its citizens.

The attractiveness of a market in a country is measured through the following.

##### 1. Property Rights:

The extent to which the legal rights to own and use physical and intellectual property are established and protected

##### 2. Macroeconomic Environment:

The maintenance of inflation and unemployment levels within optimal ranges, given the economic situation and needs

##### 3. Attracting Investments:

The ability to attract foreign direct investment (FDI)

##### 4. Logistics Competence:

The quality of logistics infrastructure and systems within a country

##### 5. Stable Business Regulations:

The stability of policies and regulations concerning business activities

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## 6. Tax Efficiency:

Whether taxes are set at reasonable levels, well-designed, and simple to comply with

### **GLOBAL INFLUENCE AND REPUTATION:**

In a highly globalised world, governments need the capabilities to effectively manage their diplomatic networks, trade and economic partnerships, and country "brand", both at home and abroad.

No country - not even superpowers with an abundance of natural resources - can thrive in isolation.

A Government's international influence and reputation is measured through the following.

#### **1. International Trade:**

The freedom, access, and capabilities to buy and sell goods and services beyond national borders

#### **2. International Diplomacy:**

The extent of a nation's diplomatic representation and presence abroad.

#### **3. Nation Brand:**

The coherence of a country's national tourism promotion, and its image and appeal to a variety of non-commercial stakeholders

#### **4. Passport Strength:**

The credibility of a nation's passport, as measured by the number of visa-free arrangements that passport holders enjoy globally

### **HELPING PEOPLE RISE:**

Good outcomes in areas such as healthcare, education, environmental protection, the extent of public satisfaction with government services, are **central to the quality of life** that people experience on a day-to-day basis.

Governments that have strong and effective capabilities in a range of areas are well-positioned to create positive foundations and conditions for people from all walks of life, as well as for communities and businesses, to flourish and **achieve their fullest potential**. In this way, good governments are Helping People Rise.

The Government's performance in helping people to rise and achieve their fullest potential is measured through the following.

#### **1. Education:**

The literacy rate and years of schooling of the population

#### **2. Health:**

How long a newborn child can expect to live, given current health and mortality expectations

#### **3. Satisfaction with Public Services:**

Satisfaction with public transport, infrastructure, and education  
Personal Safety: The state's ability to protect its people from violent crime

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#### 4. Environmental Performance:

The safety and sustainability of a nation's ecosystems and environment

#### 5. Income Equality:

The evenness of **income distribution** across the population

#### 6. Social Mobility:

The extent to which **socio-economic circumstances at birth influence** a person's future status and prosperity

#### 7. Gender Gap:

The ability of both women and men to participate in and benefit from economic opportunities  
Non-

#### 8. Discrimination:

Freedom from discrimination, regardless of a person's socio-economic status, ethnicity, gender, identity, or faith.

#### Panchayats:

### SVAMITVA Scheme Expanded to Cover Entire Country

Prime Minister Narendra Modi announced expansion of the SVAMITVA (Survey of Villages and Mapping with Improved Technology in Village Areas) scheme to cover entire country on April 24, 2021. Every year, 24th of April is celebrated as National Panchayat Raj Day.

The scheme was launched as pilot scheme in April 2020 across six states: Maharashtra, Karnataka, Haryana, Uttar Pradesh, Uttarakhand and Madhya Pradesh

#### **SVAMITVA Scheme:**

Under SVAMITVA (Survey of Villages and Mapping with Improved Technology in Village Areas) scheme

- all the inhabited properties in rural areas will be identified and validated using latest Drone Surveying technology, and
- Property cards would be issued to the property owners.

#### **Advantages:**

- a) It reduces property litigation.
- b) Owners can get loans from banks by using the property as collateral.
- c) Gram Panchayats can collect property taxes.

#### **Mapping Community Assets:**

- Other gram panchayat and community assets like village roads, ponds, canals, open spaces, school, anganwadi, health sub-centres, etc. will also be surveyed and geographic information system (GIS) maps will be created under SVAMITVA Scheme.
- These maps can be used to prepare better quality gram panchayat development plan.

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### Other Details:

- The survey will be done across the country in a phase-wise manner over a period of four years - from 2020 to 2024.
- It is a collaborative effort of the Ministry of Panchayati Raj, State Panchayati Raj Departments, State Revenue Departments and Survey of India,
- In the first phase, the program was implemented in six states - Haryana, Karnataka, Madhya Pradesh, Maharashtra, Uttar Pradesh and Uttarakhand. 4.09 lakh people have been given property e-cards (electronic cards) in 5000 villages during this pilot phase of the scheme.
- Now, it has been expanded to cover about 6.62 lakh villages in the country by 2025. An amount of Rs. 566 crore has been allocated for this scheme.
- SVAMITVA is a central sector scheme which means it is completely funded (100 per cent contribution) by the Central Government.

### About Panchayat Raj Day:

- **Constitution (73rd Amendment) Act, 1992** which led to institutionalisation of Panchayat Raj institutions in India came into force on April 24, 1993.
- Since then, April 24th of every year is celebrated as Panchayat Raj Day.

### SOCIAL ISSUES

#### Women:

#### **State of Population 2021 Deals with 'Bodily Autonomy of Women'**

- The annual United Nations Population Fund's (UNFPA) flagship State of World Population Report 2021 titled 'My Body is My Own' which deals with 'Bodily Autonomy' of women was released in April 2021.
- Nearly half the women from 57 developing countries do not have bodily autonomy.

#### **What is Bodily Autonomy?**

- Bodily autonomy defined as the power to woman to decide on her bodily issues i.e. sex, healthcare and contraception without fear of violence or having someone else decide for her.
- This is the first time a United Nations report has focused on bodily autonomy.

#### **Why Bodily Autonomy is Important?**

- Bodily Autonomy is a **basic human right**.
- It is also linked to **mental well being** and **future prospects** of the women.
- Depriving women and girls of bodily autonomy **reinforces inequalities** and **violence**.
- A woman who has control over her body is more likely to be empowered in other spheres of her life.

#### **Evolution of the term 'Bodily Autonomy':**

- The notion of autonomy in the context of women's empowerment emerged in the 1970s.
- It was later taken up by the sexual and reproductive health and rights movement.

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- In 1994, at the International Conference on Population and Development (ICPD) the term appeared in the path breaking **Programme of Action**, which acknowledged that "**the goal of the empowerment and autonomy of women** and the improvement of their political, social, economic and health status is a highly important end in itself and is essential for the achievement of sustainable development".
  - **Recognition in UN Sustainable Development Goals:**
  - In 2015, United Nations endorsed the 2030 Agenda for Sustainable Development, where **gender equality** is one of the 17 Sustainable Development Goals.
  - Goal 5 of Sustainable Development Goals which deals with Gender Equality established two indicators to help governments track progress on sexual and reproductive health and reproductive rights of women
  - The first, indicator (5.6.1) aims to measure the proportion of women aged 15 to 49 years who make their own informed decisions regarding sexual relations, contraceptive use and reproductive health care.
  - The second indicator (5.6.2) tracks the number of countries with laws and regulations **that guarantee full and equal access** to women and men aged 15 years and older to **sexual and reproductive health care, information and education**.
  - Indicator 5.6.1 is based on responses to questions posed to women aged 15 to 49 years in Demographic and Health Surveys (DHS) in 57 countries.
  - Who usually makes decisions about health care for yourself?
  - Who usually makes the decision on whether or not you should use contraception?
  - Can you say no to your husband or partner if you do not want to have sexual intercourse?
  - Only women who say they make their own decisions in all three of these areas are considered to have autonomy in reproductive health decision-making and to be empowered to exercise their reproductive rights.
  - UNFPA is responsible for managing the data included in this indicator, as well as indicator 5.6.2.

#### **Major Statistics on Bodily Autonomy in 2021 UNFPA Report:**

Complete data on all three dimensions of indicator 5.6.1 are available only for 57 countries. Based on the available data

- Only 55 per cent of girls and women (aged between 15 to 49) are able to make their own decisions in all three dimensions of bodily autonomy.
- **Maternity care:** Only 71% of countries guarantee access to overall maternity care.
- **Contraception:** Only 75% of countries legally ensure full, equal access to contraception.
- **Existence of Laws:** Only about 80% of countries have laws supporting sexual health and well-being.
- **Sex Education:** Only about 56% of countries have laws and policies supporting comprehensive sexuality education.

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### Statistics from India:

- In India, only **12% of currently married women** (15-49 years of age) independently make decisions about their own healthcare, while 63% decide in consultation with their spouse (according to NFHS-4 (2015-2016)).
- **Contraception:** Only 8% of currently married women (15-49 years) do it independently, while 83% decide jointly with their spouse.

### How Bodily Autonomy is Being Violated?

The UNFPA Report noted that beyond the above a woman's bodily autonomy is violated in numerous other ways in the following forms.

#### 1. Child Marriages

(Even though child marriage is prohibited by laws, it continues in practice. Many such marriages take place through traditional or religious ceremonies and are never registered with civil authorities.)

2. Female genital mutilation
3. Forced Marriages
4. Honour killings
5. Marital Rape,
6. Marry your rapist laws

(Countries like Algeria, Angola, Bahrain, Bolivia, Cameroon, Iraq, Kuwait, Libya, Philippines, Russia, Serbia, Syria, Tajikistan, Thailand, Venezuela, etc. have laws which allow a man convicted of rape to avoid penalties if he marries the woman he has raped.

### Why Bodily Autonomy is violated?

#### 1. Gender Inequality:

Gender-unequal norms and attitudes lead to power imbalances in relationships between men and women. These restrict women's decisions, particularly when it comes to saying no to sex.

**Patriarchal beliefs** often translate into expectations that women defer to their husbands or partners in all aspects of their lives, including their sex lives. These expectations may not only mean that a woman should always engage in sex whenever her husband wants it, but also that she should not initiate sex or openly express her desires. At the same time, women may be **expected to avoid conflict**, thus reinforcing unequal power dynamics. Women may also refrain from saying no to sex out of **fear of verbal abuse, withdrawal of financial support, divorce, or even beatings and rape.**

#### 2. Low Education Levels:

A woman's level of educational attainment is a key factor in determining how much power she has to say no to sex but it also correlates with her power to make her own decisions about contraception and health care.

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The education level of her partner is also positively associated with her participation in decisions about contraception and health care. A woman who has less education than her husband or partner is more likely to be subjected to sexual violence than a woman whose education level is more or less equal to that of her husband.

### 3. The role of the community

In certain communities, the notion of bodily autonomy is seen as incompatible with local norms and values. Communities pressure women to bear children and **generally perpetuate views that women should be submissive and passive in sexual relations.**

Community norms also often dissuade women from discussing matters of sexual and reproductive health with men, making it difficult for women to negotiate sexual relations, contraceptive use and reproductive health care.

### 4. Barriers in the health system:

Decisions about contraception and reproductive health care are sometimes impeded by the distance to clinics and facilities, especially in rural areas.

### 5. Comprehensive Sexuality Education:

Very few countries have laws, regulations or national policies that make comprehensive sexuality education a mandatory component of national school curricula.

#### Why is sexual education important?

Comprehensive sexuality education - which deals with accurate, age appropriate information about one's own body, sexual and reproductive health, and human rights - are widely considered taboo. Many schools do not teach the subject, or provide only incomplete information. This **leaves students both ill-prepared** for the changes their bodies are undergoing and ill-equipped to protect themselves from harm.

**Opponents** of comprehensive sexuality education often contend that it **promotes sexual activity**, yet studies show that this is incorrect. Rather, evidence indicates that this education improves young people's knowledge and constitutes a crucial and cost-effective strategy for preventing unintended pregnancy and sexually transmitted infections, including HIV

Without comprehensive sexuality education, **young people are vulnerable** to myths and misinformation.

Comprehensive sexuality education with lessons about **human rights, gender equality and respectful relationships** can also play **a role in preventing gender-based violence.**

#### Additional Information:

##### About UNFPA:

- The United Nations Fund for Population Activities (UNFPA) was established as a trust fund in 1967. In 1987, it was officially renamed the United Nations Population Fund, reflecting its lead role in the United Nations system in the area of population. The original abbreviation, UNFPA, was retained.
- The State of World Population report is UNFPA's annual flagship publication.
- Published yearly since 1978, **it shines a light on emerging issues in the field of sexual and reproductive health and rights.**

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## **FOREIGN RELATIONS**

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### **Indo-Pakistan:**

#### **Pakistan Freezes Plan to Import Cotton and Sugar from India**

- In April 2021, the Cabinet of Pakistan Government headed by Prime Minister Imran Khan rejected the proposal of a high-powered committee (Pakistan's Economic Coordination Council which works under Ministry of Finance of Pakistan) to import cotton and sugar from India.
- India is the world's biggest producer of cotton and second biggest sugar producer.
- Foreign Minister Shah Mahmood Qureshi asserted that there can be no normalisation of trade until India reverses its decision in August 2019 to revoke the special status of Jammu and Kashmir.
- Pakistan's Economic Coordination Council recommended allowing imports of cotton and 5 lakh tonnes of sugar from India.

#### **Why Pakistan wants to Import Cotton?**

- Textile industry is a one of the major employment generator in Pakistan. Apart from meeting domestic needs Pakistan also exports textile products.
- But, Pakistan is facing a 40 per cent reduction in cotton production in the current year due heavy monsoons and pest infestation. As a result cotton prices rose in Pakistan.
- Against the annual estimated consumption of minimum 12 million bales, the estimated production is only 5.5 to 6 million bales production this year (2021). (Cotton is rounded up in standard size for weighing. This rounded cotton is called bale. One bale of cotton is equal to 170 kgs of cotton.)
- There is a minimum shortfall of six million bales and Pakistan has so far imported roughly 6.8 lakh metric tonnes of cotton and yarn, costing USD 1.1 billion. There is still a huge gap that needs to be filled through imports.
- To bridge the shortfall of cotton on local market and sustain textile exports, Pakistan removed the 11 per cent import duty on cotton imports and allowed duty-free imports.
- However, imports from India are banned.

#### **What are the Advantages of Importing Cotton from India?**

- The price of cotton in India is lower than that in Pakistan as well as global prices.
- Pakistan is importing cotton from **United States**, Brazil, Uzbekistan, and **Africa**.
- Importing from India is **cheaper and reduces the time needed for imports**.
- Besides getting cotton at a cheaper price, Pakistan could also gain on the freight charges due to shorter distance from India. It can import cotton import cotton through land route within three to four days.
- Importing from countries like United States, Brazil is expensive and also takes longer time to import due to long distance.

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### **Sugar Imports:**

- There is also shortage of sugar in Pakistan domestic market and retail sugar prices have increased to Pakistani Rs.100
- To boost domestic availability and bring down the retail prices, Pakistan floated global tenders but these were scrapped due to high prices quoted by the suppliers.
- Importing sugar from India is cheaper and faster through land route compared to other countries.
- The cost of sugar imports through Punjab in India would \$398 per tonne (including freight charges). On the other hand, the lowest bid received in global tenders was \$540 per tonne.
- Sugar imports from India are cheaper but remains banned since August 2019.
- Pakistan, which is expecting sugar production of 5.6 million tonnes in the ongoing 2020-21 marketing year (October-September), is facing a shortage of 5, 00,000 tonnes.
- On the other hand, India, the world's second largest sugar producing nation after Brazil, is sitting on a surplus stock and targeting to export 6 million tonnes in the ongoing 2020-21 marketing year

### **Trade between India-Pakistan:**

- India - Pakistan Trade came to a halt after the terrorist attacks in Pulwama, Jammu and Kashmir, killed at least 40 Central Reserve Police Force (CRPF) personnel
- India held Pakistan based terrorist organisations responsible for the attack and in retaliation withdrew the Most Favoured Nation (MFN) status to Pakistan and imposed 200 per cent Customs duty on imports from there. There is no ban on exports to Pakistan from India.
- Bilateral ties deteriorated further after India revoked the special status of Jammu and Kashmir in August 2019.
- Pakistan downgraded diplomatic ties and expelled the Indian High Commissioner in Islamabad.
- Pakistan also snapped all air and land links with India and **suspended trade and railway services.**
- In May 2020, Pakistan lifted the ban on import of medicines and raw material of essential drugs from India amidst the COVID-19 pandemic.
- Pakistan textile industry association is asking for similar concession given to import of medicines and raw material of essential drugs so that they can import cotton from India.

### **Trade Statistics:**

- Bilateral trade froze between India and Pakistan in August 2019.
- Prior to that India's exports to Pakistan in 2018-19 were \$2.07 billion in 2018-19.
- India had a trade surplus with Pakistan. India imports were worth only \$494.87 million in 2018-19.
- Cotton, pharmaceutical products, organic chemicals, plastic, tanning/dyeing extracts were major exports from India.
- India imported fruits and nuts, salt, leather, etc.

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## Indo-U.S.:

### India-US Climate and Clean Energy Agenda 2030 Partnership

- At the 'Leaders' Summit on Climate' held virtually on April 22, 2021, Prime Minister of India Narendra Modi and United States President Joseph Biden agreed to launch the "India-US Climate and Clean Energy Agenda 2030 Partnership".
- It envisages **bilateral cooperation on strong actions in the current decade (2020-30) to meet the goals of the Paris Agreement on Climate Change.**
- Through the Partnership, India and the United States firmly committed to working together in achieving their ambitious climate and clean energy targets and to strengthening bilateral collaboration across climate and clean energy.

#### **Details:**

- Both India and the United States have set ambitious 2030 targets for climate action and clean energy.
- United States has set an economy-wide target **of reducing its net greenhouse gas emissions by 50-52 percent below 2005 levels by 2030.**
- India has set a target of installing **450 Giga Watts (GW) of renewable energy by 2030.**
- The Partnership will aim to
  1. mobilize finance and speed clean energy deployment,
  2. **demonstrate and scale innovative clean technologies** needed to **decarbonise various sectors** like industry, **transportation, power, and buildings,** and
  3. **build capacity to measure, manage, and adapt to the risks** of climate-related impacts.
- Through this collaboration, India and the United States aim to demonstrate how the world can align swift climate action with inclusive and resilient economic development.

#### Additional Information:

##### **Paris Agreement on Climate Change:**

- The Paris Agreement is a legally binding international treaty on climate change aimed at **strengthening the global response to the threat of climate change.**
- It was adopted by 196 countries on December 12, 2015.
- It entered into force on 4 November 2016, 30 days after the so-called "double threshold" (ratification by 55 countries that account for at least 55% of global emissions) had been met.
- Its goal is to **limit global warming to well below 2** in this century **compared to pre-industrial levels (1850-1900)** and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.
- **Nationally Determined Contributions (NDCs):**
- **Nationally determined contributions (NDCs)** are at the heart of the Paris Agreement. NDCs embody efforts by each country to reduce national emissions and adapt to the impacts of climate change. The Paris Agreement requires each Party to the agreement to prepare,

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communicate and maintain successive nationally determined contributions (NDCs) that it intends to achieve. Parties shall pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions.

**Adaptation:**

- The Paris Agreement focuses on **adaptation** - enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate.
- It aims to significantly strengthen national adaptation efforts, including through support and international cooperation.
- All Parties should engage in adaptation, including by formulating and implementing National Adaptation Plans, and should submit and periodically update an adaptation communication describing their priorities, needs, plans and actions.

**Green Climate Fund (GCF):**

- Green Climate Fund (GCF) is also a critical element of the historic Paris Agreement.
- It has been set up to support developing countries raise and realise their Nationally Determined Contributions (NDC) ambitions towards low-emissions, climate-resilient pathways.
- Developed countries are obligated to support the efforts of developing country Parties to build clean, climate-resilient futures by providing financial support through Green Climate Fund (GCF).
- In addition to reporting on finance already provided, developed country Parties committed to submit indicative information on future support every two years.

**Global Stock take:**

- The Paris Agreement requires all Parties to put forward their best efforts through "nationally determined contributions" (NDCs) and to strengthen these efforts in the years ahead. This includes requirements that all Parties report regularly on their emissions and on their implementation efforts. There will also be a **global stock take every 5 years to assess the collective progress towards achieving the purpose of the agreement** and to inform further individual actions by Parties.

**Indo-Netherlands:**

**India Netherlands Virtual Summit**

India Netherlands virtual summit was held in April 2021 attended by Prime Minister Narendra Modi and Netherlands Prime Minister Mr. Mark Rutte.

**Significance of India-Netherlands Partnership:**

Trade and commercial relations constitute the bedrock of bilateral ties between the two countries.

**1. Investment:**

The Netherlands was the third largest investor in India, after Mauritius and Singapore in 2019-20.

Foreign Direct Investment (FDI) inflows from Netherlands were **US \$ 6.5 billion**.

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During April 2000 to December 2020, the Dutch (Netherlands) investments in India comprise US \$ 36.28 billion standing at the fourth position.

Similarly in 2019-20, the Netherlands was the fourth largest destination for overseas direct investment (ODI) from India with investments estimated at USD 1.23 billion.

## 2. Trade:

The Netherlands was India's 5th largest trading partner in Europe, after Germany, Switzerland, the UK and Belgium in 2019-20 .

Total two-way trade of US \$11.75 billion with export from India amounting to US\$ 8.36 billion and imports from the Netherlands at US\$ 3.39 billion.

There are over 200 Dutch companies present in India, including major Dutch companies like Royal Dutch Shell, Unilever, Philips, Akzo Nobel, DSM, KLM and Rabobank.

Similarly there are over **200 Indian companies present in the Netherlands**, including all the major Information Technology (IT) companies such as TCS, HCL, Wipro, Infosys, Tech Mahindra as well as Sun Pharmaceuticals and Tata Steel.

Food major LT Foods has a rice processing plant in Rotterdam, United Phosphorus Limited (UPL Ltd) has a plant in Rotterdam with a production capacity of 45,000 tonnes of crop protection products and Tata Steel owns an integrated steel making plant in Ijmuiden which employs 9,000 people with an annual production of seven million tonnes of steel.

## 3. Water Management:

Netherlands has expertise in water management especially flood protection, water supply and treatment.

In order to design solutions for water related challenges in India, a platform called Dutch Indo Water Alliance Leadership Initiative (DIWALI) has been developed by India and Netherlands.

Through DIWALI platform Netherlands is working with the local government as well as several leather tanneries in Kanpur (on the Ganga River) and Unnao (Uttar Pradesh) to promote water treatment technologies and reduce discharges into the river.

Netherlands agencies are also working **with textile and leather manufacturers in Gujarat** to help them address the **solid waste and waste water issues**. Similar activities are ongoing with textile finishing cluster in Ludhiana, Punjab.

A Dutch consortium, in collaboration with paper mills, municipalities, the World Bank and the state of Uttar Pradesh is working on two investment projects aimed at **converting waste and waste water into energy**, to be sold to the government and paper mills.

## 4. Agriculture:

There is also ongoing cooperation on **conservation of water through efficient agriculture practices** in the sugarcane industry of Uttar Pradesh.

## Centres of Excellence:

Netherlands is establishing **Centres of Excellence (CoE) in horticulture, animal husbandry & dairy, fisheries and food processing** as well as **in skill development & capacity building in the fields of cold chain, supply chain management** etc.

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Through the Centres of Excellence (CoE), Netherlands agencies train the farmers in best practices and enable them to increase their incomes. For example, farmers are supplied with high quality planting material for wide range of vegetables. These Centres also provide post-harvest management services like transport, grading, packing, cold-chain storage and marketing facilities.

The first CoE for vegetables at Baramati, Maharashtra was inaugurated on 2 November 2017. In November 2020, the second CoE for vegetables and was inaugurated at Wayanad District, Kerala.

CoE for flowers in Talegaon (Maharashtra), CoE for flowers Ludhiana (Punjab); CoE for potatoes at Jalandhar (Punjab), CoE for temperate fruits in Srinagar and CoE for tropical fruits in Jammu are also under implementation.

## **5. Diaspora:**

The Netherlands hosts the second largest Indian Diaspora (after UK) in Europe including 2,00,000 strong Surinami-Hindustani community of Indian origin. Surinami-Hindustanis are those whose ancestors were taken as indentured labour from India to Suriname 145 years ago. The children of some of these immigrants migrated to Netherlands in search of better higher education opportunities and settled there.

Now, Surinami-Hindustanis are the best-integrated immigrants in the Netherlands and speak fluent Dutch. They are engaged in a wide spectrum of activities including academicians, professionals, businessmen, politicians, diplomats and footballers. A number of community members have been elected to various municipalities in the Netherlands. The community is an important element that helps foster India's closer ties with the Netherlands.

## **6. Non Resident Indians (NRIs):**

The Netherlands is also home to 48,000 NRIs/PIOs (Persons of Indian Origin). They are mainly businessmen, knowledge workers, professionals and students.

## **Outcome of the Virtual Summit:**

### **1. Agriculture:**

The two Leaders reiterated commitment to successfully complete the establishment of all Centres of Excellence (CoEs) sanctioned under the Indo-Dutch Joint Action Plan on Agriculture.

Both the countries would explore setting up 25 Centres of Excellence (CoEs) by 2025 in Agri related sectors.

### **2. Spatial Planning, Water Management and Mobility Management:**

Both the countries extended the Memorandum of Understanding (MoU) to promote technical cooperation in the fields of Spatial Planning, Water Management and Mobility Management.

Under the MOU, India seeks to explore cooperation with the Netherlands in urban development, utilising its strength in integrated urban planning, including provision of adequate public spaces, pedestrianisation, cycling infrastructure and preservation of water bodies etc.

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India welcomed the investment by the Dutch companies including by Royal Philips in manufacturing of medical equipment as well as in research and development

### 3. Multilateral Cooperation

The two Prime Ministers reiterated their strong commitment to multilateralism and for fostering multilateral solutions to global challenges like **climate change, sustainable development, terrorism, non-proliferation and disarmament.**

### 4. Terrorism:

Both leaders reaffirmed their strong condemnation of terrorism and stated that terrorism cannot be justified on any grounds. They acknowledged that **terrorism and violent extremism continue to pose grave threat to international peace and security** as well as for **development** and called upon all nations to intensify efforts to combat terrorism and prevent violent extremism.

### 5. Climate Action

The two leaders stressed that Climate Action is a key priority area for both countries and agreed to cooperate closely in fulfilling their ambitious commitments under the Paris Agreement.

In this context, the two leaders emphasised the importance of deepening cooperation on green investments in food (reducing food waste, logistics), water (safety and security) and in particular renewable energy, to help them move closer to meeting our international climate and environmental goals and making both economies more resilient to future shocks.

### 6. COVID Vaccines:

Netherlands acknowledged that **India's production capacity of Covid-19 vaccines is crucial for the success of global efforts in tackling the pandemic** and appreciated India's supply of Covid-19 vaccines to more than 80 countries through its 'Vaccine Maitri' initiative as well as the COVAX facility.

COVAX facility is a global initiative to accelerate the development and manufacture of COVID-19 vaccines, and to **guarantee fair and equitable access for every country in the world.**

It is led by the Coalition for Epidemic Preparedness Innovations (CEPI), GAVI (Global Alliance for vaccines and Immunisation) and the World Health Organization (WHO), alongside key delivery partner UNICEF.

All participating countries, regardless of income levels, will have equal access to COVID vaccines. The initial aim is to have 2 billion doses available by the end of 2021, which should be enough to protect high risk and vulnerable people, as well as frontline healthcare workers.

For lower-income funded nations, who would otherwise be unable to afford these vaccines, as well as a number of other countries that have no bilateral deals with manufacturers, COVAX is a lifeline and the only viable way in which their citizens will get access to COVID-19 vaccines.

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**SCRI:**

**India, Japan, Australia Launch Supply Chains Resilience Initiative**

- India, Japan and Australia formally launched the Supply Chains Resilience Initiative (SCRI) in April 2021.

**What is Supply Chains Resilience Initiative?**

- It is a strategy adopted by countries engaged in international trade. It aims at **diversifying supply risks across a group of supplying countries instead of depending on a single country for supplies.**
- Unanticipated events like volcanic eruptions, tsunamis, earthquakes or a pandemic like COVID in supplying nations can disrupt supplies which would adversely impact economic activity in the destination country.
- The **Supply Chains Resilience Initiative** was initially proposed by Japan which is heavily dependent on imports from China. COVID which began in China led to shutdown of factories in China and disrupted supplies to Japan in 2020.
- Indian economy was also impacted by shutdown in China as supplies of pharmaceutical ingredients, automotive parts, electronics, and chemicals were disrupted.

**Geopolitics:**

- The Supply Chain Resilience Initiative is also being seen as an organized effort to decouple countries from depending on China's supplies gradually and develop a coalition of like-minded countries to take on assertive China in the Indo-Pacific.

**Supply Chains Resilience Initiative:**

- Initially, **Supply Chains Resilience Initiative** launched by India, Japan and Australia will focus on
  - a) sharing best practices on supply chain resilience,
  - b) holding investment promotion events and
  - c) Buyer-seller events to provide opportunities for stakeholders to explore the possibility of diversification of their supply chains.
- The Trade and Investment Ministers of India, Japan, Australia will meet at least once a year to provide guidance to the implementation of the SCRI as well as to consult on how to develop the initiative.
- In 2019, the cumulative GDP of the three countries was \$9.3 trillion. Cumulative merchandise goods and services trade were \$2.7 trillion and \$900 billion, respectively.

**Challenges to Supply Chain Resilience Initiative:**

- India, Japan and Australia have considerable dependency on Chinese supplies. China accounts for more than a quarter of total imports to Japan and Australia while accounting for 16% of India's imports
- The existing supply chains have been built over decades on principles of economic efficiency. Hence, restructuring supply chains away from China is challenging.
- Financial incentives are crucial for repositioning supply chains. Businesses, including lead firms, vendors, and distributors across various supply chains, would have to be compensated for migrating to locations outside China.

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- Building a new supplier infrastructure in a different country or region takes considerable time and money. Even with the support of government incentives, it took 20 years for the China to build a strong base capable of supplying the vast majority of electronic components, auto parts, chemicals, and drug ingredients.

#### **Japan Offers Incentives for Relocating Companies from China:**

- Japanese industries and investors have considerable presence in China. Hence, Japanese government recently earmarked \$2.2 billion to incentivise its companies to move their manufacturing out of China. Companies which relocate from China to Japan, South East Asian countries, India, and Bangladesh are eligible for subsidies.

#### **BIMSTEC:**

#### **BIMSTEC Ministerial Meeting Held Virtually**

- The BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation) Ministerial Meeting was held in April 2021.
- Addressing the meet, Dr. S. Jaishankar, India's External Affairs Minister, stated that **BIMSTEC enjoys the unique strength of connecting South and South-East Asia and India remains committed to further building the momentum of regional cooperation** under the BIMSTEC framework and make the organization stronger, vibrant, more effective and result-oriented.

#### **Major Highlights of the External Affairs Minister's Address :**

##### **1. Connectivity:**

The External Affairs Minister stated that robust connectivity is an essential **pre-requisite for economic integration of the region** with smooth cross-border movement of people and goods.

He stated that Member States have finalized the BIMSTEC Master Plan for Transport Connectivity which is expected to be adopted at the fifth BIMSTEC Summit to be held under Chairmanship of Sri Lanka. It would be an important step towards fulfilling the aspirations of the people of our region for better connectivity and integration.

##### **2. Development and Prosperity:**

He also stated that **development and prosperity go hand in hand with peace and security**. The BIMSTEC region faces both traditional and non-traditional security challenges. Cooperation in the security sector therefore has a special significance for us.

Member countries have been working closely and have moved forward in several aspects of security cooperation including **counter terrorism, intelligence sharing, coastal security, cyber security**, etc in a tangible manner.

He stated that BIMSTEC Convention on Cooperation in Combating International Terrorism, Transnational Organized Crime and illicit Drug Trafficking has come into force in March 2021 and BIMSTEC Convention on Mutual Legal Assistance in Criminal Matters has been finalized for signing at the fifth BIMSTEC Summit. These Conventions will **provide a robust legal basis to further strengthen our cooperation in this sector**.

##### **3. Disaster Management:**

The Minister stated that disaster management is another important area of collaboration among the BIMSTEC countries having similar geo-climatic conditions.

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**BIMSTEC Centre for Weather and Climate**, being hosted in India, is **fully functional** with the **state of the art facilities to provide Disaster Early Warnings**.

#### 4. 25 Years of Existence:

BIMSTEC has evolved through a long journey. Next year (2022) will be the silver jubilee of the establishment of the BIMSTEC. The External Affairs Minister stated that it is high time to dwell upon how to make a paradigm-shift in raising the level of our cooperation and regional integration.

#### Background about BIMSTEC:

- The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) is a regional organization comprising **seven Member States** lying in the littoral and adjacent areas of the Bay of Bengal.
- This sub-regional organization came into being on 6 June 1997 through the Bangkok Declaration.
- The BIMSTEC region is home to around 1.5 billion people which constitute around 22% of the global population with a combined gross domestic product (GDP) of more than 2.7 trillion.

#### Objectives of BIMSTEC:

- Accelerate the **economic growth** and **social progress** in the region through joint endeavours in a spirit of partnership.
- This would be achieved by promoting active collaboration and mutual assistance on matters of common interest in the economic, social, technical and scientific fields.

#### Member States:

- It constitutes seven Member States: five deriving from South Asia, and two from South East Asia.

#### South Asia Member States:

- Bangladesh, Bhutan, India, Nepal, Sri Lanka.

#### Southeast Asia Member States

- Myanmar and Thailand.
- Initially, the economic bloc was formed with four Member States with the acronym 'BIST-EC' (Bangladesh, India, Sri Lanka and Thailand Economic Cooperation).
- Following the inclusion of Myanmar on December 22, 1997 during a special Ministerial Meeting in Bangkok, the Group was renamed 'BIMST-EC' (Bangladesh, India, Myanmar, Sri Lanka and Thailand Economic Cooperation).
- With the admission of Nepal and Bhutan at the 6th Ministerial Meeting (February 2004, Thailand), the name of the grouping was changed to 'Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation' (BIMSTEC).

#### Areas of Cooperation:

- BIMSTEC is a sector-driven cooperative organization. The following sectors have been identified for mutual cooperation.
- Six sectors were identified for cooperation in 1997:
  - Trade, Technology, Energy, Transport, Tourism and Fisheries.
- In 2008, the scope was expanded to embrace nine more sectors:
  - Agriculture, Public health, Poverty alleviation, Counter-terrorism, Environment, Culture, People to people contact and Climate change.

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# SCIENCE & TECHNOLOGY

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## HEALTH:

### COVID-19:

#### **Shortage of Medical Oxygen in the Second Wave of COVID-19**

- India faced a huge shortage of medical oxygen in the second wave of COVID-19 which began in mid-March and began peaking in April and May 2021.
- **Shortness of breath** is one of the most common symptoms of severe COVID-19 disease. With daily Covid cases at around 4 lakh on some days, there was huge need for medical oxygen for COVID patients.
- Several States (like Maharashtra, Madhya Pradesh, Gujarat, Uttar Pradesh, Delhi, Chhattisgarh, Karnataka, Kerala, Tamil Nadu, Punjab, Haryana and Rajasthan) struggled to keep pace with the sudden surge in the demand for medical oxygen. Many deaths of Covid patients due to lack of oxygen were reported.

#### **What is the Significance of Medical Oxygen for COVID Patients?**

- Severe Covid disease lowers oxygen level in the body.
- The normal range of oxygen in **the blood** is 94 to 100 which is considered safe and healthy.
- When the oxygen level drops below 94, cells in the body cannot perform their normal functions.
- A cell is a basic unit of life in living organisms. A group of cells form into a tissue and a group of tissues from organs like lungs, heart, brain, kidney, etc. and perform specialised function
- If a patient with severe COVID continues to remain on low oxygen for prolonged period, cells in various organs stop working. When the organs stop working, it would lead to death of the patient.
- Hence, in order to keep the oxygen level in the body in normal range, a Covid patient needs to be given medical oxygen.
- Supplying medical oxygen to Covid patients who are low on oxygen will enable the crucial organs in the human body to perform their normal functions like respiration, carrying signals from brain, purifying blood, movement of the body, excretion, etc. and increases the chances of survival of the Covid patients.

#### **How is Oxygen level in the body measured?**

- It is measured by the level of **oxygen present in the blood** also known as oxygen saturation.
- Oxygen saturation is the percentage of oxygen-saturated (carrying) haemoglobin relative to total haemoglobin (unsaturated + saturated) in the blood.
- **Haemoglobin in the red blood cells of the blood carries the oxygen** from lungs to all the organs in the body.
- Oxygen saturation depends on oxygen availability (the air breathed in), the reach of oxygen from lungs to red blood cells, the extent of haemoglobin in red blood cells, and the affinity of haemoglobin for oxygen (i.e. how strongly haemoglobin attracts oxygen).

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- Oxygen saturation is measured through pulse oximeter. (In medical terms it is written as SpO<sub>2</sub> which means Saturation point oxygen level). It is a non-invasive and painless test
  - A pulse oximeter is clipped to the finger and it indirectly measures oxygen saturation. It shines light beams into the blood circulating in capillaries, which reflect the amount of oxygen in the blood.
  - Pulse oximeter readings are expressed as a percentage.
  - **A reading of 94 to 99 percent or higher indicates normal oxygen saturation.**
  - When oxygen saturation levels drop below 94%, it is a sign of **respiratory distress**. Anything below 90 percent is considered to be low blood oxygen, also known as hypoxemia.
  - A patient who is low on oxygen can increase his oxygen levels through supplemental oxygen which is supplied through medical oxygen or oxygen concentrators.

### **What is Medical Oxygen?**

- The air we breathe has only 21 per cent oxygen. Air in the atmosphere contains 78 % nitrogen and only 21 % oxygen (Remaining gases are traces of Carbon dioxide, Argon, Water vapour, and various other compounds.)
- Medical oxygen has 99.5 percent oxygen.
- Medical oxygen is manufactured through many methods.
- Two popular methods are
  1. liquefying air through a process called cryogenic distillation.
  2. Generating oxygen through Pressure Swing Absorption (PSA) plants.
- In cryogenic distillation method, oxygen is produced in air separation plants where the air is cooled at (-) 181 degree Celsius temperature. Oxygen liquefies at this point. Since, the boiling point of Nitrogen is -196 degree Celsius, it remains in a gaseous state. But Argon has a boiling point similar to that of oxygen (-186 degree Celsius) and hence a significant amount of Argon liquefies along with Oxygen.
- The mixture of oxygen and argon thus produced is drained, decompressed and passed through a second low-pressure distillation vessel in order to separate the two gases.
- Ultimately, purified liquid oxygen is obtained using cryogenic containers. Such purification results in more than 99.5 per cent pure oxygen.
- Liquefaction enables storage in larger volume and easier transportation. one litre of liquid oxygen is the equivalent to around 800 litres when it is in normal gas form.
- Liquid medical oxygen is transported in cryogenic tankers to hospitals and distribution sites. Cryogenic tankers are specially designed tankers used to transport gases which have been converted into liquid form by cooling them to extremely low temperatures.
- Once the tanker arrives at a hospital or distribution site, the oxygen is transferred into a storage tank. It is then reconverted into gaseous form through vaporisers (heating equipment which brings down the temperature of liquid oxygen), and supplied to patients via a network of pipes, or used to fill portable metal cylinders, which can be delivered to smaller hospitals and clinics that do not have large storage tanks.

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### **Pressure Swing Absorption (PSA) Plants:**

- Pressure Swing Absorption (PSA) plants employ a technology that absorbs nitrogen, water vapour, carbon dioxide, and other impurities through trap substances like zeolites, activated carbon, molecular sieves etc., while oxygen and argon pass through. These are separated and oxygen is used for medical purposes.

### **What are Oxygen Concentrators?**

- These are portable electrically powered medical devices designed to concentrate oxygen from ambient air. It can be operated at home or in hospitals by just plugging into an electricity source.
- It delivers air that is up to 95% oxygen.
- A concentrator consists of a compressor and sieve bed filter.
- The compressor squeezes atmospheric air and also adjusts the pressure at which is delivered.
- The sieve bed is made of a material called **Zeolite** that separates the nitrogen. There are two sieve beds. One works to release oxygen into a tank that's connected to the cannula (small pipe which is connected to nose from the machine).
- Another sieve releases the separated nitrogen back into the air.

### **Disadvantages:**

- Oxygen Concentrators are a good option only for mild to moderate COVID-19 patients, whose oxygen saturation level is at 90 percent to 94 per cent and not appropriate for ICU patients where the oxygen saturation level is below 90. ICU patients require oxygen which is more than 99 per cent pure.
- They are also **expensive**. Each Oxygen concentrator costs between Rs. 40,000 to Rs.90,000.

### **What Measures were taken to increase the Supply of medical Oxygen in the Country?**

- The Government issued tenders for import of 50,000 metric tonnes of medical oxygen in April 2021 to meet the demand.
- As there was also shortage of **cryogenic tankers** used for transport of liquid oxygen. The Government imported 20 cryogenic tankers (10 with a capacity to carry 20 metric tonnes of medical oxygen and another 10 with 10 metric tonnes carrying capacity).
- **Supply of oxygen for industrial purposes** by oxygen manufacturers was **banned** temporarily to increase the availability of medical oxygen.
- Funds under PMCARES were sanctioned to procure **one lakh oxygen concentrators**
- Funds have been allocated from PMCARES to set up 500 medical oxygen plants across the country.
- India also received support from global community. Many countries provided assistance to India by supplying oxygen cylinders, oxygen concentrators, oxygen generation plants, ventilators, etc.

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### Improvement in the supply of medical oxygen:

- The measures taken by the Government to increase the medical oxygen production led to increase in daily production of medical oxygen from 900 metric tonnes during normal times to **9500 metric tonnes a day**.

### B.1.617 Variant and the Covid-19 Surge in India

- The presence of a double mutation was detected in Covid-19 cases in India. This double mutation has been classified as the "**B.1.617**" variant.

#### What is a mutation?

- Mutation refers to **change in the DNA (genetic material) sequence of the virus**.
- All viruses - including SARS-CoV-2, the virus that causes COVID-19 - evolve over time.
- When a virus replicates or makes copies of itself, it sometimes changes a little bit, which is normal for a virus. These changes are called "**mutations**".
- A **virus with one or more new mutations** is referred to as a "**variant**" of the original virus.
- Mutations are identified through genetic sequencing of virus samples.

#### What causes a virus to change to a new variant?

- When a virus is **widely circulating in a population** and causing many infections, the **likelihood of the virus mutating increases**.
- The more opportunities a virus has to spread, the more it replicates - and the more opportunities it has to undergo changes.
- Most viral mutations have little to no impact on the virus's ability to cause infections and disease. But **depending on where the changes are located in the virus's genetic material**, they **may affect a virus's properties, such as transmission** (for example, it may spread more or less easily) or severity (for example, it may cause more or less severe disease).

#### Indian Double Mutant:

- The B.1.617 variant of SARS-CoV-2, which was first reported in Maharashtra, carries two mutations, E484Q and L452R.
- Both are separately found in many other coronavirus variants, but they have been **reported together for the first time in India**.
- The two mutations are found in the virus's **spike protein**. The **spike protein helps the virus to bind itself to the human cell's receptors** and gain entry into a host cell.
- The E484Q mutation is a mutation found in the United Kingdom (lineage B.1.1.7) and South Africa (B.1.351) variants of the coronavirus.
- The L452R mutation has been found in fast spreading variants in California (B.1.427 and B.1.429). It can **increase the binding power of spike proteins with ACE2 receptors on human cells**, making it more transmissible. L452R can also potentially **enhance viral replication**.
- **The Indian double variant spreads faster, is more infectious, can infect entire families, but is less virulent (severe disease causing)**.

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## How can we prevent future new variants of the COVID-19 virus?

### Preventive Measures:

- **Stopping the spread at the source remains key.**
- **Current measures to reduce transmission** - including frequent hand washing, wearing a mask, physical distancing, good ventilation and avoiding crowded places or closed settings - continue to work against new variants by reducing the amount of viral transmission and therefore also reducing opportunities for the virus to mutate.

### Vaccination:

- Scaling up vaccine manufacturing and rolling out vaccines as quickly and widely as possible will also be critical ways of protecting people before they are exposed to the virus and the risk of new variants.
- As more people get vaccinated, virus circulation decreases, which will then lead to fewer mutations.

### What impact do the new variants of the COVID-19 virus have on vaccines?

- Mutations in the virus may not make vaccines completely ineffective. In the event that any of these vaccines prove to be less effective against one or more variants, a change the composition of the vaccines to protect against these variants has to be made. For example, vaccines may need to incorporate more than one strain while developing vaccines, booster shots may be required.
- World Health Organisation (WHO) is working with researchers, health officials and scientists to understand how these variants affect the virus's behaviour, including their impact on the effectiveness of vaccines. This is an area where the evidence remains preliminary and is developing quickly.
- While we are learning more, we need to do everything possible to stop the spread of the virus in order to prevent mutations that may reduce the efficacy of existing vaccines. In addition, manufacturers and the programmes using the vaccines may have to adjust to the evolution of the COVID-19 virus.

### Rare Diseases:

#### National Policy on Rare Diseases 2021

- The National Policy on Rare Diseases was released by the Union Government on March 30, 2021.

### What are Rare Diseases?

- There is **no universal definition of rare diseases.**
- In simple terms, these are the diseases which affect small per centage of population in a society.
- Some countries define rare diseases in absolute numbers while some others define rare diseases based on their incidence as a percentage of total population. (Details given in additional information)

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- Globally, there are 7000 to 8000 rare diseases.

#### **Status in India:**

- Data on number of people suffering from rare diseases is not available in India.
- Hence, India only has the list rare diseases. Rare diseases are not identified on the basis of per centage of population affected by them.

#### **Rare Diseases in India:**

- Primary immunodeficiency disorders, Lysosomal storage disorders (Gaucher's disease, Mucopolysaccharidoses (group of metabolic disorders caused by the absence or malfunctioning of lysosomal enzymes needed to break down molecules called glycosaminoglycans), Pompe disease (genetic disorder in which complex sugar called glycogen builds up in the body cells), fabry disease (genetic disease that can affect kidneys, heart, and skin), Small molecule inborn errors of metabolism (Maple Syrup urine disease, etc.), Cystic Fibrosis, certain forms of muscular dystrophies and spinal muscular atrophy, etc. are some of the Rare diseases in India.

#### **Problems in Addressing Rare Diseases:**

##### **1. Diagnosis:**

**Diagnosis of rare diseases is difficult** as they are not standard or established diagnostic methods to detect them

##### **2. Treatment Options:**

Even after diagnosis, **safe and effective treatment options** are **not available** for all rare diseases. Out of 7,000 to 8,000 diseases, treatment is available for less than 5 per cent of them.

##### **3. High Costs:**

Even if treatment options are available for some rare diseases, they are **prohibitively expensive**. Some of these diseases also require treatment throughout life of the patient.

#### **Main Features of Rare Diseases Policy:**

1. The Rare Diseases Policy aims to lower the high cost of treatment for rare diseases by focussing on indigenous research and developing medicines.
2. Government would provide a financial assistance of Rs.20 lakhs for treatment of rare diseases under Rashtriya Arogya Nidhi.
3. Besides Below Poverty Line (BPL) population, the financial assistance would be extended for total of 40 per cent of the country's population as identified under the Pradhan Mantri Jan Arogya Yojana (PM-JAY).
4. Centres of Excellence would be set up in 8 health facilities across the country.
5. They would be provides Rs. 5 crore each for setting up diagnostic facilities and treatment.
6. Voluntary contributions from individuals and corporates would be sought. These funds would be used for treatment as well as research on rare diseases.

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### **Additional Information:**

#### **Definition of Rare Diseases:**

- In USA, a disease that affects fewer than 200,000 patients in the country (6.4 in 10,000 people) is considered a rare disease.
- EU defines rare disease as a life-threatening or chronically debilitating condition affecting no more than 5 in 10,000 people.
- Japan identifies rare diseases as diseases with fewer than 50,000 prevalent cases (0.04%) in the country.
- World Health Organisation (WHO) defines rare disease as a debilitating lifelong disease or disorder with a prevalence of 1 or less, per 1000 population.

#### **Why Treatment of Rare Diseases is Expensive?**

- As the number of persons suffering from individual rare diseases is small, they **do not constitute a significant market for drug manufacturers** to develop and bring to market drugs for them.
- For this reason, rare diseases are also called 'orphan diseases' and drugs to treat them are called "**orphan drugs**". Wherever drug manufacturers make drugs to treat rare diseases, the **prices are extremely high apparently to recoup the cost of research and development**. At present, very few pharmaceutical companies are manufacturing drugs for rare diseases globally and there are no domestic manufacturers in India.

#### **Limitations of Government:**

- Many parents filed petitions in High Courts on behalf of their children who are suffering from rare diseases seeking direction to Central Government to provide them uninterrupted and free of cost treatment for rare diseases as it is very expensive and they could not afford.
- But due to the high cost of most therapies, the **Government has not been able to provide treatment for rare diseases for free by allocating significant budgetary resources**.
- Under the National Policy on Rare Diseases,
- The Government would extend a maximum of Rs.20 lakhs for treatment of rare diseases. This amount would also be given to those rare diseases which are curable with one time treatment(Group 1).
- Under the policy, rare diseases have been categorised into three groups.

##### **Group 1:**

- a) Diseases amenable to one-time curative treatment through stem cell transplantation; and
- b) Diseases amenable to organ transplantation (liver transplantation, renal transplantation)

##### **Group 2:**

Diseases requiring long term / lifelong treatment having relatively lower cost of treatment.

##### **Group 3:**

Diseases for which definitive treatment is available but challenges are **very high cost and need for lifelong therapy**.

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- Government **would not extend any financial assistance** for Group 3 rare diseases for which treatment is costly and requires lifelong treatment.

### **Why Did the Government Put the Ceiling of Rs. 20 lakhs and Restrict the Assistance to Rare Diseases Curable with One Time Treatment?**

- As the Government resources are limited, the Government has to keep in mind efficiency of resource allocation.
- When there are resource-constraints, competing interests of public health have to be **balanced** for **achieving optimal outcome for the resources allocated**.
- As resources are limited and have multiple uses, the policy makers have to make choice of prioritising certain set of interventions over others. The **appropriate choice** is to **support those interventions** that would **provide more number of healthy life years for given sum of money** while simultaneously looking at the **equity** i.e., interventions that benefit poor who cannot afford healthcare are prioritised.
- Thus, interventions that address **health problems of a much larger number of persons by allocating a relatively smaller amount are prioritised over others** like rare diseases where much **greater resources** will be required for addressing health problems but only a **small number of persons benefit**.
- For example, it is estimated that for a child weighing 10 kg, the annual cost of treatment for some rare diseases, may vary from Rs. 10 lakh to more than 1 crore per year. This treatment has to be given lifelong and drug dose and cost, increase with age and weight. Hence, keeping in mind resource constraints and at the same time equity, the need to support poor patients), the Government has kept the ceiling of Rs. 20 lakh for financial assistance and allowed crowd funding through voluntary and corporate contributions.

### **Shortage of Specialist Doctors:**

#### **76.1% Shortfall in Specialist Doctors at Rural Community Health Centres**

- There is a shortfall of 76.1 per cent specialist doctors at the Community Health Centres (CHCs) in rural areas according to the Rural Health Statistics Report released by the Union Ministry of Health and Family Welfare in April 2021.
- The shortage of doctors affects poor people in rural areas who depend on Government hospitals for health issues. In the absence of specialist doctors, these people will have to travel hospitals at sub-divisional level or district hospitals for maternal and child care services.

### **What are the Community Health Centres (CHCs) ?**

- CHCs are 30-bed hospitals (each covering four primary health centres) with specialised services.
- These are the backbone of India's rural health care system.
- Each CHC is manned by four medical specialists - surgeon, physician, obstetrician/ gynaecologist and a paediatrician.

### **Details of Shortage of Specialists at CHCs:**

- 68.4 per cent of Surgeons, 56.1 per cent of obstetricians & gynaecologists, 66.8 per cent of physicians and 63.1 per cent of pediatricians are vacant.

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**Physicians:**

- Requirement is 5,183. But, there is a shortfall of 3,331. The five states with maximum shortfall under this category are Rajasthan (419); Uttar Pradesh (402); Gujarat (346); Odisha (335); and Tamil Nadu (323).

**Surgeons:**

- Requirement is 5,183. But, there is a shortfall of 4,087. The five states with maximum shortfall under this category are Uttar Pradesh (545); Rajasthan (447); Gujarat (346); Madhya Pradesh (302); and Odisha (283).

**Obstetricians and Gynaecologists:**

- Requirement is 5,183. But, there is a shortfall of 3,611. The five states with maximum shortfall are Uttar Pradesh (550); Rajasthan (447); Gujarat (345); Tamil Nadu (339); and Madhya Pradesh (288).

**Rural Health Infrastructure in the Country:**

- The health care infrastructure in rural areas has been developed as a three tier system and is based on the following population norms:

Centre	Population Covered	
	Plain Area	Hilly/Tribal/Difficult Area
Sub Centre	5000	3000
Primary Health Centre	30000	20000
Community Health Centre	120000	80000

**Sub Centres:**

- The Sub Centre is the first contact point between the primary health care system and the community.
- Sub Centres provide services in different programmes like maternal and child health, family welfare, nutrition, immunization, diarrhoea control and communicable diseases as well as noncommunicable diseases.
- Each Sub Centre is manned by at least one auxiliary nurse midwife (ANM) / female health worker and one male health worker
- There are **1,55,404** rural Sub Centres in the country.

**Primary Health Centres (PHC):**

- Primary Health Centre is the first contact point between village community and the medical officer.
- The PHCs provide an integrated curative and preventive health care to the rural population.
- Each PHC is to be manned by a medical officer supported by 14 paramedical and other staff.
- There are **24,918 PHCs** functioning in rural areas.

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### **Community Health Centres (CHCs):**

- CHCs are manned by four medical specialists i.e. Surgeon, Physician, Obstetrician/ Gynaecologist and Pediatrician.
- It has 30 in-door beds with one Operation Theatre (OT), X-ray, labour room and laboratory facilities and is supported by 21 paramedical and other staff .
- It serves as a referral centre for 4 Primary Health Centres (PHCs) and also provides facilities for obstetric care and specialist consultations.
- There are 5,183 of CHCs functioning in rural areas of the country.

### **Sub-Divisional and District Hospitals:**

- Sub-district (Sub-divisional) hospitals are below the district and above the block level (CHC) hospitals and act as First Referral Units for the Tehsil/Taluk/block population in which they are geographically located.
- They play important role as First Referral Units in providing emergency obstetrics care and neonatal care and help in bringing down the Maternal Mortality and Infant Mortality.
- They form an important link between SC, PHC and CHC on one end and District Hospitals on other end. It also saves the travel time for the cases needing emergency care and reduces the workload of the district hospital.
- A subdivision hospital caters to about 5-6 lakh people and has 100 to 150 beds.
- They provide round-the-clock services for emergency obstetric and New Born Care, in addition to all emergencies that any hospital is required to provide.

### **District Hospital:**

- District Hospital is a hospital at the secondary referral level responsible for a district.
- It provides comprehensive secondary health care services to the people in the district at an acceptable level of quality and being responsive and sensitive to the needs of people and referring centres.
- As the population of a district is variable, the bed strength also varies from 75 to 500 beds depending on the size, terrain and population of the district.

### **Disease Surveillance:**

#### **Integrated Health Information Platform Launched**

- Dr Harsh Vardhan, Union Minister of Health & Family Welfare, launched '**Integrated Health Information Platform (IHIP)**' in April 2021.

### **Details:**

- Disease surveillance is key to preventing the outbreak of epidemics like COVID-19.
- If diseases which have epidemic potential are not detected early through surveillance and quick measures are not taken, they become public health challenges.
- Surveillance helps in detecting and nipping in the bud any potential outbreak of an epidemic by deploying Rapid Response Teams.

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- India launched **Integrated Disease Control Programme (IDCP)** in 2004 to quickly identify the outbreak of diseases and take measures to prevent them from transforming into epidemics.
  - 'Integrated Health Information Platform (IHIP)' has been launched as an improvement over the existing Integrated Disease Control Programme (IDCP).

#### **How IHIP is an improvement over IDCP?**

- The number of diseases monitored has been **increased from 18 to 33**.
- IHIP also relies on real-time updation of data on diseases in place of the present weekly reports under IDCP.
- Data on diseases will be updated on a real-time basis by grass root health workers (through tabs), doctors of Primary Healthcare Centres (PHCs), Community Health Centres (CHCs), Sub-divisional hospitals, District level hospitals (Public hospitals, private hospitals), and laboratories.
- Disease outbreak investigation activities can be initiated and monitored electronically.
- The data generated through IHIP would also enable evidence-based policy making.

#### **ENVIRONMENT:**

##### **Revised Notification on Fly Ash Utilisation**

- The Union Ministry of Environment issued a revised notification on fly ash utilisation in April 2021.

#### **What is Fly Ash?**

- Fly ash is a fine powder which is generated as a by-product when coal is burnt in the thermal power plants.
- If it is not safely disposed, it pollutes air, water and land.
- It is a major contributor to the Particulate Matter (PM) emissions in the country. Air in areas around the coal-fired power plants is polluted by fly ash.
- The coal used in Thermal Power Plants (TPPs) has high ash content of the order of 30-45%, which generates large quantity of fly ash.
- Since most of the coal used in thermal plants is low-grade, it generates a large quantity of fly ash.
- Hence, the Union Environment Ministry has been issuing guidelines since 1999 for utilisation of fly ash.
- The guidelines make it mandatory for Thermal Power Plants (TPPs) to ensure 100 per cent utilisation of fly ash generated by the plants.
- As a result of the guidelines, the fly ash utilisation in India has increased from nearly 10 per cent in 1996-97 to 83 per cent in 2019-20.

#### **How is Fly ash utilised?**

- Fly ash is used in the following.
- Manufacture of bricks, blocks and tiles

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- Cement manufacturing,
  - Road construction,
  - Filling up low lying areas,
  - Filling mine voids, etc.

#### **2021 Notification:**

- Existing provisions allow coal/lignite based Thermal Power Plants (TPPs) to utilise the fly ash generated by them in a four year cycle. This has been reduced to three year cycle.
- This means a Thermal Power Plant which cannot utilise 100 per cent of the fly ash generated in a year. If it achieves 80per cent utilisation in first year, it can transfer the 20 per cent target to second year. In no case shall utilisation fall below 80 % in any year. Overall, the plant should achieve average ash utilisation of 100% in a 3 year cycle
- All agencies (Government and Private) engaged in construction activities such as road laying, road and flyover embankments, and dams within 300 km from the coal based TPPs shall mandatorily utilise fly ash in these activities. This should be transported and delivered free of cost by the thermal power plant.
- All mine owners shall get mine closure plans amended to accommodate ash in the mine voids (empty space left after mining).
- All building construction projects (Central, State & Local authorities, Govt. undertakings, other Govt. agencies and all private agencies) located within a radius of three hundred kilometres from a coal or lignite based thermal power plant shall use ash bricks, tiles, or other ash based products, provided these are made available at prices not higher than the price of alternative products.

#### **Fines for Non-Compliance:**

- If a coal-based thermal power plant fails to achieve 100 per cent utilisation rate in the three year cycle, a fine of Rs. 1000 per tonne would be imposed on unutilised fly ash by the Central Pollution Control Board.
- The fine collected would be utilised for safe disposal of the unutilised ash.

#### **Deadline for Coal-Fired Utilities To Adopt New Emission Norms Extended**

- In April 2021, the Union Environment Ministry amended the emission norms for coal based thermal power plants.

#### **Details:**

- Thermal power companies produce three-fourths of the country's electricity.
- But they also contribute to air pollution. Oxides of Nitrogen (NOx), Sulphur dioxide (SO<sub>2</sub>), Mercury, and Particulate Matter (PM) are the major pollutants from coal-fired power plants.
- Thermal power plants account for around 80% of industrial emissions of **particulate matter (PM), sulphur dioxide and nitrous-oxide**. These cause lung diseases, acid rain and smog.
- To control the emissions from these plants, Government has issued guidelines mandating installation of emission control systems in thermal power plants in 2015.

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- Initially, the Government set a 2017 deadline for thermal power plants **to install emission control systems**.
  - But, the deadline was pushed to December 2022 for all power stations in the country in view of implementation issues and challenges. However, power stations in the national capital region were required to comply with the revised norms by December 2019.
  - The new order issued in April 2021 by the Environment Ministry **further revised** the deadlines for installation of emission reducing units in power plants. Thermal power plants within 10 kilometres of the National Capital Region (NCR) and cities with more than 10 lakh population to comply with new emission norms by the end of 2022.
  - Thermal Power Plants (TPPs) in "non-attainment cities" and those within 10 kilometres of critically polluted areas are required to meet the emission norms by December 31, 2023. Non-attainment cities are those which have consistently failed to meet the National Ambient Air Quality Standards. The CPCB has identified 124 such cities.
  - Coal-fired power plants in the rest of the areas have to comply with the new standards by December 31, 2024, according to the notification.
  - Power plants declared to retire before December 31, 2025 are not required to meet the specified norms.

#### **Why was the Deadline to Install Emission Control Systems Extended?**

- The Power Ministry requested the Environment Ministry seeking extension of deadline due to Covid pandemic, import restrictions and high compliance costs.
- The Power Ministry also said that graded implementation of emission norms would avoid immediate increase in power prices in various relatively clean areas of India and avoid unnecessary burden on power utilities and consumers. Power plant operators would have to incur additional capital expenditure for installation of emission control systems and these additional costs would have to be passed on to consumers by increasing power prices.

#### **Penalties for Non-Compliance:**

- In case of non-compliance by the power plants to install emission control systems within the time granted by the Government, a penalty of up to 0.20 rupees (\$0.0027) will be levied for every unit of electricity produced.

#### **DEFENCE:**

##### **Python Missile:**

#### **Tejas Cleared to Carry Python, Fifth Generation Air-to-Air Missile**

- Indigenously-developed light combat aircraft Tejas has been cleared to carry Python-5, fifth generation air-to-air missile, as part of its weapons package. This would significantly enhance the combat prowess of the jet.
- Python-5 is the second air-to-air missile of Israeli origin to be integrated on the Tejas fighter. The first was the **Derby** medium-range air-to-air missile. Both weapons are made by the Israeli defence company Rafael Advanced Defense Systems.

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- While the Derby is a radar-guided weapon thought to have a range of over 50km, the Python-5 is an infra-red guided missile with a range of 20km.
  - Powered by a rocket motor, the Derby missile has a speed of Mach 4 and can hit targets at a range of up to 50km. It weighs 118kg and is armed with a 23kg warhead. It can be launched at an enemy target under all weather conditions, both during day and at night.
  - Python missile weighs 105 kg and is capable of carrying an 11 kg high explosive warhead. It has a speed of Mach 4 and an operational range of more than 20km.
  - Tejas, Indigenously-developed light combat aircraft, has already been given clearance for deployment of armaments and other missiles.
  - The Indian Air Force (IAF) had ordered 40 Tejas jets.
  - A request for proposal (RFP) was issued to Hindustan Aeronautics Limited (HAL) by the IAF for procurement of another batch of 83 Tejas jets at a cost of around Rs 50,000 crore.

### **Military Expenditure:**

#### **India Third Largest Military Spender in the World**

- India was the third largest military spender in the world in 2020, behind only the US and China, according to the latest military expenditure database published in April 2021 by the Stockholm International Peace Research Institute, which tracks military expenditure and arms trade globally.
- Global military expenditure rose to \$1981 billion in 2020, an increase of 2.6 per cent from 2019.
- **US accounted for 39 per cent** of the money spent on military globally, **China accounted for 13 per cent**, and India accounted for 3.7 per cent of the global share of military expenditure.

#### **Military Expenditure by the top three countries in 2020:**

- United States: \$778 billion (3.7 per cent of GDP)
- China: \$252 billion (1.7 per cent of GDP)
- India: \$72.9 billion (2.9 per cent of GDP)
- All three countries saw their military spending go up compared to 2019, even though 2020 was hit by COVID pandemic.
- The other top spenders included Russia with \$61.7 billion, the UK at \$59.2 billion, and Saudi Arabia at \$57.5 billion.
- Five biggest spenders in 2020 together accounted for 62 per cent of global military expenditure.

#### **About Stockholm International Peace Research Institute (SIPRI):**

- It is an international organisation based in Sweden.
- It was set up in 1966. The idea of such organisation was first put forward in 1964 by the then Swedish Prime Minister, Tage Erlander to commemorate Sweden's 150 years of unbroken peace.

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**Functions:**

- It is dedicated to research into conflict, armaments, arms control, and disarmament.
- It strives for peaceful solution of international conflicts and global peace.

**Funding:**

- It receives a substantial part of its funding in the form of an annual grant from the Swedish Government. The Institute also seeks financial support from other organisations in order to carry out its research.

**SPACE:****International Space Station:****Russia Considering Withdrawal from International Space Station**

- Russia is considering withdrawal from the International Space Station.
- In April 2021, Russian Deputy Prime Minister Yury Borisov said Russia would back away from the ISS as early as 2025 to pursue a separate national space station.

**What is International Space Station?**

- It is a space laboratory set up as a collaborative project by Space agencies of US, Russia, Japan, Canada, and European countries (through European Space Agency)
- The International Space Station weighs almost **400 tonnes** and covers an area as big as a football pitch.
- It is impossible to build the Space Station on Earth and then launch it into space in one go as there is no rocket big enough or powerful enough.
- So the Space Station was taken into space piece-by-piece and gradually built in orbit, approximately **400 km above the Earth's surface**. This assembly required **more than 40 missions**.
- The first piece of the International Space Station was launched in November 1998. A Russian rocket launched the first module of space station called 'Zarya'. About two weeks later, another module called Unity was added by U.S. Space shuttle Endeavour.
- More pieces were added over the next two years before the station was ready for Astronauts to live there.
- The first crew on International Space Station arrived on November 2, 2000. Astronauts have lived on the space station ever since.
- More pieces have been added over time. NASA and its partners from around the world **completed construction of the space station in 2011**.
- So far, 242 Astronauts from 19 countries have visited the International Space Station.
- At any given time, an **international crew of six people live and work** in International Space Station

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- The space station orbits the earth at an average altitude of 400 kilometers above Earth.
  - It circles the earth every 90 minutes at a speed of about 17,500 mph (28,000 km/h). In one day, the station travels about the distance it would take to go from Earth to the moon and back.
  - The living and working space in the station is larger than a six-bedroom house.
  - Crews aboard the ISS are assisted by mission control centers in Houston and Moscow and a payload control center in Huntsville, Alabama. Other international mission control centers support the space station from Japan, Canada and Europe. More than 50 computers control the systems on the space station.
  - As per the current plans, space station is to be operated through at least 2024. There are discussions on possible extension until 2028.

### **Experiments Conducted in International Space Station:**

- Over that time, astronauts on the International Space Station (ISS) have conducted around **3,000 science experiments**.
- The research spans **a range of disciplines**, including fundamental physics, biology, earth observation, biomedical studies, etc. Most of the science experiments aboard the station aim to investigate how things work **differently in microgravity i.e. near zero gravity**.
- Through the experiment, scientists got insights into **how humans and animals adapt to long-duration spaceflight, as well as how materials behave in space**.

Some of the areas of focus of research in International Space Station are given below.

### **Growing food in microgravity:**

- The ability to grow supplemental food can help humans explore farther from Earth. Many techniques for growing plants have been explored aboard the space station to prepare for these missions. Scientists have grown variety of plants and vegetables like lettuce, cabbage, potato.

### **Understanding how our bodies change in microgravity:**

- Long-term stays aboard the space station have uncovered unexpected ways that the human body changes in microgravity (near zero gravity). Results from this research are key enablers for future long-duration missions beyond low Earth orbit.

### **Earth and Space Science**

- The presence of the space station in low-Earth orbit provides a unique vantage point for collecting Earth and space science data. From an average altitude of about 400 km, details in such features as glaciers, agricultural fields, cities, and coral reefs taken from the ISS can be layered with other sources of data, such as orbiting satellites, to compile the most comprehensive information available.

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## Technology

- Studies are being conducted in space station can **test a variety of technologies, systems, and materials** that will be needed for **future long-duration exploration missions**.

### Coronal Mass Ejections:

#### New Technique Developed to Track Coronal Mass Ejections (CMEs)

- Indian scientists have developed a **new technique to track Coronal Mass Ejections (CMEs)** from the Sun.
- Corona is the outermost part of the Sun's atmosphere. The corona is usually hidden by the bright light of the Sun's surface. That makes it difficult to see without using special instruments.
- The **huge bubbles of gas threaded with magnetic field lines are ejected from the Sun**. These are technically called Coronal Mass Ejections (CMEs).
- These ejections from the Sun cause various disturbances like **disrupting space weather and causing geomagnetic storms, satellite failures, and power outages**. Hence, **forecasting their arrival time is very important**.
- However, forecasting accuracy is hindered by limited Coronal Mass Ejections (CMEs) observations in interplanetary space.
- Software named Computer Aided CME Tracking Software (CACTus) based on a computer algorithm was so far used to detect and characterise such eruptions automatically in the **outer corona**.
- However, this algorithm could not be applied to the **inner corona** observations due to the vast acceleration experienced by these eruptions.
- This severely limited the capability to track the eruptions as CMEs accelerate in the lower corona.
- Research led by Mr. Ritesh Patel, Dr. Vaibhav Pant, and Prof. Dipankar Banerjee from Aryabhata Research Institute of Observational Sciences (ARIES), Nainital, along with their collaborators from Royal Observatory of Belgium, have led to the development of an algorithm, **CMEs Identification in Inner Solar Corona (CIISCO) to detect and track the accelerating solar eruption in the lower corona**.
- CIISCO has been successfully tested on several eruptions observed by space observatories, including Solar Dynamics Observatory and Solar-Terrestrial Relations Observatory, PROBA2/SWAP launched by NASA and European Space Agency (ESA), respectively.
- The research was published in the Solar Physics journal.

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## MISCELLANEOUS (PERSONS, SPORTS)

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### NATIONAL PERSONS

**Justice N.V. Ramana** was sworn in as the 48th Chief Justice of India (CJI) by President Ram Nath Kovind at the Rashtrapati Bhavan on April 24, 2021.

Justice Ramana is the second Chief Justice of India (CJI) from Andhra Pradesh. Justice Koka Subba Rao was the first from Andhra Pradesh who served as CJI during 1966-67.

Justice Ramana will have tenure of one year and four months till August 26, 2022.

**Soli Sorabjee (91)**, former Attorney General of India, a staunch proponent of free speech, and an eminent lawyer, passed away on April 30, 2021 due to COVID-19 related complications.

He appeared in several historic cases, including the **Kesavananda Bharati case** which dealt with 'Basic Structure Doctrine'.

He received the Padma Vibhushan for championing **free speech and human rights**. He worked for the Sikh community pro bono (without taking any fee) after the 1984 riots.

He was twice appointed Attorney General of India.

Election Commissioner **Sushil Chandra** was appointed as the next **Chief Election Commissioner** by President Ram Nath Kovind on April 12, 2021. He succeeded Sunil Arora.

Mr. Chandra took office as an Election Commissioner on February 15, 2019, after retiring as the chairman of the Central Board of Direct Taxes. A 1980 batch Indian Revenue Service officer, Mr. Chandra had worked in the areas of international taxation and investigation.

**G.V.G. Krishnamurthy (86)**, former Chief Election Commissioner, passed away on April 14, 2021. He served as Chief Election Commissioner from October 1, 1993 to September 30, 1996

**Kakarla Subbarao (96)**, renowned radiologist and former director of NIMS, passed away on April 16, 2021. He was instrumental in transforming Nizam Institute of Medical Sciences (NIMS) in Hyderabad, Telangana into a super-speciality hospital. Dr. Rao was its first director between 1985 and 1990 and later between 1997 and 2004. In recognition to his valuable contributions in the field of medicine, the Government of India honoured him with a Padma Shri in 2000.

**Sumitra Bhavne (78)**, eminent director, producer and screenwriter in Marathi film industry, passed away early in Pune on April 19, 2021.

Ms. Bhavne, who along with her fellow collaborator, film-maker Sunil Sukthankar, gave a string of films like Devrai, Vaastupurush and Kaasav. The duo's breakthrough film Doghi (1995), won three National Film awards.

**Sankha Ghosh (89)**, eminent Bengali poet and critic, passed away in Kolkata on April 21, 2021 due to COVID-19. He was awarded the Padma Bhushan in 2011 and conferred the prestigious Jnanpith Award in 2016. He received the Sahitya Akademi Award in 1977 for his book 'Babarer Prarthana'. His works have been translated into several languages, including English and Hindi.

**Myadam Chandrasekhar (74)**, well-known illustrator, artist, cartoonist and writer from Telangana, passed away on April 29, 2021.

Known for social, political and satirical cartoons, Chandra was also an illustrator who made sketches of several famous personalities at national and international level including from the Telugu land. He also made illustrations related to natural, folk, spiritual, mythological, modern and revolutionary ideologies besides writing several short stories.

**Rajan Mishra (70)**, classical singer and a Padma Bhushan awardee, died passed away due to COVID-19 on April 25, 2021. Belonging to the Benaras gharana, Mr. Mishra, with brother Sajan Mishra, made a mark for himself as a vocalist in the khyal style of Indian classical singing.

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**G. Venkatasubbaiah (107)**, lexicographer who hailed from Karnataka, passed away on April 19, 2021. He had compiled 12 dictionaries, including three volumes of Igo Kannada (A Socio-Linguistic Dictionary of Kannada), edited over 24 literary works covering different forms of Kannada literature such as poetry, grammar and essays and has also translated into Kannada eight important works from other languages.

### **INTERNATIONAL PERSONS**

**Nguyen Xuan Phuc (66)** was sworn in as President of Vietnam on April 5, 2021. In a secret voting on April 5, 2021, Mr. Phuc scored the maximum votes among the almost 500-member national Assembly.

Mr. Nguyen Xuan Phuc was also Vietnam's Prime Minister for the last five years, a period in which the economy boomed, and his government's COVID-19 response won praise at home and abroad.

Vietnam is run by the Communist Party and officially led by the party general secretary, President, and Prime Minister.

**Prince Philip (99)**, Duke of Edinburgh and husband of Queen Elizabeth II of United Kingdom, passed away on April 9, 2021.

**Ibn Abdur Rehman (90)**, Pakistani Human rights crusader and former Journalist who won the Ramon Magsaysay award for his work on fostering India-Pakistan relations, passed away in Lahore on April 12, 2021.

Mr. Rehman took a bold stand against atrocities by Pakistani forces in East Pakistan (present Bangladesh) in 1971, marital law under General Zia ul Haq and later the emergency imposed by General Pervez Musharraf, and fought for several causes, including minority rights and excesses by security forces.

One of the cases Mr. Rehman took up strongly was that of Hamid Ansari, a 33-year old software engineer from Mumbai who travelled to Pakistan in 2012 to try and meet a girl he had met online, and was arrested as "an Indian spy". Mr. Ansari was released in 2018, in large part due to the efforts of human rights activists, including Mr. Rehman, and a young journalist Zeenat Shahzadi.

**Alessandra Galloni** has been selected as new editor-in-chief by Reuters on April 13, 2021 becoming the first woman to head the global news agency in its 170-year history. Reuters is one of the largest news agencies in the world. The agency was established in London in 1851 by the German-born Paul Reuter. It employs around 2,500 journalists and 600 photojournalists in about 200 locations worldwide.

**Bernie Madoff (82)**, former chairman of the Nasdaq stock market in U.S. who infamous for running one of the largest Ponzi scheme in history and cheating thousands of investors, passed away on April 14, 2021 in U.S. Ponzi scheme is a financial fraud in which early investors are repaid with money acquired from later investors rather than from actual investment income. Investors are lured into this scheme by promising huge returns on their investments. The scheme got its name after Charles Ponzi who was the first person to run such scheme in U.S. in 1920.

Michael Collins (90), the pilot of the Apollo 11 spacecraft that carried Neil Armstrong and Edwin "Buzz" Aldrin to the moon, passed away in Florida, U.S. on April 28, 2021. Apollo 11 was the first manned mission to Moon.

### **NATIONAL AWARDS**

#### **Dadasaheb Phalke Award for Rajinikanth**

51st Dadasaheb Phalke Award was given to legendary actor Rajinikanth for his contribution as an actor, producer and screenwriter.

Instituted in 1969, the award is the highest honour for an artiste in Indian cinema.

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The award consists of a 'Swarna Kamal', a cash prize of INR 10 lakh, a certificate, a silk roll, and a shawl.

The first recipient of the award was Devika Rani Roerich in 1969. Subsequent awardees include music director Naushad, filmmaker Satyajit Ray, filmmaker Raj Kapoor, singer Lata Mangeshkar, actor Dilip Kumar, actor Dev Anand, filmmaker Yash Chopra, writer Gulzar, actor Shashi Kapoor, and actor Manoj Kumar among others.

**About Dadasaheb Phalke:**

His full name is Dhundiraj Govind 'Dadasaheb' Phalke. Born in 1870 at Trimbak in Maharashtra, Phalke was drawn towards creative arts since childhood. He studied engineering and sculpture and developed an interest in motion pictures after watching the 1906 silent film *The Life of Christ*. In 1913, Phalke wrote, produced, and directed India's first feature film, *Raja Harishchandra*. It was a silent film i.e. there was no sound or music in those days. Since, it was a silent film, it had intertitles in English, Marathi, and Hindi languages. Phalke made 95 more films and 26 short films in the next 19 years.

The first ever sound film was '*Alam Ara*' by Ardeshir Irani made in 1931. The film took months to be made and had around 7 songs.

**INTERNATIONAL AWARDS**

**Vaclav Havel Human Rights Prize:**

Saudi activist **Loujain al-Hathloul** was awarded the Vaclav Havel Human Rights Prize, a top European rights award in April 2021 in recognition of her fight for women's rights in the kingdom. Ms. Hathloul is one of the leaders of the Saudi feminist movement who campaigned to end the male guardianship system laws.

Ms. Hathloul was detained in 2018. She is now on probation and barred from leaving Saudi Arabia for five years.

Under the 'Male Guardianship System' in Saudi Arabia, a woman's life is controlled by a man from birth until her death under various laws. A woman cannot make critical decisions on issues like **marriage, work, travel, applying for a passport, study abroad**, etc. A woman's father, brother, husband or son has the authority to make these critical on her behalf and called a guardian.

In 2019, the male guardian ship laws were partly relaxed like lifting the ban on women driving, permitting them to get passports without the consent of their guardians.

**Vaclav Havel Human Rights Prize:**

The Vaclav Havel Human Rights Prize, named after the former Czech dissident and later President, is awarded annually for civil society action in defence of human rights by the Parliamentary Assembly of the Council of Europe (PACE).

The award carries a prize of 60,000 euros.

**Council of Europe:**

The Council of Europe is the European continent's leading human rights organisation.

It has **47 member states**, 28 of which are members of the European Union.

It was set up after the Second World War in 1949 to uphold human **rights, democracy and the rule of law**.