

## GS II

SYLLABUS: ISSUES AND CHALLENGES PERTAINING TO THE FEDERAL STRUCTURE.

### PRESIDENTS RULE

THE HINDU, PG.NO: 12.

**News:** "When can President's Rule be imposed?"

#### Current situation in Manipur:

- In Manipur, the unprecedented and **horrific violence** that erupted in May 2023, continues unabated.
- **Ordinary people are forced to resort to violence** for self-protection.
- Between May 11 and November 11, 2024, **over 250 people were killed**, and more than a **lakh were displaced** due to ethnic violence.
- Recent **centre's AFSPA intervention in Manipur** has limited impact.
- **Supreme Court's intervention** was **slow and ineffective**. despite there having been 27 hearings.
- State of Manipur reflects a **classic case of the failure of the Constitutional machinery**.
- Situation **demand the immediate intervention of the President**.

#### Emergency Provision's under Part XVIII:

- **Art.355:**
  - Duty of **Centre to protect every State** from external aggression and internal disturbance's.
  - Centre to ensure that every **State govt. operate according to provisions of the Constitution**.
- **Art.356:**
  - Imposition of President's rule, if President **is satisfied**, that State govt. is not functioning according to provisions of Constitution or **"Governor report" or "otherwise"**.
- **Art.365:**
  - Imposition of President's rule, **if State govt. does not comply with directions of Centre**.
- **Note:** Art. 355 was incorporated to check any arbitrary or unauthorised use of Art. 356—**Dr. B.R. Ambedkar**.

#### Important cases on president rule:

- **S.R.Bommai vs Union of India 1994: to restrict misuse.**
  - President rule is subjected to **Judicial Review**.
  - Satisfaction of President must be based on relevant material & **Centre must justify President rule**.
  - If President rule is unconstitutional, **State Legislature can be revived by court**.
  - State Legislature can be dissolved only after parliamentary approval, till then can **only be suspended**.
  - **If State follows anti-secular policy**, Art.356 can be applied.
  - **Floor test of confidence is mandatory** before dismissal of State executive.
  - Art.356 is only a measure of **last resort**.

#### Proper Application President Rule :

- **Hung Assembly situation:** no single party or pre-existing coalition achieves a clear majority.
- If **State goes against Constitutional direction** of Central govt.
- **Internal subversion** Eg. Govt deliberately acting against Constitution or law.
- **Physical breakdown of govt.** law and order i.e, State endangering its security.

P.T.O

#### Misuse of Art.356:

- Dr. B.R. Ambedkar **wished that Art. 355 & 356 should remain as 'dead letters'** but they were misused on several occasions:
  - Removing elected govts.
  - Loss in Loksabha elections.
  - Deterioration of law and order in States.

#### Impacts of President Rule

##### On State Executive:

- President can **suspend** Constitutional provisions of any body of State.
- President can **dismiss Council of Ministers** headed by Chief Minister.
- Can vest State govt. executive powers with Governor or any other authority.

##### On State Legislature:

- **Parliament exercises State Legislature powers.**
- **State budgets & bills passed by Parliament.**
- President can promulgate **ordinances** for State.
- **Laws** made by Parliament or President **continued to operate even after President rule**. Such laws can be repealed or altered by State Legislature.
- **Parliament can dissolve State assembly only after** Parliamentary approval, till then (only suspended)—**S.R. Bommai case**.

- **On Judiciary:** No Impact.

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**"A house divided against itself cannot stand."** This highlights the importance of stable governance, which President's Rule often aims to restore.

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## HEALTH

PRE-CONTEXT

### DISEASES IN NEWS

THE HINDU, PG.NO: 11.

**News:** "Sex work drives mpox clade 1b outbreak in DR Congo."

#### Monkey Pox: Zoonotic disease

- Tropical disease.
- **Recent outbreak** in *DRC, Burundi, Uganda etc.*
- **Caused by** *Monkeypox virus.*
- **Transmission route:** Direct contact (person to person, animal to person), contaminated materials.
- **Testing method** RT-PCR same as COVID-19.
- **Vaccines like** MVA-BN, ACAM2000 etc available.
- **99% of people** infected are *likely to survive.*

#### Zika

- Tropical disease.
- **Caused by:** *Zika Virus* transmitted by *Aedes mosquitoes.*
- **No vaccination or preventive treatment** available.
- **Zika virus infection during pregnancy** can cause infants to be born with *microcephaly* and other *congenital malformations.*

#### Polio

- Caused by *Polio virus.*
- Transmitted through *Oral-Oral, Fecal to Oral, contaminated water and Food.*
- Polio virus attacks the *central nervous system.*

#### Vaccination: two types.

##### Inactivated Polio Vaccine.

- **Contains killed polio virus strains** administered through an *Injection.*
- It is considered safe and effective in preventing polio.

##### Oral Polio Vaccine:

- **Contains Live, attenuated(weakened)** poliovirus strains.
- Provides excellent immunity but in *rare cases it can cause vaccine-derived poliovirus.*
- *India uses Oral Polio vaccine.*
- In April 2022, a *case of vaccine derived polio virus was detected in Kolkata.* So it is argued its time for India to shift to Inactivated polio vaccine.

##### India and polio:

- *India received Polio Free certification from WHO in 2014.*
- **India's initiatives:**
  - **Pulse Polio programme:** to achieve 100% coverage of Oral Polio vaccine in the country administered **to children under age 5.**

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## TECHNOLOGY (BIO)

PRE-CONTEXT

### PRECISION MEDICINE TECHNOLOGIES

THE HINDU, PG.NO: 12.

**News:** "What is the cancer vaccine Russia is offering?"

#### mRNA Therapeutics

- Involves using *messenger RNA (mRNA) molecules to direct cells to produce specific proteins* that can treat or prevent diseases.

##### Approach:

- **Synthetic mRNA** is introduced into body viz vaccines; cells use this mRNA or produce therapeutic proteins.
- mRNA vaccines *do not use any live attenuated virus.*

##### Application:

- **Vaccine development:** COVID-19 vaccine.
- **Cancer immunotherapy:** mRNA instructs cells to produce antigens that trigger an immune response against cancer cells.
- **Protein replacement:** treating diseases caused by missing or defective proteins by supplying the mRNA to produce them.

**Note:** vaccines' are one form of immunotherapy, others include the use of antibodies, CAR T cell therapy, immune checkpoint inhibitors, etc.

#### Gene-Therapy

- A *technique that modifies person's gene* to treat or cure disease. It *involves inserting, altering/silencing, or removing genes* within an *individual's cells.*

##### Types:

- **Somatic Gene Therapy:**
  - Targets non-reproductive cells (blood cells, skin cells etc); changes are not inherited.
  - Used to treat diseases in individuals.
- **Germline Gene Therapy:**
  - Targets reproductive cells (Eggs, Sperm); changes are heritable.
  - Used to treat inherited diseases from family lines.

##### Delivery systems:

- **Modified viruses** are used to deliver genetic material.
- **Non-Viral methods** like Nanoparticles, liposomes electroporation are used to deliver genetic material.

##### Applications:

- **Treating inherited Genetic disorders:** Eg. Hemophilia, Muscular dystrophy and certain immunodeficiencies.
- **Cancer Treatment:** CAR-T therapy to target cancer cells.

#### Organ on Chip

- These **small micro-fluidic devices** containing human cells can *mimic human organ functions on a micro scale.*
- They help researchers **test drug efficacy** with precision.
- They can **reduce the need for animal testing** in drug development.

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**MAPPING**

PRE-CONTEXT

**DEMOCRATIC REPUBLIC OF CONGO**

THE HINDU, PG.NO: 13.

**News:** "Rebels who lost their cause."

**Situation in Democratic Republic of Congo (DRC):**

- Crisis in the (DRC) is back in the spotlight after the **M23 militia**, backed by eastern neighbour **Rwanda**, **captured the mineral rich city of Goma**, which lies on the border of DRC.
- UN estimates suggest that the fighting, which began in January, has taken the lives of more than 2,900 people, displaced close to 7,00,000. .
- **Root cause of the crisis** is generally attributed to the 1994 **Rwandan genocide**, the region has been beset with conflict between the **Hutus and Tutsis** since colonial times.
  - Hutus and Tutsis are two distinct ethnic groups primarily found in Rwanda.

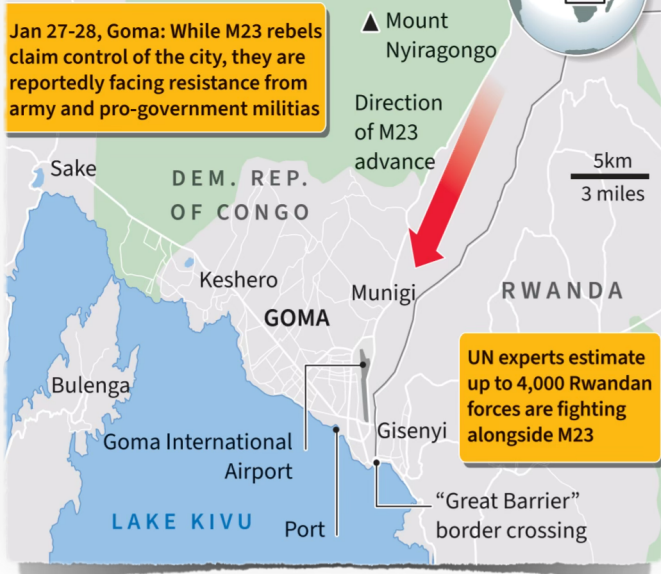
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**THE M23 MILITIA**

- One of about 100 armed factions vying for a foothold in mineral-rich eastern DRC
- Rwandan-backed group which consists primarily of Tutsis who failed to integrate into the Congolese army
- Led major insurgency against the DRC government in 2012, took up arms again in 2022. The group is estimated to have 6,500 fighters



Jan 27-28, Goma: While M23 rebels claim control of the city, they are reportedly facing resistance from army and pro-government militias



UN experts estimate up to 4,000 Rwandan forces are fighting alongside M23

**ENVIRONMENT**

PRE-CONTEXT

**AIR POLLUTION IN DELHI NCR**

THE HINDU, PG.NO: 11.

**News:** "Stubble burning contributes only 14% PM2.5 in Delhi-NCR: study"

**Commission on Air Quality Management in NCR (CAQM):**

- **CAQM replaced the EPCA** (Environmental Pollution (Prevention and Control) Authority) and **established under the NCR & Adjoining Areas Act 2021**.
- **This body frames GRAP** (Graded Response Action Plan).
- CAQM is **constituted by Central Govt.** by notification in NCR and adjoining areas.
- Chairperson appointed by **Central govt.**
- **No powers to punish** violation activities related pollution.
- CAQM **can initiate stringent actions against officers** for not following its orders.

**Multiple reasons for winter Air pollution in Delhi:**

- Slow wind speed, **temperature inversion** (traps pollutants).
- Bursting of firecrackers, **Stubble burning (14%)**
- **Emissions from vehicles (contribute 60%)**, coal-based power plants, brick kilns etc.
- Household sources, **dust (Roads, construction activities)**.
- Of all, **stubble burning** in Punjab and Haryana is **responsible for ~40% of the pollution** during **October and November**.
- In November 2024, **Air pollution in Delhi was 17 times WHO's limit**. Few areas in NCR **reached an AQI of 1700**.
- **Partially unburned exhaust of automobiles** with nitrogen oxides leading to ozone formation.

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**Thank you!**