

GOVERNANCE**Geneva Conventions**

After the Galwan (India-China) clash in Ladakh in June 2020, the International Committee for the Red Cross (ICRC) urged both the Indian and Chinese governments that they observe the Geneva Conventions to which both countries are signatories.

Key Points

- The Geneva Conventions (1949) and their Additional Protocols are international treaties that contain the most important rules limiting the barbarity of war.
- They protect people who do not take part in the fighting (civilians, medics, aid workers) and those who can no longer fight (wounded, sick and shipwrecked troops, prisoners of war).
 - ❖ The first Geneva Convention protects wounded and sick soldiers on land during war.
 - ❖ The second Geneva Convention protects wounded, sick and shipwrecked military personnel at sea during war.
 - ❖ The third Geneva Convention applies to prisoners of war.
 - ❖ The fourth Geneva Convention affords protection to civilians, including in occupied territory.
- Article 3, common to the four Geneva Conventions, covers situations of non-international armed conflicts. They include traditional civil wars, internal armed conflicts that spill over into other States or internal conflicts in which a third State or a multinational force intervenes alongside the government.
- Two Protocols of 1977: Additional to the four 1949 Geneva Conventions were adopted in 1977. They strengthen the protection of victims of international (Protocol I) and non-international (Protocol II) armed conflicts and place limits on the way wars are fought.
- In 2005, a third Additional Protocol was adopted creating an additional emblem, the Red Crystal, which has the same international status as the Red Cross and Red Crescent emblems.
- The International Committee for the Red Cross (ICRC), an international humanitarian organisation, has the mandate to monitor that signatories follow the rules in situations of conflict.
 - ❖ Established in 1863, the ICRC operates worldwide, helping people affected by conflict and armed violence and promoting the laws that protect victims of war.
 - ❖ An independent and neutral organization, based in Geneva, Switzerland.
 - ❖ The ICRC is funded mainly by voluntary donations from governments and from National Red Cross and Red Crescent Societies.

SCIENCE AND TECHNOLOGY**Saviour Sibling**

Recently, doctors successfully conducted India's first 'saviour sibling' experiment.

- The Saviour Sibling named Kavya saved her 6-year-old brother (suffering from Thalassemia).
- 150- 200 ml bone marrow was harvested from Kavya in an hour-long procedure and then given to her brother Abhijeet through transfusion.
- Kavya suffered low haemoglobin for some time but it was corrected with supplements and she also endured some pain in the areas from where the marrow was taken for a few days. Presently, both Kavya and Abhijeet are healthy.

Key Points

- 'Saviour Sibling' refers to babies that are created to serve an older sibling as a donor of organs, bone marrow or cells.
- Stem cells from the umbilical cord blood or blood of the saviour sibling are used for treatment of serious blood disorders like thalassemia, sickle cell anaemia.
- They are created with In vitro fertilisation (IVF) so that they can undergo pre-implantation genetic diagnosis (or testing) to rule out any genetic disorders and also check bone marrow compatibility.
- Pre-implantation Genetic Testing (PGT) refers to the genetic profiling of embryos. It is used to screen embryos for genetic diseases or chromosomal abnormalities.
- From each embryo, PGT takes a biopsy of only a few cells and conducts a genetic analysis.
- This analysis can search to exclude embryos carrying a genetic variant that causes a hereditary disease, and it can search to find embryos that are an Human Leukocyte Antigen (HLA) match to a sibling.
- HLA is a type of molecule found on the surface of most cells in the body. These play an important part in the body's immune response to foreign substances.

- These make up a person's tissue type, which varies from person to person.
- HLA typing is important in organ transplantation protocols, as they determine the likelihood of rejection.
- The world's first saviour sibling, Adam Nash, was born in 2000 in the USA.

Need:

- For those families with a child that requires a stem cell transplant, often there is a hurdle of finding a donor for the transplant.
- A successful transplant requires an HLA match between donor and recipient. However, the probability of finding a suitable match among family members is about 30% overall.
- Ethical Considerations and Implications: In a 2004 paper published in the Journal of Medical Ethics, UK researchers debated whether selecting saviour siblings should be banned.

They studied the arguments to ban it:

- That saviour siblings would be wrongfully treated as means rather than ends.
- They would cause or constitute a slide towards designer babies,
- They would suffer physically and/or emotionally.
- But the paper found these arguments to be flawed. It concluded that the selection of saviour siblings should be permitted, especially given that prohibiting it would result in the preventable deaths of a number of existing children.

In vitro Fertilisation

- IVF is one of the more widely known types of Assisted Reproductive Technology (ART).
- In vitro comes from the latin word 'in glass', i.e. studies are done in a test tube rather than in a human or animal.
- The opposite to 'In-vitro' is 'In-vivo', which comes from the latin word 'within the living'. In vivo refers to experimentation being done in a living organism.
- In vitro means outside the body. Fertilization means the sperm has attached to and entered the egg.
- During IVF, mature eggs are collected (retrieved) from the ovaries and fertilized by sperm in a lab. Then the fertilized egg (embryo) or eggs (embryos) are transferred to a uterus.

Way Forward

Currently there is a significant gap between the biotechnology advancements in prenatal testing versus the necessary legal and ethical framework. It is imperative that legal and ethical standards be set for the benefit of both the families and professionals involved in the creation of savior children.

INDIAN ECONOMY**GST Compensation: Centre to borrow on behalf of States**

Recently, the Centre has decided to borrow an estimated revenue shortfall of Rs. 1.1 lakh crore as loans to States to meet the Goods and Services Tax (GST) shortfall.

Key Points**Borrowing:**

- The borrowing will not have any impact on the fiscal deficit of the Government of India as the Centre is acting as mediator only. The Centre is borrowing the loan and passing that on to the states.
- The amounts will be reflected as the capital receipts of the state governments and as part of financing of its respective fiscal deficits.

Background:

- The economic slowdown had reduced both GST and cess collections in FY 2019-20, resulting in a 40% gap (shortfall) between the compensation paid and cess collected.
- The state's GST revenue gap in 2020-21 is expected to be about Rs. 3 lakh crore, while cess collections are only projected to reach Rs. 65,000 crore, leaving a shortfall of Rs. 2.35 lakh crore.

The Centre distinguished the GST shortfall into two types:

- Due to GST implementation itself.
- Caused by the impact of Covid-19.
- The Finance Minister termed the fall of GST revenue due to Covid-19 as an act of God. However, the GST Compensation Act, 2017 did not foresee an act of God.
- The GST Compensation Act, 2017 guaranteed states that they would be compensated for any loss of revenue in the first five years of GST implementation, until 2022, using a cess levied on sin and luxury goods.
- The Centre has been at loggerheads with many states over the compensation issue due to GST shortfall. In August 2020 at GST Council meet, the Centre had proposed two options to states to meet the shortfall:

- A special window could be provided, in consultation with the Reserve Bank of India (RBI), so that the states can get Rs. 97,000 crore at a reasonable rate of interest, the amount can be repaid after five years (of GST implementation) ending 2022 from cess collection.
- Another option is that this entire gap of Rs. 2.35 lakh crore can be met by the borrowing by the states in consultation with RBI.
- However, many states were against these two options and were planning to move the Supreme Court over the issue.

Benefits:

- The borrowing by the Centre would avoid differential rates of interest that individual states may be charged for their respective State Development Loans (SDLs) and would be an administratively easier arrangement.
- The country's general government debt, which includes both the Centre's and States' borrowings will not increase due to this step.
- The States that get the benefit from the Special Window are likely to borrow a considerably lesser amount from the additional borrowing facility of 2% of Gross State Domestic Product under Atma Nirbhar Package.
- The borrowing limits of state governments was increased from 3% to 5% of GSDP for the year 2020-21 under Atma Nirbhar Package.

Goods and Services Tax

- GST was introduced through the 101st Constitution Amendment Act, 2016.
- It is an indirect tax levied on the supply of final goods and services. The GST has subsumed indirect taxes like excise duty, Value Added Tax (VAT), service tax, luxury tax etc.
- It is essentially a consumption tax and is levied at the final consumption point.
- It is levied only on the value addition and is collected on goods and services at each point of sale in the supply line.
- The GST that a merchant pays to procure goods or services (i.e. on inputs) can be set off later against the tax applicable on supply of final goods and services. The set off tax is called input tax credit.
- The GST avoids the cascading effect or tax on tax which increases the tax burden on the end consumer.

Tax Structure under GST:

- Central GST to cover Excise duty, Service tax etc, State GST to cover VAT, luxury tax etc.
- Integrated GST to cover inter-state trade.
- IGST per se is not a tax but a system to coordinate state and union taxes.
- It has a 4-tier tax structure for all goods and services under the slabs- 5%, 12%, 18% and 28%.

ENVIRONMENT AND DIVERSITY**Right of Passage of the Animals**

Recently, the Supreme Court (SC) upheld the 2011 order of the Madras High Court (HC) on the Nilgiris elephant corridor, affirming the right of passage of the animals and the closure of resorts in the area.

Key Points**Madras HC Judgement:**

- In 2011, the Madras HC upheld the validity of the Tamil Nadu government's notification (of 2010) declaring an 'Elephant Corridor' in the Sigur Plateau of Nilgiris District.
- It said that the government is fully empowered under the 'Project Elephant' of the Union government as well as Article 51 A(g) of the Constitution to notify the elephant corridor in the state's Nilgiris district.
- Article 51 A(g): It shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creatures.
- Further, it upheld directions to the resort owners and other private landowners to vacate lands falling within the notified elephant corridor.

Highlights of the SC Judgement:

- It's the State's duty to protect a "keystone species" like elephants, which are immensely important to the environment.
- Keystone species, in ecology, a species that has a disproportionately large effect on the communities in which it lives.

- Elephant corridors allow elephants to continue their nomadic mode of survival, despite shrinking forest cover, by facilitating travel between distinct forest habitats. These corridors play a crucial role in sustaining wildlife by reducing the impact of habitat isolation.
- The court also allowed the formation of a committee led by a retired HC judge and two other persons to hear the individual objections of resort owners and private landowners within the corridor space.
- However, during the hearings, the SC opined that the area is a fragile ecosystem, where the will of men must give way to elephants.

Nilgiris Elephant Corridor:

- The corridor is situated in the ecologically fragile Sigur plateau, which connects the Western and the Eastern Ghats and sustains elephant populations and their genetic diversity.
- It is situated near the Mudumalai National Park in the Nilgiris district.
- It has the Nilgiri hills on its southwestern side and the Moyar river valley on its northeastern side.
- There are about 100 elephant corridors in India of which almost 70% are used regularly.
- 75% of the corridors are in the southern, central and north-eastern forests.
- There are an estimated 6,500 elephants in just the Brahmagiri-Nilgiris-Eastern Ghats ranges.
- **Challenges for Elephant Corridors:** ‘Right of Passage’, an 800-page study released in August 2017, authored by experts and published by the Wildlife Trust of India (WTI) identifies and records details pertaining to 101 elephant corridors across India.
- **Narrowing Passage Width:** Only 22% corridors are of a width of one to three kilometres in 2017, compared with 41% in 2005, pointing to how constricted corridors have become in the past 12 years.
- **Human Encroachment of Corridors:** 21.8% of corridors were free of human settlements in 2017 compared with 22.8% in 2005, and 45.5% have 1-3 settlements in 2017 compared with 42% in 2005.
- **Intercepted Corridors:** About 36.4% of the elephant corridors in northwestern India, 32% in central India, 35.7% in northern West Bengal and 13% of the elephant corridors in northeastern India have a railway line passing through them.
- Almost two-thirds of the corridors have a National or State Highway passing through them, fragmenting habitats and hindering elephant movement further.
- 11% of corridors have canals passing through them.
- 12% are affected by mining and the extraction of boulders.
- **Land-use Along Corridors:** In terms of land use, only 12.9% of the corridors are totally under forest cover in 2017 compared with 24% in 2005.
- Two in every three elephant corridors in the country are now affected by agricultural activities.
- All the corridors in northern West Bengal (100%) and almost all in central India (96%) and northeastern India (52.2% under settled cultivation and 43.4% under slash and burn cultivation) have agricultural land.

Asian Elephant

- There are three subspecies of Asian elephant – the Indian, Sumatran and Sri Lankan.
- The Indian has the widest range and accounts for the majority of the remaining elephants on the continent.
- Escalation of poaching, habitat loss, human-elephant conflict and mistreatment in captivity are some common threats to both African and Asian elephants.
- African elephants are listed as “vulnerable” and Asian elephants as “endangered” in IUCN Red List of threatened species.

CITES status:

- Appendix I for Asian Elephants.
- Appendix II for African elephants in Botswana, Namibia, South Africa and Zimbabwe.

Conservation Efforts:

- Project Elephant launched by the Government of India in the year 1992 as a Centrally Sponsored Scheme. Elephant census is conducted once in 5 years under the aegis of Project elephant.
- Establishment of elephant reserves and adoption of the “World Elephant Day” (August 12) to help conserve and protect elephants in India.
- ‘Gaj Yatra’ a nationwide awareness campaign to celebrate elephants and highlight the necessity of securing elephant corridors.
- The Monitoring the Illegal Killing of Elephants (MIKE) programme, launched in 2003, is an international collaboration that tracks trends in information related to the illegal killing of elephants from across Africa and Asia, to monitor effectiveness of field conservation efforts.

Way Forward

- The judgement sets the pace for better, more effective laws for the protection of elephant corridors across India.
- Illegal structures in these pathways should be removed without delay as the first step.
- Elephant Corridors are not fully protected areas. Therefore, the need is to ensure their protection. This needs political will.
- People should be encouraged to avoid critical elephant migratory routes. Conservation is an achievement only if local communities are also involved in the process.

INTERNATIONAL AFFAIRS

65th Anniversary of the Bandung Conference : NAM

The year 2020 marks the 65th anniversary of the landmark Bandung Conference that resulted in the adoption of the founding principles of the Non-Aligned Movement (NAM).

- The basic concept for NAM originated in 1955 during discussions that took place at the Asia-Africa Bandung Conference held in Indonesia.

Key Points

- The milestone of the 65th anniversary is a good time to reflect upon the philosophy behind the movement.
- India reiterated that NAM never was and can never be a platform for pursuits that undermine the territorial integrity of a State by another State.
- India will deploy her rich developmental experience for the peace and welfare of humanity, treating the world as one family.
- India also emphasized that in order to make NAM a relevant entity in the global decision making process, its members must avoid raising issues that divide the forum.
- Covid-19 is a reminder of the interconnectedness and dependence of NAM members on each other.
- Members must work to reduce the socio-economic impact of the pandemic on the most vulnerable sections of society. NAM's unique tradition of promoting South-South cooperation can provide a way out as societies look to rebuild and regenerate in the wake of this crisis.
- Apart from the global pandemic, terrorism, climate change, cybersecurity threats and the uneven impact of frontier technologies (Artificial Intelligence, robotics, Internet of Things, etc.) and development concerns are few other challenges which can only be tackled if all the members work together.
- The strength of the NAM lies in its diversity, its shared developmental experience, and its youthful populations.

Non-Aligned Movement

Background:

- It was formed during the Cold War as an organisation of States that did not seek to formally align themselves with either the USA (Capitalism) or the Soviet Union (Socialism) but sought to remain independent or neutral.

Foundation:

- Six years after the Bandung Conference, the Movement of Non-Aligned Countries was founded on a wider geographical basis at the First Summit Conference of Belgrade, which was held in September 1961.
- It was held under the leadership of Josip Broz Tito of Yugoslavia, Gamal Abdel Nasser of Egypt, Jawaharlal Nehru of India, Kwame Nkrumah of Ghana, and Sukarno of Indonesia.

Purpose:

- The purpose of the organisation was enumerated in the Havana Declaration of 1979 to ensure "the national independence, sovereignty, territorial integrity and security of non-aligned countries" in their struggle against imperialism, colonialism, neo-colonialism, racism, and all forms of foreign subjugation.

Members and Observers:

- It has 120 members as of April 2018 comprising 53 countries from Africa, 39 from Asia, 26 from Latin America and the Caribbean and 2 from Europe.
- There are 17 countries and 10 international organisations that are Observers at NAM.

Headquarters:

- NAM does not have a formal constitution or permanent secretariat, and its administration is non-hierarchical and rotational.

- Decisions are made by consensus, which requires substantial agreement, but not unanimity.

Way Forward

- Even if members call for effective and reformed multilateralism, they need to introspect, reform and revitalise the current arrangements of their own movement, which will enable them to pursue a focused, positive and transformative agenda going forward.
- The NAM has a glorious past but the future will depend on how the member nations perform in addressing the defining challenges of the current era, which could be solved easily with the help of the principles of solidarity and cooperation.

IMPORTANT FACTS FOR PRELIM

Wheat Variety MACS 6478

The wheat variety called **MACS 6478** has doubled the crop yield for farmers in Karanjkhop, a village in Maharashtra.

Key Points

- **Developed By:** Scientists from Agharkar Research Institute (ARI), Pune- an autonomous institute of the Department of Science and Technology (DST).

Features:

- A common wheat or bread wheat (*Triticum aestivum*).
- Other popular wheat varieties are durum wheat (*T. durum*) and club wheat (*T. compactum*).
- Hybrid Crop, i.e. produced by the cross-breeding of two genetically different varieties or species. Hybrids are often spontaneously and randomly created in nature when open-pollinated plants naturally cross-pollinate with other related varieties (not genetically modified).
- Matures in 110 days and is resistant to most races of leaf and stem rust.
- This is against the normal maturing attained after 140 to 150 days, required for wheat varieties cultivated commonly in northern India.
- This amber colored medium sized grain contains 14% protein, 44.1 ppm (parts per million) zinc and 42.8 ppm iron which is higher than other cultivated varieties.
- Farmers get a yield of 45-60 quintal per hectare with the new variety as against earlier average yield ranging 25-30 quintal per hectare when they cultivated Lok 1, HD 2189 and other old varieties.

Other ARI Wheat Variety (MACS 4028):

- This bio-fortified durum variety has very high protein (14.7%), iron (46.1 ppm) and zinc (40.3 ppm) content, compared to the corresponding levels of 8-10%, 28-32 ppm and 30-32 ppm in normally-grown varieties.
- Biofortification is the process by which the nutritional quality of food crops is improved through agronomic practices, conventional plant breeding, or modern biotechnology.
- Maturing in just over 100 days, it is suitable for cultivation in rainfed and low fertility conditions in Maharashtra and Karnataka.
- It was chosen for a UNICEF-funded Farming System for Nutrition project, operated through the Indian Council of Agricultural Research's (ICAR) Krishi Vigyan Kendras (KVK), as part of the National Nutrition Strategy.
- ARI has also bred MACS 2971, a high-yielding variety of the traditionally cultivated dicoccum (also known as 'khopli') wheat that is rich in dietary fibre.
- The Karan Vandana (DBW 187) wheat variety, developed by the Indian Institute of Wheat and Barley Research (IIWBR) under the Indian Council of Agricultural Research (ICAR), is used for cultivation in North Eastern Plains Zones.

Other Recent Activities by ARI

- Found the first synthetic route for producing flavonoids molecules related to the treatment of tuberculosis and chikungunya.
- Found that the colour of Lonar lake water in Maharashtra's Buldhana district turned pink due to a large presence of the salt-loving 'Haloarchaea' microbes.
- Mapped two alternative dwarfing genes Rht14 and Rht18 in wheat that can help in reducing rice crop residue burning i.e. stubble burning.
- Isolated and cultivated 45 different strains of methanotrophs (methane-utilising bacteria) and created the first indigenous methanotroph culture.
- A study on biogenic methane hydrate in the Krishna-Godavari (KG) Basin.

DAILY ANSWER WRITING PRACTICE

Qns. Autonomous bodies are very crucial to the government's functioning. In the light of the statement critically discuss the role of Autonomous Bodies and their governance issue. (250 words)

Ans.

Autonomous Bodies are set up whenever it is felt that certain functions need to be discharged outside the governmental set up with some amount of independence and flexibility without day-to-day interference of the Governmental machinery.

These are set up by the Ministries/Departments concerned with the subject matter and are funded through grants-in-aid, either fully or partially, depending on the extent which such institutes generate internal resources of their own.

Role of Autonomous Bodies (ABs)

- Autonomous bodies are a major stakeholder in the government's functioning as they are engaged in diverse activities, ranging from formulating frameworks for policies, conducting research, and preserving the cultural heritage, etc.
- The apex administrative body of ABs is called governing council or governing body and is chaired by the minister or the secretary of the respective ministry.
- These Autonomous Bodies have specialised committees such as the purchase committee, works committee, finance committee, with nominated ministry officials.
- ABs is set up by the government for a specific purpose and are independent in day-to-day functioning.

Issues with Autonomous Bodies

- **Accountability:** These bodies are funded by taxpayer's money. However, there have been complaints that they don't follow the policies of the government and are not accountable the way the government departments are.
- Even though the senior ministry officials are required to attend ABs' committee meetings, they mostly don't due to their busy schedules.
- **Opaque Recruitment:** ABs employ a considerable number of people. For example, the Indian Council of Agricultural Research, an Autonomous Body under the ministry of agriculture, has almost 17,000 employees.
- However, unlike the government and the public sector undertakings, in which the recruitment rules are uniform and the recruitment is done by a centralised body such as SSC, UPSC, there is no such body for such recruitments.
- **Non-Adherence to Envisaged Goal:** The boards have fallen into disuse and did not serve the purpose for which they were envisioned.
- The boards were merely advisory in nature and failed to impact on influencing policy-making while they became vehicles of "political patronage" with the emergence of a 'middleman culture' that did not help the interests of weavers.
- **Non Uniform Auditing:** There is no uniform audit procedure. Some ABs are audited by CAG whereas many are done by chartered accountants.

Way Forward

- **Legal Framework:** A legal framework should be devised which defines the boundaries of its working, its autonomy, and the various policies that it must follow. This will simultaneously help identify the numbers.
- **Comprehensive Review:** Each ministry will need to undertake a comprehensive review of ABs under their jurisdiction.
- ABs that have outlived the cause for which they were established may need to be closed or merged with a similar organisation or their memorandum altered as per the new charter.
- **A Pan India Recruitment Agency:** To bring about uniformity in the policies, a task force needs to be set up under a pan-Indian agency such as SSC or UPSC.
- It will streamline the recruitment rules, salary structure, allowance and perks paid to employees, and mode of recruitment.
- **Collaborated Approach:** To ensure the participation of ministry officials, committee meetings of similar ABs should be held together so that the appropriate authorities could provide meaningful suggestions.
- **Uniform Independent Auditing:** Audits of ABs should be undertaken by an independent agency. CAG had done an exhaustive performance audit of autonomous scientific bodies in 2016, highlighting the gaps in their performance.

- Such a theme-based audit should be done for other ABs as well.

Conclusion

All these years on, these ABs have remained the one official forum however watered down, where the voices and views of different stakeholders could be expressed directly. There is an urgent need to define them properly, bring uniformity in their policies, facilitate senior officials' attendance in their meetings, and seek independent audits.

DAILY QUIZ

1. With reference to Non-Alignment Movement (NAM), consider the following statements:

1. The concept of NAM originated from the Balfour Declaration.
2. The first summit of NAM was held at Bandung in 1961.
3. The headquarters of NAM is located in Kathmandu.

Which of the statements given above is/are not correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3**

2. With reference to Geneva Conventions (1949), consider the following statements:

1. It is an international treaty that contains rules limiting the barbarity of war.
2. The convention only protects wounded and sick soldiers on land during war.
3. UN Human Rights Council monitors signatories to follow the rules in situations of conflict.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 1 only**
- c) 3 only
- d) 1, 2 and 3

3. Consider the following statements regarding the 'Saviour Sibling':

1. It refers to the babies that are created to serve an older sibling as a donor of bone marrow.
2. The babies are born via the natural process with In-vivo fertilisation.

Which of the given statements is/are not correct?

- a) 1 only
- b) 2 only**
- c) Both 1 and 2
- d) Neither 1 nor 2

4. In which of the following states Inner Line Permit is applicable?

1. Manipur
2. Arunachal Pradesh
3. Nagaland

Select the correct answer using the code given below:

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3**

5. With reference to the GST cess, consider the following statements:

1. It is levied on all the goods and services that are traded either intrastate or interstate.
2. It is levied for compensating the States for the loss of revenue arising on account of GST implementation.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only**
- c) Both 1 and 2
- d) Neither 1 nor 2