

SAMACHAR MANTHAN

WEEK 01

24 - 30 May
2021

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24 - 30 May 2021

THIS WEEK'S HOTTEST STORIES

Health Sector - UHC, National Health Policy, Family Planning, Health Insurance, etc.

Tax Reforms

Freedom of Speech - Defamation, Sedition, etc.

Social Media: Prospect and Challenges

Global Geological And Climatic Events

Historical and Archaeological Findings in News

Coronavirus - Health and Governance Issues

Coronavirus - Economic Issues

Coronavirus - Disease, Medical Sciences Involved & Preventive Measures

GOVERNMENT BUDGETS

challenges the second Covid wave poses to India's path to fiscal consolidation.

Economics | GS3: Indian Economy

Note4Students | From UPSC perspective, the following things are important :

Prelims level : Tax buoyancy

Mains level : Paper 3- Recalibration of growth projections

Recalibration to growth projection due to second Covid wave

- The growth projections of different national and international agencies and the fiscal projections of Centres 2021-22 Budget require recalibration.
- The International Monetary Fund (IMF) had forecast real GDP growth for 2021-22 at 12.5%.
- The Reserve Bank of India (RBI) had forecast real GDP growth for 2021-22 at 10.5%.
- The Ministry of Finances Economic Survey had forecast real GDP growth for 2021-22 at 11.0%.

Growth rate of 8.7% to keep GDP at same level as in 2019-20

- Moody's has recently projected India's GDP growth in 2021-22 at 9.3%.
- **Benchmark growth rate:** 9.3% is close to the benchmark growth rate of 8.7% which would keep India's GDP at **2011-12 prices at the same level as in 2019-20**.
- This level of growth may be achieved based on the assumption that the economy normalises in the second half of the fiscal year.
- The 2019-20 **real GDP was 145.7-lakh crore** at 2011-12 prices.
- It fell to 134.1-lakh crore in 2020-21, implying a **contraction of minus 8.0%**.
- At 8.7% real growth, the **nominal GDP growth would be close to 13.5%**, assuming an inflation rate of 4.5%.
- This would be lower than the **nominal growth of 14.4% assumed in the Union Budget**.
- At 13.5% growth, the estimated GDP for 2021-22 is **222.4-lakh crore at current prices**.
- **Impact:** This will lead to a **lowering of tax and non-tax revenues** and an increase in the fiscal deficit as compared to the budgeted magnitudes.

How much the gross tax revenue would be impacted?

- The budgeted gross and net tax revenues for 2021-22 were 22.2-lakh crore and 15.4-lakh crore, respectively.
- The assumed **buoyancy** for the Centres gross tax revenues (GTR) was 1.2.

- If, however, the buoyancy of 1.2 proves optimistic and instead a buoyancy of 0.9, which is the average buoyancy of the five years preceding the COVID-19 year, **is applied, the nominal growth of GTR would be 12.2%**.
- This would lead to **the Centres GTR of about 21.3-lakh crore**.
- The corresponding shortfall in the Centres net tax revenues is estimated to be about **0.6 lakh crore**.
- The budgeted magnitudes for **non-tax revenues and non-debt capital receipts** at 2.4-lakh crore and 1.9-lakh crore, respectively, may also prove to be optimistic.
- In these cases, the budgeted growth rates were 15.4% and 304.3%, respectively.
- The excessively high growth for the non-debt capital receipts was premised on implementing an ambitious **asset monetisation and disinvestment programme**.
- Together with the tax revenue shortfall of nearly 0.6 lakh crore, the total shortfall on the receipts side may be **about 2.1-lakh crore**.

Impact on fiscal deficit estimates

Two factors will affect the fiscal deficit estimate of 6.76% of GDP in 2021-22.

- First, there would be a **change in the budgeted nominal GDP growth**.
- Second, there would be a **shortfall in the receipts from tax, non-tax and non-debt sources**.
- Together, these two factors may lead to a slippage in fiscal deficit which may be **close to 7.7% of GDP in 2021-22 if total expenditures are kept at the budgeted levels**.
- This would call for revising the fiscal road map again.
- **Protecting total expenditures at the budgeted level** is, however, important given the need to support the economy in these challenging time.

Vaccination policy and role of Central government

- **Positive externalities:** COVID-19 vaccination is **characterised by strong inter-State positive externalities**, making it primarily the responsibility of the central government.
- The entire vaccination bill should be **borne by the central government**.
- If the central government is the single agency for vaccine procurement, **the economies of scale** and the Centres **bargaining power** would keep the average vaccine price low.
- The central government **may transfer the vaccines rather than the money** that it has budgeted for transfer.

- Some of the smaller States may find procuring vaccines through a global tender to be quite challenging.

Conclusion

Protecting total expenditures at the budgeted level and mass vaccination are important in India's pandemic situation.

Back2basics: Tax buoyancy

- There is a strong connection between the governments tax revenue earnings and economic growth.
- Tax buoyancy explains this relationship between the **changes in governments tax revenue growth and the changes in GDP**.
- It refers to the **responsiveness of tax revenue growth to changes in GDP**.

- When a tax is buoyant, its **revenue increases without increasing the tax rate**.
- In 2007-08, everything was fine for the economy, **GDP growth rate was nearly 9 per cent**.
- Tax revenue of the government, especially, that of direct taxes registered a growth rate of 45 per cent in 2007-08.
- We can say that the **tax buoyancy was five (45/9)**.

What is tax elasticity?

- It refers to changes in tax revenue in response **to changes in tax rate**.
- For example, how tax revenue changes if the government reduces corporate income tax **from 30 per cent to 25 per cent indicate tax elasticity**.

TRADE SECTOR UPDATES - FALLING EXPORTS, TIES, MEIS, FOREIGN TRADE POLICY, ETC.

Global minimum Corporate tax

Economics | GS3: Indian Economy

Note4Students | From UPSC perspective, the following things are important :

Prelims level : Base Erosion and Profit Shifting

Mains level : Paper 3- Global minimum tax and its impact

What is global minimum tax

- Treasury Secretary Janet Yellen has thrown the weight of the U.S. government behind a push for a **global corporate minimum tax rate**.
- It is being proposed that the race to the bottom for corporate tax rates be reversed.
- For example**, assume Country A has a corporate tax rate of 20 percent and Country B has a corporate tax rate of 11 percent. If the global minimum tax rate is 15 percent. Consider a situation, where Company X is headquartered in Country A, but it reports income in Country B. Then Country A will increase the taxes paid by Company X. This is equal to the percentage-point difference between Country Bs rate and the global minimum rate(15 percent). In short, Company X will have to pay an additional 4 percent of the tax to Country A

- The US proposal envisages a **21% minimum corporate tax rate, coupled with cancelling exemptions on income from countries** that do not legislate a minimum tax to discourage the shifting of multinational operations and profits overseas.
- The proposal for a minimum corporate tax is **tailored to address the low effective rates of tax shelled out by some of the worlds biggest corporations**, including digital giants such as Apple, Alphabet and Facebook, as well as major corporations such as Nike and Starbucks.
- These companies typically **rely on complex webs of subsidiaries to hoover profits out of major markets into low-tax countries** such as Ireland or Caribbean nations such as the British Virgin Islands or the Bahamas, or to central American nations such as Panama.

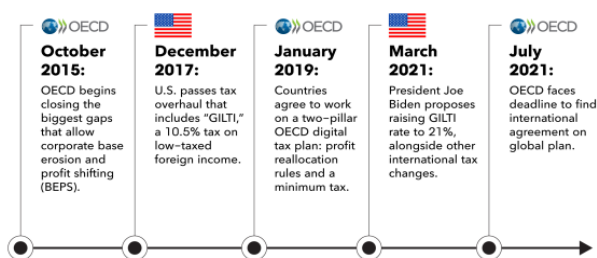
US Reasons for the Proposal:

- The proposal **aims to somewhat offset any disadvantages** that might arise from the **proposed increase in the US corporate tax rate**.
- The proposed increase to 28% from 21% would partially reverse the previous cut in tax rates on companies from 35% to 21% by way of a 2017 tax legislation.
- The increase in corporation tax **comes at a time when the pandemic is costing governments across the world**, and is also timed with the USs push for a USD 2.3 trillion infrastructure upgrade proposal.

Proposal on a Global Minimum Corporate Tax Rate:

The Path to a Global Minimum Tax Agreement

Nearly 140 countries are trying to find agreement on a global plan while the U.S. proposes hiking its own minimum tax rate.



Bloomberg Tax & Accounting

Significance:

- A global compact on this issue, at the time of pandemic, **will work well for the US government and for most other countries in western Europe**, even as some low-tax European jurisdictions such as the Netherlands, Ireland and Luxembourg and some in the Caribbean rely largely on **tax rate arbitrage** to attract MNCs.
- The plan to peg a minimum tax on overseas corporate income **seeks to potentially make it difficult for corporations to shift earnings offshore**.

- The **average headline corporate tax rate in advanced economies has fallen** from 32% in 2000 to just over 23% by 2018.
- That is largely because **smaller countries such as Ireland, the Netherlands and Singapore have attracted footloose businesses by offering low corporate tax rates.**
- Footloose industry is a general term for an industry that can be placed and located at any location without effect from factors such as resources or transport.
- **Multinational companies** with increasingly intangible assets such as the global tech firms **have shifted some actual business and a lot of profits into these tax havens and low-tax jurisdictions**, lowering their global tax bills.

International Response:

- The European Commission backed the proposal, but the global minimum rate should be decided after discussions in the **Organisation for Economic Cooperation and Development (OECD)**.
- The European nations, including Germany and France have supported the US proposal.
- The OECD and Group of Twenty (G20) have been leading the **Base Erosion and Profit Shifting (BEPS) initiative** a multilateral negotiation with over 135 countries, including the United States since 2013.
- **BEPS** refers to tax planning strategies used by multinational enterprises that exploit gaps and mismatches in tax rules to avoid paying tax.
- **China** is not likely to have a serious objection with the US call, but an **area of concern** for Beijing would be the **impact of such a tax stipulation on Hong Kong**, the seventh-largest tax haven in the world and the largest in Asia.
- The US proposal also has support from the **International Monetary Fund (IMF)**.

Challenges:

- **The proposal impinges on the right of the sovereign to decide a nation's tax policy.**
- Taxation is ultimately a sovereign function, and depending upon the needs and circumstances of the nation, the government is open to participate and engage in the emerging discussions globally around the corporate tax structure.
- A global minimum rate **would essentially take away a tool that countries use to push policies that suit them.** A lower tax rate is a tool they can use to alternatively push economic activity.
- For instance, in the backdrop of the pandemic, IMF and World Bank data suggest that developing countries with less ability to offer mega stimulus packages may experience a longer economic hangover than developed nations.
- A global minimum tax rate **will do little to tackle tax evasion.**

India's Position

- Indian Government has said that it is open to participate and engage in discussions about the Global Minimum corporate tax structure.
- It said that the government will look into the pros and cons of the new proposal and take a view thereafter.

Steps taken by India to implement Global Minimum tax

1. Cut in Corporate Tax:

- In a bid to revive investment activity, the Finance Minister announced, in September 2019, a sharp cut in corporate taxes for domestic companies to 22% and for new domestic manufacturing companies to 15%.

- The **Taxation Laws (Amendment) Act, 2019** resulted in the insertion of a section (115BAA) to the Income-Tax Act, 1961 to provide for the concessional tax rate of 22% for existing domestic companies subject to certain conditions including that they do not avail of any specified incentive or deductions.
- Also, the existing domestic companies opting for the concessional taxation regime will **not be required to pay any Minimum Alternate Tax.**
- The cuts effectively **brought India's headline corporate tax rate broadly at par with the average 23% rate in Asian countries.**
- China and South Korea have a tax rate of 25% each, while Malaysia is at 24%, Vietnam at 20%, Thailand at 20% and Singapore at 17%.
- The effective tax rate, inclusive of surcharge and cess, for Indian domestic companies is around 25.17%.
- The average corporate tax rate stands at around 29% for existing companies that are claiming some benefit or the other.

2. Equalisation Levy:

- To **address the challenges posed by the enterprises who conduct their business through digital means** and carry out activities in the country remotely, the government has the **Equalisation Levy.**
- The equalization levy is **aimed at taxing foreign companies which have a significant local client base in India** but are billing them through their offshore units, effectively escaping the country's tax system.
- The Income-tax Act, 1961 has been amended to bring in the concept of **Significant Economic Presence** for establishing business connection in the case of non-residents in India.

3. Agreements for Exchange of Information:

- India has been proactively engaging with foreign governments with a view to facilitating and enhancing exchange of information under **Double Taxation Avoidance Agreements, Tax Information Exchange Agreements and Multilateral Conventions** to plug loopholes.
- Such agreements **promote cooperation in tax matters.**
- Besides, **effective enforcement actions** including expeditious investigation in foreign assets cases have been launched, including searches, enquiries, levy of taxes, penalties, etc.

Consider the question "What are the reasons that led to the idea of global minimum tax? How it will impact India?"

Way Forward:

- Government must **engage with global players to ensure that the interests** of developing countries are not harmed.
- Corporate global minimum tax along with taxation of companies in the country where they are operating can help in minimizing the inequality. The need of the hour is to tax the wealthy more for welfarism.

Conclusion

For the rise in US tax rates to pay off, it requires other countries to reform their tax systems accordingly and, most importantly, allow for the taxation of incomes that are perceived to be undertaxed.

B2BASICS- BEPS

Base erosion and profit shifting refers to corporate tax planning strategies used by multinationals to "shift" profits from higher-tax jurisdictions to lower-tax jurisdictions, thus "eroding" the "tax-base" of the higher-tax jurisdictions

Please refer the Global minimum Corporate tax infographics on Page number 42 (at the end)

COVID & Economic Inequality

Economics | GS3: Inclusive Growth & Issues, Indian Economy
 Note4Students | From UPSC perspective, the following things are important :
 Prelims level : Not much
 Mains level : Paper 3- Worsening inequality amid pandemic

Rising inequality in India

- The second wave of the pandemic is spreading to rural areas also.
- It is known that rural areas have poor health infrastructure.
- Similar to the first wave, **inequalities are also increasing** during the second wave.
- The country has to address the issue of **rising inequalities** for achieving **higher sustainable growth** and the well-being of a larger population.
- According to the State of Working in India 2021 report of the Azim Premji University, the pandemic would push **230 million people into poverty**.
- CMIE data shows a **decline in incomes and rising unemployment** during the second wave.
- **U-shaped impact:** The recent RBI Bulletin says that the impact of the second wave **appears to be U-shaped**.
- In the well of the U are the most vulnerable blue collar groups who have to risk exposure for a living and for rest of society to survive.
- **Pew Research Centers study on living standards:** India's middle class (people with incomes of approximately 700-1,500 or \$10-20 per day) may have shrunk by a third due to 2020s pandemic-driven recession.
- The number of people who are poor in India (with incomes of \$2 or less a day) is estimated to have increased by 7.5 crore because of the COVID-19 recession. This accounts for nearly 60% of the global increase in poverty.

K-shaped recovery and rising inequality

- The recovery seemed to be K-shaped during the first wave.
- The **share of wages declined as compared to that of profits**.
- A large part of the corporate sector managed the pandemic with many **listed companies recording higher profits**.
- On the other hand, the informal workers including daily wage labourers, migrants, MSMEs etc. **suffered a lot with loss of incomes and employment**.
- The recovery post the second wave is also likely to be **K-shaped with rising inequalities**.

Policies needed for higher growth and reduction in inequality

1) Vaccination and healthcare facilities

- An aggressive vaccination programme and improving the healthcare facilities in **both rural and urban areas** is needed.
- Reducing the health crisis can **lead to an economic revival**.
- Vaccine inequality between urban and rural areas has to be reduced.
- The crisis can be used as an opportunity **to create universal healthcare facilities for all**, particularly rural areas.

- Other states can learn from Kerala on building health infrastructure.

2) Investment in infrastructure

- The budget offered some good announcements relating to capital investment in infrastructure.
- The **Development Financial Institution (DFI)** for funding long-term infrastructure projects is being established.
- This can revive employment and reduce inequalities.
- The government has to **fast track infra investment**.

3) Safety net for vulnerable

- The informal workers and other vulnerable sections including MSMEs have been dealt back-to-back blows due to the first and second waves.
- A majority of workers have experienced a loss of earnings.
- Therefore, the government has to provide safety nets in the form of **free food grains for six more months, expand work offered under MGNREGA** in both rural and urban areas.
- The government also need to undertake a cash transfer to provide **minimum basic income**.

Policies for growth

- **Focus on demand:** On economic growth, the RBI Bulletin says that the biggest toll of the second wave is **in terms of a demand shock as aggregate supply is less impacted**.
- **Investment:** In the medium term, the investment rate has to be increased from the present 30 per cent of GDP to 35 per cent and 40 per cent of GDP for higher growth and job creation.
- **Export:** It is one of the main **engines of growth** and employment creation.
- There is **positive news on exports** as the global economy is reviving.
- **Protectionist trade policy:** In recent years India's trade policy has become more protectionist and the **country has to reduce import tariff rates**.
- **Role of fiscal policy:** In the near term, fiscal policy has to play a more important role in achieving the objectives of growth, jobs and equity by **expanding the fiscal space** by restructuring expenditure, widening the tax base and increasing non-tax revenue.

Consider the question "Two waves of the Covid pandemic have worsened the inequality. India has to address the issue of rising inequalities for achieving higher sustainable growth and the well-being of a larger population. Suggest the policies that India should follow for higher growth and reduction in inequality."

Conclusion

Vaccination, expansion in rural healthcare and cash transfers should be part of the strategy to boost demand and address inequalities.

The letters of economic recovery

A V-, U-, W- or L-shaped recession/recovery is an informal shorthand description of the economic cycle heard often these days. The shapes take their names from the approximate pattern data make in graphs tracking the fluctuations of the economy. In the first of a two-part series on the shape of recovery, we decipher what they mean.

BY CHUANG PECK MING

WHAT KIND OF RECESSION OR RECOVERY DO THE SHAPES SHOW?

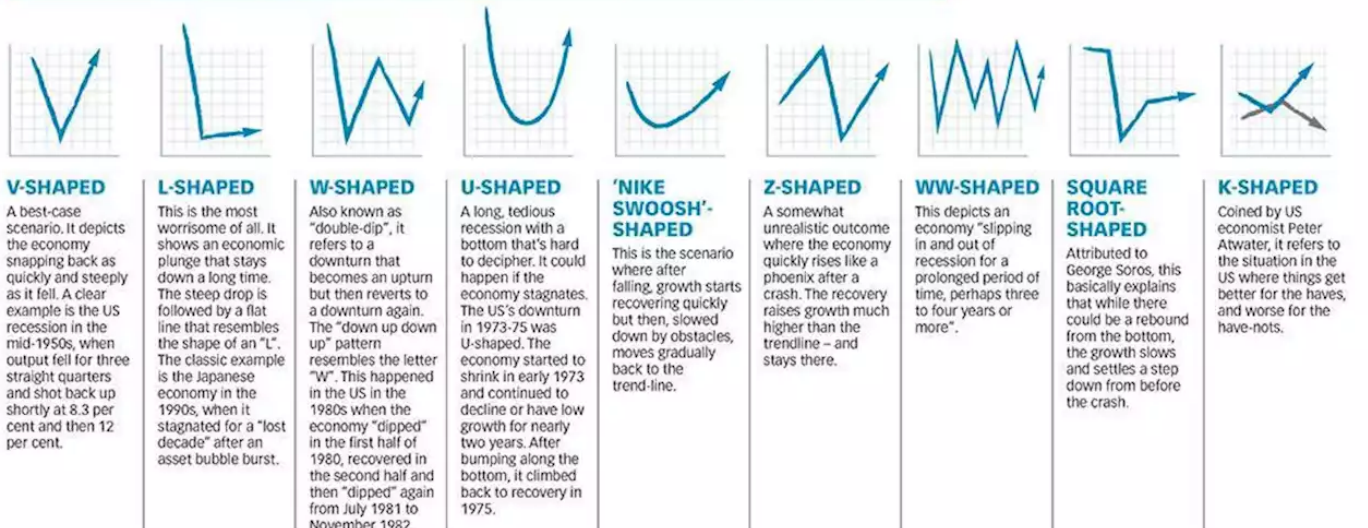


Photo: Lorenzo BT Graphics

GI(GEOGRAPHICAL INDICATOR) TAGS

[pib] Shahi Litchi from Bihar exported to the UK

Economics | GS3: Intellectual Property Rights

Note4Students | From UPSC perspective, the following things are important :

Prelims level : GI tags, Shahi Litchi

Mains level : Not Much



In a major boost to the export of GI-certified products, the seasons first consignment of Shahi Litchi from Bihar was exported to the United Kingdom by the air route.

Tap here to read about all GI-tagged products in news.

<https://www.civildaily.com/story/gi-tags/>

Shahi Litchi

- India is the second-largest producer of litchi (Litchi chin) in the world, after China.

- The translucent, flavored aril or edible flesh of the litchi is popular as a table fruit in India, while in China and Japan it is preferred in dried or canned form.
- Shahi litchi was the fourth agricultural product to get GI certification from Bihar in 2018, after Jardalu mango, Katarni rice, and Magahi paan.
- GI registration for Shahi Litchi is held with the Muzaffarpur-based Litchi Growers Association of Bihar.
- Muzzafarpur, Vaishali, Samastipur, Champaran, Begusarai districts and adjoining areas of Bihar have favorable climate for growing Shahi Litchi.

Back2Basics: Geographical Indication (GI)

- The World Intellectual Property Organisation defines a GI as a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin.
- GIs are typically used for agricultural products, foodstuffs, handicrafts, industrial products, wines and spirit drinks.
- Internationally, GIs are covered as an element of intellectual property rights under the Paris Convention for the Protection of Industrial Property.
- They have also covered under the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement.

AGMARK, HALLMARK, ISI, BIS, BEE AND OTHER RATINGS

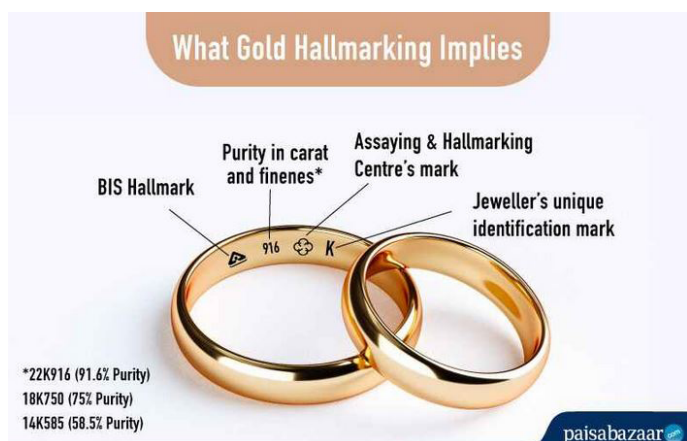
[pib] Hallmarking of Gold Jewellery

Economics | GS3: Effects Of Liberalization On The Economy, Changes In Industrial Policy and their effects on Industrial Growth

Note4Students | From UPSC perspective, the following things are important :

Prelims level : Hallmark

Mains level : Not Much



Hallmarking of Gold Jewellery is set to begin from 15th June 2021.

What is Hallmark Gold?

- The process of certifying the purity and fineness of gold is called hallmarking.
- Bureau of Indian Standards, the National Standards Body of India, is responsible for hallmarking gold as well as silver jewellery under the BIS Act.
- If you see the BIS hallmark on the gold jewellery/gold coin, it means it conforms to a set of standards laid by the BIS. Hallmarking gives consumers assurance regarding the purity of the gold they bought.
- That is, if you are buying hallmarked 18K gold jewellery, it will actually mean that 18/24 parts are gold and the rest is alloy.

- At present, only 30% of Indian Gold Jewellery is hallmarked.

Here are the four components one must look at the time of buying gold (they are mentioned in the laser engraving of a hallmark seal):

- BIS Hallmark: Indicates that its purity is verified in one of its licensed laboratories
- Purity in carat and fineness (corresponding to given caratage KT)
- 22K916 (91.6% Purity)
- 18K750 (75% Purity)
- 14K585 (58.5% Purity)
- Assaying & Hallmarking Centres mark
- Jewellers unique identification mark

Answer this PYQ from CSP 2017 in the comment box

Q.Consider the following statements:

1. The Standard Mark of the Bureau of Indian Standards (BIS) is mandatory for automotive tyres and tubes.
2. AGMARK is a quality Certification Mark issued by the Food and Agriculture Organisation (FAO).

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

Why need hallmark?

- Hallmarking will enable Consumers/Jewellery buyers to make the right choice and save them from any unnecessary confusion while buying gold.
- It will enhance the credibility of gold Jewellery and Customer satisfaction through third-party assurance for the marked purity/fineness of gold, consumer protection.
- This step will also help to develop India as a leading gold market center in the World.

Semiconductor chips shortage, and how carmakers are coping

Economics | GS3: Effects Of Liberalization On The Economy, Changes In Industrial Policy and their effects on Industrial Growth
Note4Students | From UPSC perspective, the following things are important :
Prelims level : Chip famine
Mains level : Not Much

A shortage of inputs, especially semiconductor chips, has made India-based car manufactures and premium bike makers curtail production across categories.

Do you know?

Electronic parts and components today account for 40% of the cost of a new internal combustion engine car, up from less than 20% two decades ago.

Chip famine

- The trigger point was the beginning of the Covid-19 pandemic and the subsequent lockdowns across the world that forced shut crucial chip-making facilities in countries including Japan, South Korea, China and the US.
- A key feature in a chip shortage is that it almost always causes cascading effects, given that the first one creates pent-up demand that becomes the cause for the follow-up famine.

Why such famine?

- The COVID-19 pandemic caused disruptions in supply chains and logistics.

- This is coupled with a 13% increase in global demand for PCs owing to some countries' shift to a stay-at-home economy.
- This has impacted the availability of key chips necessary for the manufacturing of a broad range of electronics being a necessary component of every industry.

What is the impact of the chip famine?

- Consumers of semiconductor chips, which are mainly car manufacturers and consumer electronics manufactures, have not been receiving enough of this crucial input to continue production.
- There were two reasons for this: a steady decline in input prices and improvements in the processing power of chips.
- The number of transistors mounted in IC circuit chips has doubled every two years.
- Notably, the increase in chip consumption over the last decade is also partly attributable to the rising contribution of electronic components in a cars bill of materials.

How have vehicle makers responded?

- Supply constraints are learned to have caused some output issues at notable Indian auto firms.
- In addition to delaying vehicle deliveries, some companies have reportedly started discarding features and high-end electronic capabilities on a temporary basis.

GOODS AND SERVICES TAX (GST)

Fundamental problems facing GST regime

Economics | GS3: Indian Economy
Note4Students | From UPSC perspective, the following things are important :
Prelims level : Not much
Mains level : Paper 3- Fundamental challenges GST regime faces

Initial issues with GST

- The multiple rates structure, high tax slabs and the complexity of tax filings as the problems underpinning India's GST.
- These were indeed the initial problems in the way GST was implemented, leading to some of its current woes.
- However, technical fixes such as simplification of GST rates and tax filing systems will not succeed in addressing the fundamental problems with GST.

Fundamental problems

1) Politics influence the decision of GST Council

- The 43rd meeting of the Goods and Services Tax (GST) Council which consists of **31 States and Union Territories** is to be held on May 28.
- Ideally, political affiliations should not matter in a Council set up to decide indirect taxes.
- The GST Council **was mandated to meet at least once every quarter**, but it had not met for two quarters, due to the pandemic.
- Several of the 14 members of the groups who belong to parties different from the party ruling in the Centre, requested the Finance Minister to convene the GST meeting **to help them manage their finances**.
- None of the 17 members of the ruling group deemed it necessary.
- Even the need for a meeting to determine tax revenues for States **is evidently a political decision**.

2) Lack of trust

- The GST Council is a compact of trust between the States and the Centre, set in the larger context of India's polity.
- The tragedy of the GST Council is that it is afflicted with spite and forced to function under the prevailing cloud of politics.
- If the functioning of the GST Council is subject to the vagaries of elections and consequent vendetta politics, GST will continue to be just a caricature of its initial promise.

3) Uncertainty after the guarantee of 14% growth ends

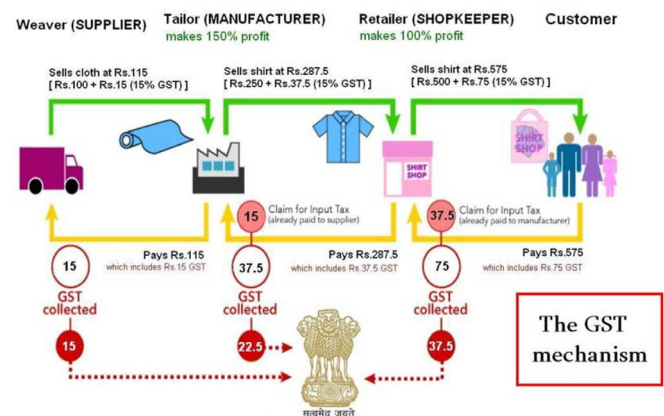
- The States paid a huge price for GST in terms of **loss of fiscal autonomy**.
- GST has endured so far primarily because the States were guaranteed a 14% growth in their tax revenues every year.
- This minimised the risks of this new experiment for the States and compensated for their loss of fiscal sovereignty.
- This revenue guarantee ends in July 2022.
- This can lead to a crumbling of the precarious edifice on which GST stands today.

Consider the question "What are the challenges faced by the States in the GST regime? What would be the impact on States as a guarantee of 14% growth in tax revenue comes to an end in July 2022?"

Conclusion

The end of India's grand GST experiment seems inevitable unless there is a radical shift in the tone and tenor of India's federal politics, backed by an extension of revenue guarantee for the States for another five years.

B2BASICS Working of GST



AGRICULTURAL SECTOR AND MARKETING REFORMS - ENAM, MODEL APMC ACT, ECO SURVEY RECO, ETC.

Why are edible oils getting costlier?

Economics | GS3: Major Crops & Cropping Patterns

Note4Students | From UPSC perspective, the following things are important :

Prelims level : India's oil import

Mains level : Impact of covid on food basket

Edible oil prices have risen sharply in recent months.

What is edible oil?

Cooking oil is plant, animal, or synthetic fat used in frying, baking, and other types of cooking. It is also used in food preparation and flavoring not involving heat, such as salad dressings and bread dippings like bread dips, and may be called edible oil.

How much have edible oil prices rising?

- The prices of six edible oils groundnut oil, mustard oil, vanaspati, soya oil, sunflower oil, and palm oil have risen between 20% and 56% at all-India levels in the last year.
- The prices of soya oil and sunflower oil, too, have increased more than 50% since last year.
- In fact, the monthly average retail prices of all six edible oils soared to an 11-year high in May 2021.
- The sharp increase in cooking oil prices has come at a time when household incomes have been hit due to Covid-19.

Trends of oil consumption in India

- With rising incomes and changing food habits, consumption of edible oils has been rising over the years.
- While mustard oil is consumed mostly in rural areas, the share of refined oils sunflower oil and soyabean oil is higher in urban areas.

How much is produced domestically and how much is imported?

- In 2019-20, domestic availability of edible oils from both primary sources (oilseeds like mustard, groundnut etc.) and secondary sources (such as coconut, oil palm, rice bran oil, cottonseed) was only 10.65 million tonnes against the total domestic demand of 24 million tonnes.
- Thus, India depends on imports to meet its demand.
- In 2019-20, the country imported about 13.35 million tonnes of edible oils or about 56% of the demand.
- This mainly comprised palm (7 million tonnes), soyabean (3.5 million tonnes) and sunflower (2.5 million tonnes).
- The major sources of these imports are Argentina and Brazil for soyabean oil; Indonesia and Malaysia palm oil; and Ukraine and Argentina again for sunflower oil.

Answer this PYQ from CSP 2019:

Q.Among the agricultural commodities imported by India, which one of the following accounts for the highest imports in terms of value in the last five years?

(a) Spices (b) Fresh fruits (c) Pulses (d) Vegetable oils

Global prices rising

- The increase in domestic prices is basically a reflection of international prices because India meets 56% of its domestic demand through imports.
- In the international market, prices of edible oils have jumped sharply in recent months due to various factors.
- Even the FAO price index (2014-2016=100) for vegetable oils, an indicator of the movement of edible oil prices in the international market, has soared to 162 in April this year, compared to 81 in April last year.

But why are international prices rising?

- One of the reasons is the thrust on making biofuel from vegetable oil. There is a shifting of edible oils from food basket to fuel basket.
- There has been a thrust on making renewable fuel from soyabean oil in the US, Brazil and other countries.
- Other factors include buying by China, labour issues in Malaysia, the impact of La Nia on palm and soya producing areas, and export duties on crude palm oil in Indonesia and Malaysia.

What are the options before the government?

- One of the short-term options for reducing edible oil prices is to lower import duties.
- However, the edible oil industry is not in favor of reducing duties.
- If import duties are reduced, international prices will go up, and neither will the government get revenue nor will the consumer benefit.
- The government can rather subsidize edible oils and make them available to the poor under the Public Distribution System.

GOVERNANCE

[PIB] COMPETITION COMMISSION OF INDIA

[pib] Competition Commission of India

Governance | GS2: Statutory, Regulatory & Various Quasi-Judicial Bodies
Note4Students | From UPSC perspective, the following things are important :
Prelims level : Competition Commission of India
Mains level : Not Much

Union Minister of Finance and Corporate Affairs recently commemorated the 12th Annual Day of the Competition Commission of India (CCI).

Competition Commission of India

- CCI is the competition regulator in India.
- It is a statutory body responsible for enforcing The Competition Act, 2002 and promoting competition throughout India and preventing activities that have an appreciable adverse effect on competition in India.

- It was established on 14 October 2003. It became fully functional in May 2009.

Its establishment

- The idea of CCI was conceived and introduced in the form of The Competition Act, 2002 by the Vajpayee government.
- A need was felt to promote competition and private enterprise especially in the light of 1991 Indian economic liberalization.
- The Competition Act, 2002, as amended by the Competition (Amendment) Act, 2007, follows the philosophy of modern competition laws.
- The Act prohibits anti-competitive agreements, abuse of dominant position by enterprises, and regulates combinations (acquisition, acquiring of control, and Merger and acquisition), which causes or likely to cause an appreciable adverse effect on competition within India.

CBI

Governance | GS2: Civil Service

Note4Students | From UPSC perspective, the following things are important :

Prelims level : CBI

Mains level : Issues with the CBI

The high-powered selection committee headed by the Prime Minister has finalized some names for the post of CBI director.

Try answering this:

Q. Why the CBI is called a caged parrot speaking in its masters voice? Critically comment.

Historical Background

- During the period of World War II, a Special Police Establishment (SPE) was constituted in 1941 in the Department of War of the British India to enquire into allegations of bribery and corruption in the war related procurements.
- Later on it was formalized as an agency of the Government of India to investigate into allegations of corruption in various wings of the Government of India by enacting the Delhi Special Police Establishment (DSPE) Act, 1946.
- **CBI derives power to investigate from the Delhi Special Police Establishment Act, 1946.**
- In 1963, the CBI was established by the Government of India with a view to investigate serious crimes related to defence of India, corruption in high places, serious fraud, cheating and embezzlement and social crime, particularly of hoarding, black-marketing and profiteering in essential commodities, having all-India and inter-state ramifications.
- With the passage of time, CBI started investigations in conventional crimes like assassinations, kidnappings, hijackings, crimes committed by extremists, etc.

Cases Handled by the CBI

- **Anti-Corruption Crimes** - for investigation of cases under the Prevention of Corruption Act against Public officials and the employees of Central Government, Public Sector Undertakings, Corporations or Bodies owned or controlled by the Government of India.
- **Economic Crimes** - for investigation of major financial scams and serious economic frauds, including crimes relating to Fake Indian Currency Notes, Bank Frauds and Cyber Crime, bank frauds, Import Export & Foreign Exchange violations, large-scale smuggling of narcotics, antiques, cultural property and smuggling of other contraband items etc.
- **Special Crimes** - for investigation of serious and organized crime under the Indian Penal Code and other laws on the requests of State Governments or on the orders of the Supreme Court and High Courts - such as cases of terrorism, bomb blasts, kidnapping for ransom and crimes committed by the mafia/ the underworld.
- **Suo Moto Cases** - CBI can suo-moto take up investigation of offences only in the Union Territories.
- The Central Government can authorize CBI to investigate a crime in a State but only with the consent of the concerned State Government.

- The Supreme Court and High Courts, however, can order CBI to investigate a crime anywhere in the country without the consent of the State.

Director of CBI

- Director, CBI as Inspector General of Police, Delhi Special Police Establishment, is responsible for the administration of the organisation.
- Till 2014, the CBI Director was appointed on the basis of the DSPE Act, 1946.
- In 2003, DSPE Act was revised on Supreme Courts recommendation in the Vineet Narain case. A committee that had members from Central Vigilance Commission, Secretaries from Home Ministry, Ministry of Personnel and Public Grievances would send recommendations to Central Government for the appointment of CBI Director.
- In 2014, the Lokpal Act provided a committee for appointment of CBI Director:
- Headed by Prime Minister
- Other members - Leader of Opposition/ Leader of the single largest opposition party, Chief Justice of India/ a Supreme Court Judge.
- Home Ministry sends a list of eligible candidates to DoPT. Then, the DoPT prepares the final list on basis of seniority, integrity, and experience in the investigation of anti-corruption cases, and sends it to the committee.
- Director of CBI has been provided **security of two year tenure**, by the CVC Act, 2003.

Challenges

- The Supreme Court of India has criticised the CBI by calling it a "caged parrot speaking in its master's voice", due to **excessive political interference** in its functioning.
- It has often been used by the government of the day to cover up wrongdoing, keep coalition allies in line and political opponents at bay.
- It has been accused of **enormous delays in concluding investigations** - For example, the inertia in its probe against the high dignitaries in Jain hawala diaries case [of the 1990s].
- **Loss of Credibility:** Improving the image of the agency is one of the biggest challenges till now as the agency has been criticised for its mismanagement of several cases involving prominent politicians and mishandling of several sensitive cases like Bofors scandal; Hawala scandal, Sant Singh Chatwal case, Bhopal gas tragedy, 2008 Noida double murder case (Aarushi Talwar).
- **Lack of Accountability:** CBI is exempted from the provisions of the Right to Information Act, thus, lacking public accountability.
- **Acute shortage of personnel:** A major cause of the shortfall is the government's sheer mismanagement of CBI's workforce, through a system of inefficient, and inexplicably biased, recruitment policies - used to bring in favoured officers, possibly to the detriment of the organisation.
- **Limited Powers:** The powers and jurisdiction of members of the CBI for investigation are subject to the consent of the State Govt., thus limiting the extent of investigation by CBI.

- **Restricted Access:** Prior approval of Central Government to conduct inquiry or investigation on the employees of the Central Government, of the level of Joint Secretary and above is a big obstacle in combating corruption at higher levels of bureaucracy.

Suggestions

- Delink the CBI from the administrative control of the government - As long as the government of the day has the power to transfer and post officials of its choice in the CBI, the investigating agency will not enjoy autonomy and will be unable to investigate cases freely.
- Providing statutory status through legislation equivalent to that provided to the Comptroller & Auditor General and the Election Commission will help maintain the independence of the institution.
- Twenty fourth report of Department related parliamentary standing committee on personnel, public grievances, law and justice on working of CBI recommended the following:
 - Strengthening human resources by increasing strength of CBI;
 - Better investments in infrastructural facilities;
 - Increased financial resource and administrative empowerment with accountability;
 - Give more Powers (related to Union, State and Concurrent list of the 7th schedule of Indian constitution), to the CBI;
 - Separate enactment under "Central Bureau of Intelligence and Investigation Act" and replace DSPE Act.
 - In 1978, the L P Singh committee recommended enactment of a comprehensive central legislation to remove the deficiency of not having a central investigative agency with a self-sufficient statutory charter of duties and functions.
 - The Second Administrative Reforms Commission (2007) also suggested that a new law should be enacted to govern the working of the CBI.

CORONAVIRUS - HEALTH AND GOVERNANCE ISSUES

Why community efforts are essential for real change

Governance | GS2: NGO, SHG & Civil Society

Note4Students | From UPSC perspective, the following things are important :

Prelims level : Not much

Mains level : Paper 2- Role of civil society in pandemic

The article highlights the important role played by civil society and suggest the need for the new framework for the participation of community in the solution of problems.

Important role played by civil society in second wave of Covid

- We also have to realise that the state or the market cannot be the **only provider for what citizens need**.
- **Effective social interactions** and community participation can play an important role in scaling up some of the actions that have been found useful.
- During the second wave of Covid infections, communities emerged as resilient entities across the country.
- **Active engagement with civil society:** Recently, the Prime Minister called for an active engagement of civil society in coping with the pandemic.
- The empowered group of secretaries has also identified the role of civil society during this period of crisis.

Tasks for NITI Aayog: New framework

- NITI should engage government institutions that encourage **public participation** and also support **new frameworks for crisis management**.
- This new framework should critically look into the weaknesses and failures of the existing ones in attracting **community participation in an effective manner**.
- This would also help in NITI's own goal of localisation of development as part of its SDG strategy.

- NITI should create mechanisms for facilitating the creation of required space for **community initiatives**.
- It should leverage advanced technologies **ABCD artificial intelligence, blockchain, cloud computing and data analytics** for bridging demand-supply gaps.
- It is time for NITI to apply the **institutional framework** where it has to, to rationalise select activities of communities and overcome the failure of the state where it is imminent.
- NITI should partner with willing state governments to explore the launch of platforms that promote **cross-learning and experience-sharing** to reduce the cost of operations.
- This may help in scaling up and, in some cases, overcome the **asymmetric flow of information**.
- Opportunities for the **participation of communities in decision making** and their implementation at local levels may be explored.
- The advantage for NITI is **DARPAN**, its portal for all voluntary organisations/non-governmental organisations **engaged in development activities**.
- Several informal entities, start-ups and others, at times undefined, may also have to be engaged.

Initiatives and micro-models

- Several micro-models are coming up, but few have a larger footprint.
- In Nandurbar, for instance, a district collector could achieve what now seems a rare coordination between beds, number of critical patients and supply of oxygen.
- At the end of the day, they had more beds with oxygen than required.
- Breathe India and HelpNow represent an array of options, these apps have facilitated **access to oxygen concentrators, hospitals and ambulances**.
- There are several such initiatives that are taking place across the country with little connection with each other.
- These **micro-models need to be scaled up**.

Consider the question "The role played by the civil society during the second covid wave highlighted its importance. What we need is a new framework for community participation. In light of this, discuss the important aspects of such framework."

Conclusion

Solutions to any social problem call for an effective collective action that coordinates the aspirations of several groups of stakeholders. The present situation underlines the necessity of combined efforts to face this challenge.

B2BASICS

What is civil Society?

- The society considered as a community of citizens linked by common interests and collective activity is a civil society.
- It is the aggregate of non-governmental organizations and institutions that manifest interests and will of citizens.
- It is referred to as the third sector of the society distinct from government and business.

HEALTH SECTOR - UHC, NATIONAL HEALTH POLICY, FAMILY PLANNING, HEALTH INSURANCE, ETC.

WHO BioHub: Global Facility for Pathogen Storage

Governance | GS2: Health & Education

Note4Students | From UPSC perspective, the following things are important :

Prelims level : WHO BioHub and its purpose

Mains level : Not Much

The World Health Organization (WHO) and Switzerland have signed an MoU to launch a BioHub facility that will allow rapid sharing of pathogens between laboratories and partners to facilitate better analysis and preparedness against them.

WHO BioHub

- The BioHub will enable member states to share biological materials with and via the BioHub under pre-agreed conditions, including biosafety, biosecurity, and other applicable regulations.

- The facility will help in the safe reception, sequencing, storage, and preparation of biological materials for distribution to other laboratories, so as to facilitate global preparedness against these pathogens.
- It would be based in Spiez, Switzerland.
- Pathogens are presently shared bilaterally between countries: A process that can be sluggish and deny the benefits to some.

Its significance

- This will ensure timeliness and predictability in response activities.
- The move is significant in the view of the novel coronavirus disease (COVID-19) pandemic and the need to underline the importance of sharing pathogen information to assess risks and launch countermeasures.
- The move will help contribute to the establishment of an international exchange system for novel coronavirus SARS-CoV-2 and other emerging pathogens.

FREEDOM OF SPEECH - DEFAMATION, SEDITION, ETC.

IBF to cover Streaming Platforms

Governance | GS2: Statutory, Regulatory & Various Quasi-Judicial Bodies

Note4Students | From UPSC perspective, the following things are important :

Prelims level : Indian Broadcasting Foundation

Mains level : Self regulation by electronic media

The Indian Broadcasting Foundation (IBF), the apex body of broadcasters, is expanding its purview to cover digital streaming platforms and will be renamed the Indian Broadcasting and Digital Foundation (IBDF).

Why such a move?

- The move would bring broadcasters and OTT (over-the-top) platforms, which have seen a substantial jump in their viewership base after the pandemic, under one roof.
- For this, the IBDF was in the process of forming a new wholly-owned subsidiary to handle all matters of digital media, an official statement said.

- The IBDF would also form a self-regulatory body, the Digital Media Content Regulatory Council (DMCRC), for digital OTT platforms.

Indian Broadcasting Foundation

- The IBF is a unified representative body of television broadcasters in India.
- The organization was founded in the year 1999. Over 250 Indian television channels are associated with it.
- The organization is credited as the spokesman of the Indian Broadcasting Industry.
- The IBF is the parent organization of the Broadcasting Content Complaints Council (BCCC) which was set up in the year 2011.
- The BCCC examines content-related complaints relating to all non-news general entertainment channels in India.

Note: The IBF has no statutory backing.

What are Neglected Tropical Diseases (NTD)?

Governance | GS2: Health & Education

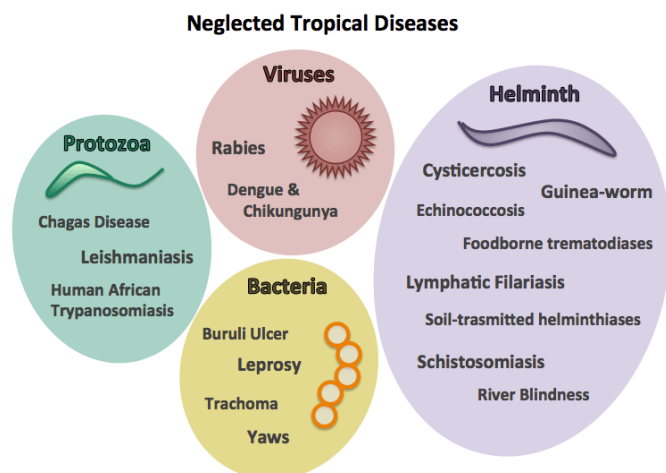
Note4Students | From UPSC perspective, the following things are important :

Prelims level : Neglected Tropical Diseases

Mains level : Burden of NTD in India

The ongoing World Health Assembly has declared January 30 as World Neglected Tropical Diseases (NTD) Day.

Neglected Tropical Diseases



- NTDs are a group of infections that are most common among marginalized communities in the developing regions of Africa, Asia, and the Americas.
- They are caused by a variety of pathogens such as viruses, bacteria, protozoa, and parasitic worms.
- These diseases generally receive less funding for research and treatment than malaises like tuberculosis, HIV-AIDS and malaria.
- Some examples of NTDs include snakebite envenomation, scabies, yaws, trachoma, Leishmaniasis and Chagas disease.

Significance of global recognition

- NTDs affect more than a billion people globally, according to the WHO. They are preventable and treatable.
- However, these diseases and their intricate interrelationships with poverty and ecological systems continue to cause devastating health, social and economic consequences.
- A major milestone in the movement to recognize the global burden of these diseases was the London Declaration on NTDs that was adopted January 30, 2012.
- The first World NTD Day was celebrated informally in 2020. This year, the new NTD road map was launched.

PRIMARY AND SECONDARY EDUCATION - RTE, EDUCATION POLICY, SEQI, RMSA, COMMITTEE REPORTS, ETC.

Mid Day Meal Scheme

Governance | GS2: Government Scheme/Policies

Note4Students | From UPSC perspective, the following things are important :

Prelims level : Midday Meal Scheme

Mains level : Food and nutrition security measures

The Centre has decided to give about 100 each to children studying in Class 1 to Class 8 in government schools, who are beneficiaries of the Mid Day Meal scheme.

Mid Day Meal Scheme

- The Midday Meal Scheme is a school meal programme in India designed to better the nutritional standing of school-age children nationwide.
- It is a wholesome freshly-cooked lunch served to children in government and government-aided schools in India.
- The programme supplies free lunches on working days for children in primary and upper primary classes in government, government-aided, local body and alternate innovative education centres, Madarsa and Maqtabas.
- Serving 120,000,000 children in over 1,265,000 schools and Education Guarantee Scheme centres, it is the largest of its kind in the world.

- The programme has undergone many changes since its launch in 1995. The Midday Meal Scheme is covered by the National Food Security Act, 2013.

The scheme aims to:

1. avoid classroom hunger
2. increase school enrolment
3. increase school attendance
4. improve socialization among castes
5. address malnutrition
6. empower women through employment

Answer this PYQ in the comment box:

Q. An objective of the National Food Security Mission is to increase the production of certain crops through area expansion and productivity enhancement in a sustainable manner in the identified districts of the country. What are those crops?

(a) Rice and wheat only

- (b) Rice, wheat, and pulses only
- (c) Rice, wheat, pulses, and oilseeds only
- (d) Rice, wheat, pulses, oilseeds, and vegetables

What is the new move?

- The money, 1200 crore in total, will be given to 11.8 crore children through direct benefit transfer as a one-time payment.

- The money comes from the cooking cost component of the scheme, it said.
- This decision will help safeguard the nutritional levels of children and aid in protecting their immunity during challenging pandemic times.

POLITY

BASIC STRUCTURE DOCTRINE

Basic Structure doctrine

Polity | GS2: Constitutional Bodies

Basic Structure Doctrine

https://d18x2uyjeekruj.cloudfront.net/wp-content/uploads/2021/05/Basic_Structure_Doctrine-1.pdf

Recently High Court of Kenya ruled Basic Structure doctrine applicable in Kenya. The judgment was rendered by a Constitution Bench in a petition filed in public interest challenging the Building Bridges Initiative and the resulting Constitution Amendment Bill initiated by President Uhuru Kenyatta.

Background

- Since the adoption of Indian Constitution, debates have started regarding the **power of the Parliament to amend key provisions of the Constitution**.

Pre Golaknath Case

- In the early years of Independence, the **Supreme Court conceded absolute power to Parliament in amending the Constitution**, as was seen in the verdicts in **Shankari Prasad case (1951)** and **Sajjan Singh case (1965)**.
- In both the **cases** the court had ruled that the term **law** in **Article 13** must be taken to mean **rules or regulations made in exercise of ordinary legislative power and not amendments to the Constitution** made in exercise of constituent power under **Article 368**.
- This means Parliament had the power to amend any part of the constitution including Fundamental rights.
- Article 13(2) reads, "The State shall not **make any law** which takes away or abridges the right conferred by this Part (Part-III) and any law made in contravention of this clause shall, to the extent of contravention, be void."

Golaknath Case (1967)

- In the **Golaknath case (1967)**, the Supreme Court held that **Parliament could not amend Fundamental Rights**, and this power would be only with a Constituent Assembly.

- The Court held that an **amendment under Article 368 is "law" within the meaning of Article 13** of the Constitution and therefore, if an amendment "takes away or abridges" a Fundamental Right conferred by Part III, it is void.
- To get over the judgments of the Supreme Court in the **Golaknath case (1967)**, **RC Cooper case (1970)**, and **Madhav Rao Scindia case (1970)**, the then government headed by Prime Minister Indira Gandhi had enacted major **amendments to the Constitution (the 24th, 25th, 26th and 29th)**.
- All the four amendments brought by the government were challenged in the Kesavananda Bharati case.

Kesavananda Bharati case(1973)

- In Kesavananda Bharati case, a relief was sought against the Kerala government vis--vis **two state land reform laws**, which imposed restrictions on the management of religious property.
- The **case was challenged under Article 26**, concerning the right to manage religiously owned property without government interference.
- Question underlying the case:** Was the power of Parliament to amend the Constitution unlimited? In other words, could Parliament alter, amend, abrogate any part of the Constitution even to the extent of taking away all fundamental rights?
- The Constitutional Bench in Kesavananda Bharati case ruled by a 7-6 verdict that **Parliament could amend any part of the Constitution so long as it did not alter or amend the basic structure or essential features of the Constitution**.
- However, the court **did not define the term basic structure**, and only listed a few principles **federalism, secularism, democracy** as being its part.
- The basic structure doctrine has since been interpreted to include
 - the supremacy of the Constitution,
 - the rule of law,
 - Independence of the judiciary,
 - doctrine of separation of powers,
 - sovereign democratic republic,
 - the parliamentary system of government,
 - the principle of free and fair elections,

- welfare state, etc.
- An **example** of application of basic structure is the **SR Bommai case (1994)**.
- In this case the Supreme Court upheld the dismissal of BJP governments by the President following the demolition of the Babri Masjid, invoking a threat to secularism by these governments.

Significance of basic structure:

- **Check on arbitrary use of power:** Judiciary does not take away amendment powers or power to make laws, it just places certain restrictions in order to enhance democratic principles.
- **Effective and efficient laws :** Basic structure helps in increasing culture of debate which helps in bringing effective and efficient laws for welfare of people.
- **Democracy:** Basic structure has protected and promoted democracy or else India would have become a dictatorship or taken over by armed rebellions like Pakistan, Afghanistan etc.
- **Supremacy of constitution :** It places restriction on any institution gaining immense power or power over others. It helps in maintaining supremacy of constitution and its principles.
- **Political ideology:** It prevents India from becoming battle ground for different ideologies or change the country according to specific ideologies or ideologies of party in power.
- **Certain instances where basic structure has enhanced parliamentary sovereignty** can be, Ordinance for SC/ST act to nullify SC order, placing Fundamental rights and DPSP on equal footing, Triple talaq ordinance to give effect to SC order on Triple talaq etc.

Arguments against Basic structure

- **Restriction on amendment powers:** It restricts parliament to introduce new laws or scarp any old laws which are no more required. For instance, preamble states India has a socialist country but since 1991, India has followed capitalism in principles.
- **Due process of law:** Constitution established procedure established by law but it was replaced by due process of law, which gives power to judiciary to scarp any laws. Even though not arbitrarily, but still it affects law making power of parliament.
- **Against constitution:** Preamble of the constitution says people are sovereign (Give to ourselves this constitution) and they passed on this power to elected representatives but judiciary has taken over to itself in name of Judicial review.
- **Ambiguous in nature:** There is no proper definition or what constitutes basic structure. With passage of time, the contents of basic structure are increasing and over time it is feared that parliament may lose its value and power to judiciary to enact and implement laws.
- **There are various instances where it can be proved that judiciary has restricted parliamentary powers** like in case of NJAC bill (99th amendment to constitution), Aadhaar bill (diluted provisions of bill), Set aside reservations in promotion and above 50% reservation in states granted by certain state governments.

Conclusion

India is the only country with basic structure doctrine, there has been criticism as well has appreciation for the same. There is no such thing as entirely good or entirely bad but we have to decide between which offer more good than the other.

Please refer the Basic Structure doctrine infographics on Page number 43 (at the end)

INTERSTATE RIVER WATER DISPUTE

Mekedatu Project

Polity | GS2: Federalism

Note4Students | From UPSC perspective, the following things are important

Prelims level : Mekedatu Project

Mains level : Cauvery Water Dispute



The National Green Tribunal (NGT), Southern Zone has appointed a joint committee to look into allegations of unauthorized construction activity taking place in Mekedatu, where the Karnataka government had proposed to construct a dam across the Cauvery River.

What is the Mekedatu Project?

- Mekedatu, meaning goats leap, is a deep gorge situated at the confluence of the rivers Cauvery and Arkavathi, about 100 km from Bengaluru, at the Kanakapura taluk in Karnataka's Ramanagara district.
- In 2013, then Karnataka announced the construction of a multi-purpose balancing reservoir project.
- The project aimed to alleviate the drinking water problems of Bengaluru and Ramanagara district.
- It was also expected to generate hydro-electricity to meet the power needs of the state.

Issues with the project

- Soon after the project was announced TN has objected over granting of permission or environmental clearance.
- Explaining the potential for damage to the lower riparian state of TN, it said that the project was in violation of the final award of the Cauvery Water Disputes Tribunal.
- It stated that the project will affect the natural flow of the river Cauvery considerably and will severely affect the irrigation in TN.

Panel to define offences of Speech, Expression

Polity | GS2: Indian Constitution - historical underpinnings, evolution, features, amendments, significant provisions and basic structure

Note4Students | From UPSC perspective, the following things are important :

Prelims level : Not Much

Mains level : Hate Speech vs Free Speech

A panel constituted by the Union Home Ministry to suggest reforms to the British-era Indian Penal Code (IPC) is likely to propose a separate Section on offences relating to speech and expression.

Panel to define hate speech

- As there is no clear definition of what constitutes a hate speech in the IPC, the Committee for Reforms in Criminal Laws is attempting for the first time to define such speech.
- Legally speaking, for criminal Sections to be invoked, any such speech has to lead to violence or disturbance of law and order.

What constitutes Hate Speech?

- Hate speech can be defined as "public speech that expresses hate or encourages violence towards a person or group based on something such as race, religion, sex, or sexual orientation".
- The word hate speech as is a loaded term and merely criticizing someone is not hate speech.
- There has been much debate over freedom of speech, hate speech and hate speech legislation.

Indian attempts for definition

- The Bureau of Police Research and Development recently published a manual for investigating agencies on cyber harassment cases.

- It has defined hate speech as a language that denigrates, insults threatens or targets an individual based on their identity and other traits (such as sexual orientation or disability or religion etc.).
- Earlier in 2018, the Home Ministry had written to the Law Commission to prepare a distinct law for online hate speech.
- A committee was formed in the wake of Section 66A of the IT Act, 2000, which provided punishment for sending offensive messages through communication services.
- In 2019, however, the Ministry decided to overhaul the IPC, framed in 1860 and the Code of Criminal Procedure (CrPC) after seeking suggestions from various stakeholders.

Recommendations of various committees

- The **Viswanathan committee** proposed inserting Sections 153 C (b) and Section 505 A in the IPC for incitement to commit an offence on grounds of religion, race, caste or community, sex, gender identity, sexual orientation, place of birth, residence, language, disability or tribe.
- It proposed punishment by up to two years along with 5,000 fine.
- The **Bezbaruah Committee** was constituted by the Centre in February 2014 in the wake of series of racial attacks on persons belonging to the northeast.
- It proposed amendment to Section 153 C IPC (promoting or attempting to promote acts prejudicial to human dignity), punishable by five years and fine or both and Section 509 A IPC (word, gesture or act intended to insult a member of a particular race), punishable by three years or fine or both.

INTERNATIONAL RELATIONS

INDIA-ISRAEL RELATIONS

India-Israel Relations

International Relations | GS2: India & Its Neighborhood - Relations

India-Israel Relations

https://d18x2uyjeekruj.cloudfront.net/wp-content/uploads/2021/05/India-Israel_Relations.pdf

Recently India's permanent representative to the UN made a carefully crafted statement at the UN Security Council open debate on the escalating Israel-Palestine violence.

History of India-Israel ties:



- Though India and Israel have many common traits, it took nearly four decades to set up an official diplomatic relationship.
- Both nations became independent almost at the same time, in the late 1940s, following a long struggle against the British Colonialism.
- They both follow the democratic form of governance in a neighbourhood where democracy is either frail or non-existent.
- Like India, Israel also has a rich ancient history, going back many millennia.
- The obvious difference between the two nations is the size of the territory and the population. Israel's geographical size is 20,770 to 22,072 km², smaller than India's 3,287,263 km².
- Israel's population is approximately nine million, while India is home to about 1,400,000.
- Demographically, both the nations have a vast majority of a Muslim minority that makes up 15-20% of the total population.
- For India, this is one of the major obstacles that hindered the establishment of diplomatic ties.
- India announced its recognition of Israel on September 17th, 1950, following which the Jewish Agency established an immigration office in Bombay. This later became a Trade Office and subsequently a Consulate.
- The diplomatic relationship between India and Israel was previously based on popular consensus and only much later became official.
- Israelis, particularly the youth, were attracted by the India culture and history, leading to the initiation of liaison.
- The Israelis visited India, resulting in the budding of the people-to-people ties. This formed a significant base for the establishment of the formal diplomatic relationship in 1992.
- However, while Israel had tried to forge close ties with India, the latter was reluctant to respond in kind.
- This was because during that time India was a young state that needed to take into account Arab states' numerical impact at the United Nations.
- Furthermore, it could not afford to antagonise its Muslim population by establishing ties with a Jewish state. Sympathising the Palestinian cause is a by-product of these motives.
- In 1961, India is one of the founders of the Non-Aligned Movement along with President Nasser of Egypt. This significantly complicated India's ties with the Jewish state.
- Another hurdle that prevented the bilateral ties was India's close ties with the Soviet Union while Israel inclined towards the US.
- However, since 1992, many of these impediments ceased to exist.
- Egypt made peace with Israel in 1979, breaking a huge anti-Israeli mindset among the Indians.
- Another significant breakthrough in this regard is the Madrid Conference that was held in 1991. This conference aimed to revive the Israeli-Palestine peace process through negotiations involving the Arab nations and Israel.
- Other similar developments include the 1993 Israeli-Palestinian Oslo Accord and the 1994 Israel-Jordan Peace Agreement.
- These peace negotiations helped India form close ties with Israel.
- Other events that led to the improvement of bilateral ties include the collapse of the Soviet Union in 1991 and liberalisation of the Indian economy.
- Once these barriers were removed, the bilateral ties have exponentially improved at a rapid pace, becoming a strategic asset for both the nations.

What are the areas of cooperation?

1. Political Cooperation:

- Since the up-gradation of relations in 1992, defence and agriculture have become the two main pillars of the bilateral engagement.
- The political ties have become especially cordial under the Modi Government.
- In 2017, Prime Minister Modi became the first-ever Indian Prime Minister to visit Israel.
- During this visit, the diplomatic relationship was upgraded to a strategic level and seven agreements/MoUs were signed in the areas of R&D, innovation, water, agriculture and space.
- In 2018, the Israeli Prime Minister visited India, during which Government to Government (G2G) agreement on cybersecurity, oil and gas cooperation, film cooperation and air transport were signed, along with five other semi-government agreements.
- An increase in the high-level exchanges in recent times has expanded cooperation in areas like trade, agriculture, science and technology and security.

2. Economic Cooperation:

- The bilateral merchandise trade stood at \$5.02 billion (excluding defence) in 2016-17.
- While exports from India were \$3.06 billion, the import to India from Israel was \$1.96 billion.
- The diamond trade constitutes more than 53% of the bilateral trade.
- India is Israel's third-largest trading partner in Asia after China and Hong Kong.
- In recent years, bilateral trade has diversified to include several sectors like pharmaceuticals, agriculture, IT and telecom and homeland security.
- Major exports from India to Israel include precious stones and metals, chemical products, textiles and textile articles etc.
- Major imports from Israel include chemicals and mineral products, base metals and machinery and transport equipment. Potash is a major item of Israel's exports to India.

3. Investment:

- The major investments from Israel in India include renewable energy, telecom, real estate, water technologies etc., and are also setting up R&D centres or production units in India.
- The extent of Israel's investment in India is not available as most of these are routed via third countries such as Singapore, USA.
- Also, India's investments in Israel are mostly in drip-irrigation, pharmaceuticals, wastewater treatment, IT etc.

4. Agriculture:

- Cooperation in the field of agriculture is being prioritised by India.
- Several India-Israel Centres of excellence for Cooperation in agriculture have been set up in states like Haryana, Gujarat, Maharashtra, Rajasthan etc.
- India has significantly benefited from Israel's expertise and technologies in horticulture, mechanisation, protected cultivation, orchard and canopy management, nursery management, micro-irrigation and post-harvest management, particularly in Haryana and Maharashtra.
- Currently, Israeli drip-irrigation technologies and products are widely used in India.
- Furthermore, India is gaining Israel's expertise in managing and improving dairy farming and high milk yield.

5. Military and strategic cooperation:

- India's arms trade with Israel had reached almost \$600 million in 2016, making Israel the second-largest source of defence equipment for India, after Russia.
- Both nations have enhanced bilateral military and intelligence cooperation since the official establishment of diplomatic relations.
- Israel was one of the few nations, including France and Russia, that did not condemn India's 1998 Pokhran-II nuclear tests.
- Following the 2008 Mumbai attacks, Israel offered a team of about 40 special-operations forces and assistance in the investigation. Paramedics, medics and other professionals from Israel were also sent to aid India.
- The common aspiration to fight the menace of terrorism led to the enhancement of defence cooperation.
- In February 2014, India and Israel signed three important agreements on Mutual Legal Assistance in Criminal Matters, Cooperation in Homeland Security and Protection of Classified Material.
- Four working groups in areas of border management, internal security and public safety, police modernisation and capacity building for combating crime, crime prevention and cybercrime were established.

6. Science and Technology cooperation:

- Under a Science and Technology Cooperation Agreement in 1993, Science and Technology institutions undertook joint research.
- Specific areas of cooperation include IT, biotechnology, lasers and electro-optics.
- In 2005, India and Israel signed an MoU to set up i4RD fund to encourage bilateral investment into industrial research and development and specific projects. Under the agreement, at least one Indian and one Israeli company must be collaborating on a project for it to be qualified for the fund.
- In 2012, both nations signed a five-year \$50 million academic research agreement for promoting collaborative research in various disciplines, including medical technology, IT, social and welfare sciences, humanities and arts.
- Israel has also offered to assist with India's Clean Ganga Mission by providing its expertise in water management to address water scarcity.

7. Culture:

- Israelis know India for its culture and tradition, making it an attractive alternative tourist destination.
- In 2017, Indian tourists became the second largest from an Asian country.
- In 2011, cultural artists and performers from India participated in a three-week festival commemorating 20 years of diplomatic relations between the two countries.
- In 2019, a large-scale summit was organised to boost cultural ties.
- On February 15, 2020, the first of its kind Jerusalem-Mumbai festival was held in Mumbai to promote artistic and cultural ties between the two nations. This festival aimed to establish a link between the cities of Jerusalem and Mumbai and boost cooperation in the field of music, culinary art and dance.

8. Education:

- In recent years, several public and private Indian universities have entered into academic agreements with Israel's educational institutions.
- Since 2012, Israel has been offering post-doctoral scholarships to students from India and China in all fields for three years.

- India too offers scholarships to Israelis every year and an equal number of scholarships are offered by Israel for 10-month programmes in specialised fields of study.
- In 2014, the Indian diamond community in Israel had set up a fund to finance study tours to India for meritorious Israeli students of Hindi.

9. Indian diaspora:

- There are approximately 85,000 Jews of Indian-origin in Israel (at least one Indian parent).
- The main waves of immigration into Israel from India took place in the 1950s and 1960s mostly from Maharashtra (Bene Israelis) and relatively smaller numbers from Kerala (Cochini Jews) and Kolkata (Baghdadi Jews).
- In recent years, some Indian Jews from the North Eastern States (Bnei Menashe) have been immigrating to Israel.
- Out of almost 11,000 Bnei Menashe Jews, only around 4,000 Jews have been able to immigrate to Israel, while about 7,000 of them is said to be waiting for immigration to the Jewish state.
- Bnei Menashe Jews, post immigration to Israel, have an especially difficult life in the region, being allocated areas of highly unstable lands in West Bank where education, security and employment remain a major challenge. This may be because of their inferior socio-economic and educational status is in contrast to the larger Israeli society.
- Despite the progress made in the diplomatic relations between India and Israel post-2017 visit by the Indian Prime Minister, little is being done for the welfare of the Indian immigrants in Israel.
- Despite agreeing to take in the remaining 7,000 Bnei Menashe Jews in India by the Netanyahu government in 2012, still, only about 4,000 Jews were able to enter Israel while the rest are remaining in India.
- Clearly, discrimination and scepticism are to blame for this delay and oppression.

Sticky Points in the Relations:

- **Bilateral Trade and investment still below potential** : From just \$200 million in 1992, bilateral trade (excluding defense) peaked at about \$5 billion in 2012 but since then it has dropped to about \$4 billion. Also, bilateral trade has not diversified much diamonds and chemicals still make up for the large chunk of the pie.
- **Private Sector still finding feet**: Indian companies like Sun Pharma and ATG, a specialty tyre-maker, have big interests in Israel. But perhaps unsurprisingly, the Chinese are streets ahead of us in bilateral trade and their companies are investing heavily in Israel's cutting-edge start-ups.
- **Connectivity between two countries still poor** with just one direct flight from Mumbai 3 times a week and no direct flights from Delhi.
- **Historical retrenchment**: India's consistent support for a sovereign, independent, viable and united Palestinian state with East Jerusalem as its capital, living within secure and recognized borders, side by side and at peace with Israel and Pro-Arab stance has been a sticky point.
- **Limited People to People ties and cultural differences**: Israelis and Indian approach business differently and often find it difficult to get on the same page. Though formal ties were established in 1992, but the ideological divide resurfaces time and again.

What is India's stand on Israel-Palestine Issue?

- India, for a very long time, had called for the 2-state solution that supports the establishment of a sovereign independent state of Palestine.

- However, India's stand on Israel-Palestine conflict has not hindered the growing diplomatic relationship with India and Israel.
- Yet, the recent close ties with Israel have diluted India's stance on the issue.
- In 2014, India favoured a UN resolution that established a Commission of Inquiry to investigate a violation of an international humanitarian and human rights law in the Occupied Territories during Operation Protective Edge conducted by Israel in the Gaza Strip.
- However, the Indian Government did not pass a resolution in the parliament condemning the Israeli action, contrary to the earlier practices.
- At the UN Human Rights Commission (UNHRC), India abstained on the resolution that welcomed the report of the same Commission of Inquiry, making it the first time India had refused to vote against Israel at the UN.
- However, the Indian government clarified that this does not mean that there is a change in India's traditional support for the separate state of Palestine.
- Nevertheless, from the growing strategic ties, it is evident that India is distancing itself from advocating for the Palestinian cause.

What is the nature of the India-Israel ties?

- India had often been favourable in maintaining close ties with Israel, though not prepared to acknowledge it in the open.
- New Delhi voted to recognise Israel in 1950, but Cold War alliances, fear of alienating its large Muslim population, and its need to maintain close ties with the Arab nations for oil, remittance and Kashmir issue led to India adopting a less sympathetic position towards Israel.
- However, through most of its post-independence history, India has significantly, but privately, benefited from the bilateral ties with Israel, without recognizing it.
- In recent times, under the Modi regime, the diplomatic relationship went from being clandestine to the one that openly supports closer ties with Israel.
- Prime Minister Modi's noteworthy visit to Israel in 2017 did not lead to diplomatic tension with Arab nations, making it a successful turning point.
- This is of significance as Israel has everything that India needs to be secure, stable and prosperous. This includes technology, innovation, defence equipment, cooperation in counter-terrorism, training in intelligence gathering etc.
- For Israel, India is an enormous market for its technologies and expertise.
- Furthermore, India recognising Israel as an independent nation is of significance, since more than 30 UN member nations are still unwilling to recognise it.
- This diplomatic relationship, despite facing differences, is still stable due to the shared value, interests and democratic principles between the two nations.
- It is imperative that for the relationship to realise its full potential, both nations must take into account the common economic and security interests while putting aside the differences.

Way forward

- Taking steps to balance the differences between India and Israel is often difficult and complicated.
- Flexibility in favour of India's national interest must be made the top priority of the Indian government while dealing with Israel.
- India has so far been successful in balancing its interests in the Middle East, both bilaterally and multilaterally, without taking sides with neither of the conflicting nations in the region.

- Maintaining apolitical ties with the Sunni-dominated and Shia-dominated Arab countries and Israel is a step in the right direction.

- Thus, prioritising the energy and security interest must be ensured while sculpting new policies to address novel challenges that are bound to arise in this region.

Please refer the India-Israel Relations infographics on Page number 41 (at the end)

OBOR INITIATIVE

China's 17+1 Cooperation Forum

International Relations | GS2: Bilateral, Regional and Global Groupings and agreements involving India

Note4Students | From UPSC perspective, the following things are important :

Prelims level : 17+ 1 Forum

Mains level : Not Much

Cooperation between China and Central and Eastern European Countries



Graphic © Asia Briefing Ltd.

Lithuania has decided to quit Chinas 17+1 cooperation forum with central and eastern European states that include other EU members, calling it divisive.

About 17+ 1 Forum

- The forum is an abbreviation for Cooperation between China and Central and Eastern European Countries.
- It is an initiative by the Chinese Ministry of Foreign Affairs to promote business and investment relations between China and 16 countries of CEE (CEEC).
- The countries are Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Estonia, Greece, Hungary, Latvia, North Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia, and Slovenia.
- The format was founded in 2012 in Warsaw to push for the cooperation of the "17+1" (the 17 CEE countries and China).
- Its goals are to promote the Chinese Belt and Road Initiative and enhance cooperation in the fields of infrastructure, transportation, and logistics, trade and investment".

UAE'S GOLDEN VISA SCHEME

UAE's Golden Visa Scheme

International Relations | GS2: Effect Of Policies & Politics Of World On India'S Interests

Note4Students | From UPSC perspective, the following things are important :

Prelims level : Golden visa scheme

Mains level : Not Much

A Bollywood actor has recently received a golden visa from the UAE government.

What is the Golden Visa?

- The Golden Visa system essentially offers long-term residency (5 and 10 years) to people belonging to the following groups: investors, entrepreneurs, individuals with outstanding talents like researchers, medical professionals and those within the scientific and knowledge fields, and remarkable students.
- The main benefit of the visa will be security.
- The UAE government has made it clear that they are committed to providing expatriates, investors and essentially everyone looking to make the UAE their home an extra reason to feel secure about their future.

Who are eligible to apply?

- For the 10-year visa, investors having no less than AED (Dirham) 10 million worth of public investment, either in the form of an investment fund or a company, can apply.
- However, at least 60 per cent of the total investment must not be in the form of real estate and the invested amount must not be loaned, or in case of assets, investors must assume full ownership.
- The investor must be able to retain the investment for a minimum of three years as well.
- The long-term visa can also include the holders spouse and children, as well as one executive director and one advisor.
- In addition to the aforementioned, foreign nationals who are looking to set up their business in the UAE may also apply for permanent residency (5 years) through the Golden Business Visa scheme.

Perks for the talent

- Besides entrepreneurs, individuals with specialized talent can also apply for the visa. They include doctors, researchers, scientists, investors and artists.

- These individuals may be granted a 10-year visa following accreditations granted by their respective departments and fields and the visa will also be extended to their spouses and children.
- Exceptional high school and university students are eligible for a 5-year residency visa in the UAE.

FOREIGN POLICY WATCH: INDIA-BANGLADESH

Currency swap between Bangladesh and Sri Lanka

International Relations | GS2: India & Its Neighborhood - Relations
Note4Students | From UPSC perspective, the following things are important :
Prelims level : Currency Swap
Mains level : Bangladesh economic growth

Bangladesh's central bank has approved a \$200 million currency swap facility to Sri Lanka.

Practice question for mains:

Q. What are Currency Swaps? Discuss the efficacy of Currency Swap Agreements for liberalizing bilateral trade.

What is a Currency Swap?

- In this context, a currency swap is effectively a loan that Bangladesh will give to Sri Lanka in dollars, with an agreement that the debt will be repaid with interest in Sri Lankan rupees.
- For Sri Lanka, this is cheaper than borrowing from the market, and a lifeline as it struggles to maintain adequate forex reserves even as repayment of its external debts looms.
- The period of the currency swap will be specified in the agreement.

A helping hand for SL

- Bangladesh Bank, the central bank, has in principle approved a \$200 million currency swap agreement with Sri Lanka.
- Dhaka decided to extend the facility after a request by Sri Lankan PM Mahinda Rajapaksa to Bangladesh's PM Sheikh Hasina.
- It will help Colombo tide over its foreign exchange crisis, according to media reports from Bangladesh, quoting the bank's spokesman.
- Sri Lanka, staring at an external debt repayment schedule of \$4.05 billion this year, is in urgent need of foreign exchange.

An unusual move

- Bangladesh has not been viewed so far as a provider of financial assistance to other countries.
- It has been among the most impoverished countries of the world, and still receives billions of dollars in financial aid.
- But over the last two decades, its economy has pulled itself up literally by the bootstraps, and in 2020, was the fastest growing in South Asia.
- Bangladesh's economy grew by 5.2 percent in 2020 and is expected to grow by 6.8 percent in 2021.

- The country has managed to pull millions out of poverty. Its per capita income just overtook India's.

A break in monopoly

- This may be the first time that Bangladesh is extending a helping hand to another country, so this is a landmark of sorts.
- It is also the first time that Sri Lanka is borrowing from a SAARC country other than India.
- The presumption was that only India, as the regional group's largest economy, could do this.
- The Bangladesh-Sri Lanka arrangement shows that is no longer valid.

Why didn't SL approach India?

- Last year, it requested for a \$1 billion credit swap, and separately, a moratorium on debts that the country has to repay to India.
- But India-Sri Lanka relations have been tense over Colombo's decision to cancel a valued container terminal project at Colombo Port.
- India put off the decision, but Colombo no longer has the luxury of time.

Is SL in a crisis?

- With the tourism industry destroyed since the 2019 Easter attacks, Sri Lanka had lost one of its top foreign exchange pullers even before the pandemic.
- The tea and garment industries have also been hit by the pandemic affecting exports.
- Remittances increased in 2020, but are not sufficient to pull Sri Lanka out of its crisis.
- The country is already deep in debt to China. According to media reports, Sri Lanka owes China up to \$5 billion.

What about the previous swap facility that India gave Sri Lanka?

- Last July, the RBI did extend a \$400 million credit swap facility to Sri Lanka, which the Central Bank of Sri Lanka settled in February. The arrangement was not extended.
- RBI has a framework under which it can offer credit swap facilities to SAARC countries within an overall corpus of \$2 billion.
- According to RBI, the SAARC currency swap facility came into operation in November 2012 with the aim of providing to smaller countries in the region.

India must engage with Nepal-without intervening

International Relations | GS2: India & Its Neighborhood - Relations
 Note4Students | From UPSC perspective, the following things are important :
 Prelims level : Not much
 Mains level : Paper 2- Engage with Nepal without intervening

Nepal in political crisis

- For the second time in weeks, Prime Minister K P Oli has persuaded President Bidya Devi Bhandari to dissolve parliament and call for fresh elections.
- That is, unless the Supreme Court decides to declare the dissolution of parliament as unconstitutional, as it had done in the recent past.
- The current dissolution has been challenged in the court by five political parties.

Madhesi demand fulfilled

- Prime Minister Oli has also delivered on the longstanding Madhesi demand to reverse a constitutional provision which **denied citizenship to children born of Nepali mothers who had foreign husbands.**
- The widespread **unrest in the Terai adjoining India in 2015** was triggered by this attempt **t to deny equal rights to the Madhesi population.**
- This provision had directly targeted the Madhesi population, which has close kinship and marital ties across the border with India.
- While this provision has now been removed through a presidential ordinance, it could well be reversed in future by Nepali political parties dominated by the higher caste.

Steps India needs to take

- Political uncertainty in a neighbouring country is never good news for India, particularly in Nepal with whom we share a long and open border.
- The Indian government **has maintained a studied silence** on the current political developments in Nepal and this may be the right thing to do.
- But this silence should **not imply the lack of a proper assessment of the political situation** in Nepal and what would serve the interests of India best.
- Following are the steps India need to take:

1) India should declare it does not support the revival of monarchy

- The abolition of the monarchy is a net gain for India and the government must firmly and unambiguously declare that it does not support the revival of the monarchy, which has already been rejected by its people.
- India should declare its unconditional support to Nepals republican democracy.

2) Remain engaged with Nepal

- India should remain fully engaged with Nepal at all levels and across the political spectrum.
- The safeguarding of India's vital interests demands such sustained engagement.
- A hands-off policy will only **create space for other external influences**, some of which, like China, may prove to be hostile.
- However, engagement must dispense with the recurrent tendency to label Nepali political leaders as friends or enemies.
- India should advocate policies rather than persons.

3) Recognise the role of Madhesi population

- In India's engagement with Nepal, the Terai belt and its large Madhesi population plays a critical and indispensable role.
- In an effort to win over the Kathmandu political and social elite, one should be careful not to neglect citizens living in the plains.
- Our engagement with Nepal must find an important place for Nepali citizens who are our immediate neighbours and **act as a kinship, cultural and religious bridge between our two countries.**

4) Appreciate people-to-people link

- India needs to appreciate that the people-to-people links between our two countries have an unmatched density and **no other country, including China, enjoys this asset.**
- The challenge to our Nepal policy lies in **leveraging this precious asset** to ensure a stable and mutually-productive state-to-state relationship.
- India has every reason to approach its relations with Nepal with confidence and assurance.

Consider the question "What are the factors that make India-Nepal relationship special? What are the recent challenges impacting this special relationship?"

Conclusion

The safeguarding of India's vital interests demands India's engagement with Nepal without intervening in its politics. A hands-off policy will only create space for other external influences.

SECURITY ISSUES

SOCIAL MEDIA: PROSPECT AND CHALLENGES

Explained: Social Media and Safe Harbour

Security Issues | GS3: Social Media Networks & Internal Security
Note4Students | From UPSC perspective, the following things are important :
Prelims level : Not Much
Mains level : Social media regulation

The new rules for social media platforms and digital news outlets called the Intermediary Guidelines and Digital Media Ethics Code has come into effect.

New guidelines for digital media

- The guidelines had asked all social media platforms to set up a grievances redressal and compliance mechanism.
- This included appointing a resident grievance officer, chief compliance officer and a nodal contact person.
- The IT Ministry had also asked these platforms to submit monthly reports on complaints received from users and action taken.
- A third requirement was for instant messaging apps was to make provisions for tracking the first originator of a message.
- Failure to comply with any one of these requirements would take away the indemnity provided to social media intermediaries under Section 79 of the Information Technology Act.

What is Section 79 of the IT Act?

- Section 79 says any intermediary shall not be held legally or otherwise liable for any third party information, data, or communication link made available or hosted on its platform.
- This protection, the Act says, shall be applicable if the said intermediary does not in any way, initiate the transmission of the message in question, select the receiver of the transmitted message and does not modify any information contained in the transmission.
- This means that as long as a platform acts just as the messenger carrying a message from point A to point B, without interfering in any manner, it will be safe from any legal prosecution.
- The intermediary must not tamper with any evidence of these messages or content present on its platform, failing which it loses its protection under the Act.

Effect of non-compliance

- As of now, nothing changes overnight. Social media intermediaries will continue to function as they were, without any hiccups.
- People will also be able to post and share content on their pages without any disturbance.
- Social media intermediaries such as Twitter, Facebook, and Instagram have so far not appointed any officer or contact person as required under the new rules.

- They have also failed to submit monthly action taken reports on grievances and complaints submitted to them by users. Thus, protection under Section 79 of the IT Act does will not hold for them.

Liabilities with the new rules

- Further, Rule 4(a) of the IT Rules mandates that significant social media intermediaries must appoint a chief compliance officer (CCO) who would be held liable in case the intermediary fails to observe the due diligence requirements.
- This means that if a tweet, a Facebook post or a post on Instagram violates the local laws, the law enforcement agency would be well within its rights to book not only the person sharing the content but the executives of these companies as well.

Global norms on safe harbour protection

- As most of the bigger social media intermediaries have their headquarters in the US, the most keenly watched is Section 230 of the 1996 Communications Decency Act.
- This provides Internet companies a safe harbour from any content users post of these platforms.
- Experts believe it is this provision in the US law that enabled companies such as Facebook, Twitter, and Google to become global conglomerates.
- Like Section 79 of India's IT Act, this Section 230 states that no provider or user of an interactive computer service shall be treated as the publisher or speaker of any information provided by another information content provider.
- This effectively means that the intermediary shall only be like a bookstore owner who cannot be held accountable for the books in the store unless there is a connection.

Repercussions of the rules in India

- WhatsApp has approached the Delhi High Court challenging the new Rules which include a requirement for social media platforms to compulsorily enable the identification of the first originator of the information in India upon government or court order.
- It argued that this provision forces it to break end-to-end encryption on its messaging service, as well as the privacy principles underlying it.

Must read:

<https://www.civildaily.com/burning-issue-new-it-rules-2021/>

ENVIRO & BIODIVERSITY

TAX REFORMS

Benefits of environmental fiscal reforms

Enviro & Biodiversity | GS3: Conservation, Environmental Pollution & Degradation, Eia

Note4Students | From UPSC perspective, the following things are important :

Prelims level : Not much

Mains level : Paper 3- Benefits of environmental tax

Status of out-of-pocket spending on health in India

- As per WHO data, in 2011, 1 **7.33% of the population in India** made out-of-pocket payments on health that was **more than 10% of their income**.
- The percentage was higher in rural areas compared to urban areas.
- Globally, **12.67% of the population** spent more than 10% of their income (out of their pocket) on health.
- In Southeast Asia, 16% spent more than 10% of their household income on health.
- Similarly, **3.9% of the population in India** made more than 25% of out-of-pocket payments on health, with 4.34% of it in the rural areas.

Alternate source of health financing: Eco tax

- The Economic Survey of India 2019-20 has outlined that an increase in public spending from 1% to 2.5-3% of GDP, can decrease out-of-pocket expenditure from **65% to 30% of overall healthcare expenses**.
- The National Health Policy of 2017 also envisages increase in public spending from 1% to 2.5-3% of GDP.
- This is where the importance of alternate sources of health financing in India needs to be stressed.
- **Fiscal reforms for managing the environment** are important, and India has great potential for revenue generation in this aspect.

Environmental tax reforms

Environmental tax reforms generally involve three complementary activities:

- **Eliminating existing subsidies** and taxes that have a harmful impact on the environment;
- **Restructuring existing taxes** in an environmentally supportive manner;
- Initiating **new environmental taxes**.
- Taxes can be designed either as **revenue neutral or revenue augmenting**.
- **Revenue augmenting model:** In case of revenue augmenting, the additional revenue can either be targeted towards the **provision of environmental public goods** or directed towards the overall revenue pool.

- In developing countries like India, the revenue can be used to a greater extent for the **provision of environmental public goods and addressing environmental health issues**.

Eco tax

- The success of an eco tax (environment tax) in India would depend on its architecture, that is, how well it is planned and designed.
- It should be **credible, transparent and predictable**.
- Ideally, the eco tax rate ought to be equal to the marginal social cost arising from the **negative externalities associated with the production, consumption or disposal of goods and services**.
- This would include the adverse impacts on the health of people, climate change, etc.
- The eco tax rate may, thus, be fixed commensurate to the marginal social cost so evaluated.
- There is also a need to **integrate** environmental taxes in the Goods and Service Tax framework.

In India, eco taxes can target three main areas

- One, **differential taxation on vehicles** in the transport sector purely oriented towards fuel efficiency and GPS-based congestion charges.
- Two, in the energy sector **by taxing fuels which feed into energy generation**.
- Three, **waste generation** and use of natural resources.

Benefits of implementation of eco taxes

- The implementation of an environmental tax in India will have three broad benefits: **fiscal, environmental and poverty reduction**.
- **Finance basic public services:** Environmental tax reforms can mobilise revenues **to finance basic public services** when raising revenue through other sources proves to be difficult or burdensome.
- **Reduce distorting taxes:** It can also help to **reduce other distorting taxes** such as fiscal dividend.
- **Finance research:** Environmental tax reforms help **internalise the externalities**, and the said revenue **can finance research and the development of new technologies**.

Impact

- Environmental regulations may lead to **slow productivity growth** and **high cost of compliance** in private sector.
- This could result in the possible **increase in the prices of goods and services**.

- However, the European experience shows that most of the taxes also **generate substantial revenue** and there is no evidence on green taxes with sustainable development goals leading to a no growth economy.
- **Negligible impact on GDP:** Most countries experiences suggest **negligible impact on the GDP**, though such revenues have not necessarily been used for environmental considerations.

- The negligible impact on the GDP may be a temporary phenomenon.

Conclusion

This is the right time for India to adopt environmental fiscal reforms as they will reduce environmental pollution and also generate resources for financing the health sector.

GLOBAL GEOLOGICAL AND CLIMATIC EVENTS

Eruption of Mount Nyiragongo

Enviro & Biodiversity | GS1: Geographical Features & Their Location
 Note4Students | From UPSC perspective, the following things are important :
 Prelims level : Mount Nyiragongo
 Mains level : Not Much



Thousands have fled a volcanic eruption in the Democratic Republic of Congo from Mount Nyiragongo on the outskirts of Goma City.

These were some volcanoes in news this year:

Mount Vesuvius

<https://www.civildaily.com/news/places-in-news-mount-vesuvius/>

Taal Volcano

<https://www.civildaily.com/news/eruption-of-taal-volcano/>

La Soufriere

<https://www.civildaily.com/news/la-soufriere-volcanic-eruption/>

Mount Nyiragongo

- Mount Nyiragongo is an active stratovolcano with an elevation of 3,470 m (11,385 ft) in the Virunga Mountains associated with the Albertine Rift.

- The main crater is about 2km wide and usually contains a lava lake.
- The crater presently has two distinct cooled lava benches within the crater walls.
- It is one of the 16 Decade Volcanoes.
- Nyiragongo's lava lake has at times been the most voluminous known lava lake in recent history. The depth of the lava lake varies considerably.
- Nyiragongo and nearby Nyamuragira are together responsible for 40 percent of Africa's historical volcanic eruptions.

Answer this PYQ in the comment box:

Q.Which of the following adds/add carbon dioxide to the carbon cycle on the planet Earth?

1. Volcanic action
2. Respiration
3. Photosynthesis
4. Decay of organic matter

Select the correct answer using the code given below:

- (a) 1 and 3 only (b) 2 only (c) 1, 2 and 4 only (d) 1, 2, 3 and 4

What are Decade Volcanoes?



- The Decade Volcanoes are 16 volcanoes identified by the International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI).
- They are considered worthy of particular study in light of their history of large, destructive eruptions and proximity to densely populated areas.
- They are named Decade Volcanoes because the project was initiated in the 1990s as part of the United Nations-sponsored International Decade for Natural Disaster Reduction.

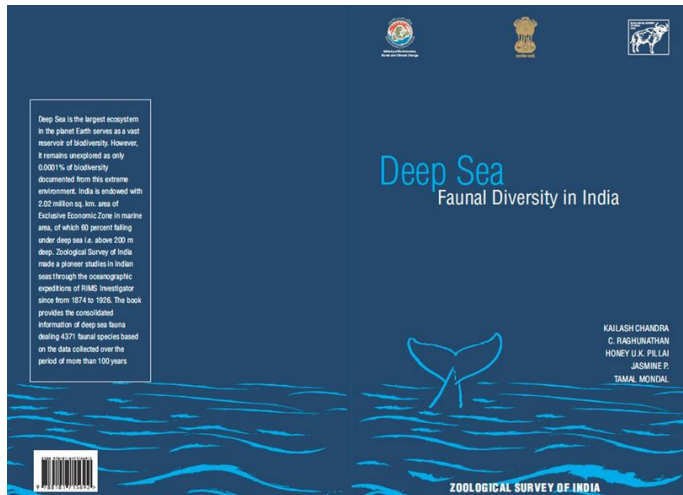
Deep Sea Faunal Diversity in India

Enviro & Biodiversity | GS3: Conservation, Environmental Pollution & Degradation, Eia

Note4Students | From UPSC perspective, the following things are important :

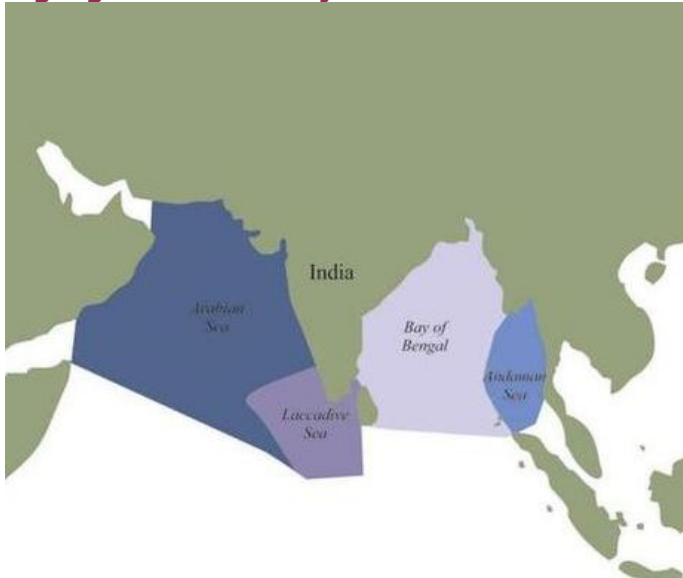
Prelims level : Deep Sea Faunal Diversity in India

Mains level : Not Much



India is home to 4,371 species of deep-sea fauna, including 1,032 species under the kingdom Protista and 3,339 species under the kingdom Animalia, a recent publication by the Zoological Survey of India (ZSI) has revealed.

Highlights of the Survey



- India is surrounded by the Arabian Sea, the Bay of Bengal, the Andaman Sea, and the Laccadive Sea (Lakshadweep Sea).
- Of the 4,371 species, a maximum of 2,766 species has been reported from deep-sea areas of the Arabian Sea, followed by 1,964 species from the Bay of Bengal, 1,396 species from the Andaman Sea, and only 253 species from the Laccadive Sea.

RIMS ship investigator

- India is one of the countries that made a pioneering exploration in the deep Indian Ocean region in 1874 by commissioning a RIMS (Royal Indian Marine Survey) ship investigator.
- This conducted enormous studies in seas around India and continued to work till 1926.

Components of the exploration

- The deep-sea ecosystem was the most unexplored ecosystem across the world. It included hydrothermal vents, submarine canyons, deep-sea trenches, seamounts, cold seeps, and mud volcanoes.
- This publication, the first of its kind, provides baseline information on all groups of fauna and biological organisms in the Indian deep seas.
- Not only will this support our knowledge on conserving and managing deep-sea faunal resources, but it will also pave way for their sustainable utilization.

Key findings

(1) Mammals

- There are 31 species of sea mammals that are found in the deep-sea ecosystem of Indian waters, including the Critically Endangered Irrawaddy Dolphin.
- Two other species, the Indo-Pacific Finless Porpoise and the Sperm Whale are recorded as Vulnerable in the IUCN classification.
- The list of mammals includes Cuviers Beaked Whale and Short-beaked Common Dolphin, which dive as deep as 8,000 meters below the Earth's surface.

(2) Marine turtles

- Out of the seven species of marine turtles found across the world, five species have been recorded from Indian waters.
- India is known as one of the best and largest breeding grounds for sea turtles, especially for Olive Ridley and Leatherback Turtles, across the world.

[pib] Recycling Carbon Technology

Enviro & Biodiversity | GS3: Conservation, Environmental Pollution & Degradation, Eia

Note4Students | From UPSC perspective, the following things are important :

Prelims level : Components of CCUS

Mains level : Carbon sequestration

A Bangalore-based startup has received the National Award 2021 for developing efficient catalysts and methodologies for the conversion of CO₂ to methanol and other chemicals.

Carbon Recycling

- It has led to the improvisation of process engineering to enhance the production of chemicals and fuels from anthropogenic CO₂.
- It has integrated multiple components involved in the CCUS (Carbon capture, utilization, and sequestration) to develop a complete solution for the environmental issues due to global warming.

- The current capacity of CO₂ conversion is 300 kg per day, which can be scaled up to several 100 tons on an industrial scale.

What is CCUS?

- Carbon Capture, Utilization, and Storage (CCUS) encompass methods and technologies to remove CO₂ from the flue gas and from the atmosphere.
- CCUS involves multiple aspects that need to be in sync for the successful removal or capture of CO₂ from the flue gas or the atmosphere, followed by utilization and storage.
- Carbon capture involves the development of sorbents that can effectively bind to the CO₂ present in flue gas or the atmosphere, which is expensive.
- In addition, there has been a considerable debate about the fate of captured and compressed CO₂.

GLOBAL GEOLOGICAL AND CLIMATIC EVENTS

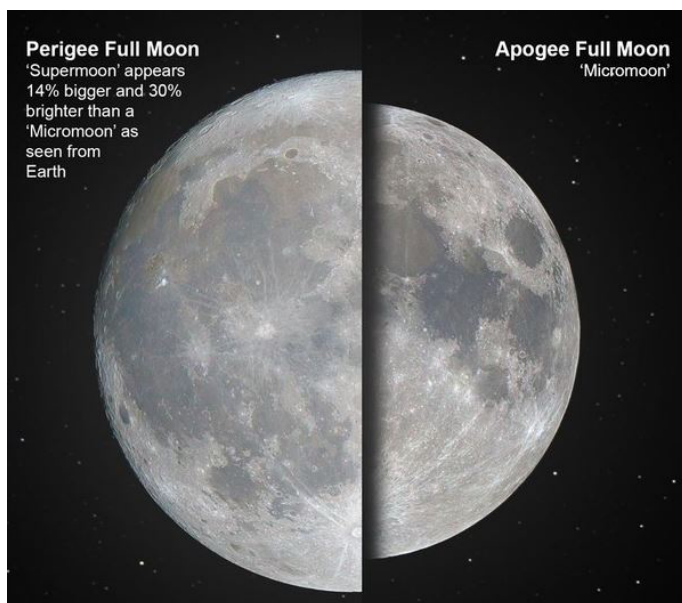
What is a Supermoon?

Enviro & Biodiversity | GS1: Geographical Features & Their Location

Note4Students | From UPSC perspective, the following things are important :

Prelims level : Lunar Eclipse

Mains level : Not Much



The Moon will have the nearest approach to Earth on May 26, and therefore will appear to be the closest and largest Full Moon or supermoon of 2021.

Tap here to read more about Solar and Lunar Eclipses

<https://www.civildaily.com/burning-issues-eclipses-this-year/>

What is a Supermoon?

- A supermoon occurs when the Moon's orbit is closest to the Earth at the same time that the Moon is full.
- As the Moon orbits the Earth, there is a point of time when the distance between the two is the least (called the perigee when the average distance is about 360,000 km from the Earth).
- Also, there is a point of time when the distance is the most (called the apogee when the distance is about 405,000 km from the Earth).
- Now, when a full moon appears at the point when the distance between the Earth and the Moon is the least, not only does it appear to be brighter but it is also larger than a regular full moon.
- According to NASA, the term supermoon was coined by astrologer Richard Nolle in 1979.
- In a typical year, there may be two to four full supermoons and two to four new supermoons in a row.

What is happening today?

- Two celestial events will take place at the same time.
- One is the supermoon and the other is a total lunar eclipse, which is when the Moon and Sun are on opposite sides of the Earth.
- Because of the total lunar eclipse, the moon will also appear to be red.

- This is because the Earth will block some of the light from the Sun from reaching the moon.
- The Earth's atmosphere filters the light, it will soften the edge of our planet's shadow giving the Moon a deep, rosy glow.

NATIONAL GREEN TRIBUNAL'S ROLE AND CONTRIBUTIONS

NGT upholds rights of pastoralists in Banni Grasslands

Enviro & Biodiversity | GS3: Conservation, Environmental Pollution & Degradation, Eia

Note4Students | From UPSC perspective, the following things are important :

Prelims level : Banni Grasslands

Mains level : Not Much

The National Green Tribunal (NGT) ordered all encroachments to be removed from Gujarat's Banni grasslands.

Banni Grasslands

- Banni Grasslands form a belt of arid grassland ecosystem on the outer southern edge of the desert of the marshy salt flats of Rann of Kutch.
- They are known for rich wildlife and biodiversity and are spread across an area of 3,847 square kilometers. Two ecosystems, wetlands and grasslands, are juxtaposed in Banni.
- They are currently legally protected under the status as a protected or reserve forest in India.
- Wildlife Institute of India (WII) has identified this grassland reserve as one of the last remaining habitats of the cheetah in India and a possible reintroduction site for the species.
- The region hosts a nomadic pastoralist community, the Maldharis, whose livelihoods depend on this protected shrub-savanna.

Answer this PYQ in the comment box:

Q. Which one of the following is the correct sequence of ecosystems in the order of decreasing productivity? (CSP 2014)

- Oceans, lakes, grasslands, mangroves
- Mangroves, oceans, grasslands, lakes
- Mangroves, grasslands, lakes, oceans
- Oceans, mangroves, lakes, grasslands

What is the recent NGT verdict?

- The court also said the Maldharis will continue to hold the right to conserve the community forests in the area, granted to them as per the provisions in Section 3 of Forest Rights Act, 2006.
- NGT highlighted that the lack of coordination between the forest department and the revenue department lead to the problem of encroachment.
- The grassland was first declared a "protected forest" in May 1955, using the nomenclature of the Indian Forest Act, 1927.
- Since then, the actual transfer of the land from the Revenue department to the Forest department has not been completed.

Back2Basics: National Green Tribunal

- The NGT has been established in 2010 under the National Green Tribunal Act 2010.
- It works for:

- effective and expeditious disposal of cases relating to environmental protection
- conservation of forests and other natural resources including enforcement of any legal right relating to environment and
- giving relief and compensation for damages to persons and property and for matters connected therewith or incidental thereto
- It is not bound by the procedure laid down under the Code of Civil Procedure, 1908, but shall be guided by principles of natural justice.
- The Tribunal's dedicated jurisdiction in environmental matters shall provide speedy environmental justice and help reduce the burden of litigation in the higher courts.
- The Tribunal is mandated to make and endeavour for disposal of applications or appeals finally within 6 months of filing of the same.
- Initially, the NGT is proposed to be set up at five places of sittings and will follow circuit procedure for making itself more accessible.
- New Delhi is the Principal Place of Sitting of the Tribunal and Bhopal, Pune, Kolkata and Chennai shall be the other four place of sitting of the Tribunal.

Grassland



- Grassland biomes consist of large open areas of grass. Trees can be present, but they are infrequent.
- The animals found in grasslands range from African elephants to various species of prairie dogs (*Cynomys* spp.).
- Low rainfall, wildland fires, and grazing by animals are three factors that maintain grasslands. In grassland regions, the climate is ideal for the growth of grasses only.
- The low precipitation rates are enough to nourish grasses but not enough for a forest of trees. Frequent fires also play a role in maintaining grassland ecosystems.
- Grasses are well adapted to grow back after a fire. Grassland animals are also prepared for fires, fleeing or burrowing underground to wait out the flames.
- Large animals, such as African elephants, can also trample the ground and discourage the growth of trees.

Data central to effective climate action

Enviro & Biodiversity | GS3: Awareness In The Fields Of It, Space, Computers, Robotics, Nano-Technology, Bio-Technology, Pharma Sector & Health Science, Conservation, Environmental Pollution & Degradation, Eia

Note4Students | From UPSC perspective, the following things are important :

Prelims level : Not much

Mains level : Paper 3- Data driven approach to deal with the future disruptions

Article highlights the importance of data driven approach in dealing with the future disruptions and suggests the reforms in the system.

Managing the disruption through data-driven tools

- The data-driven tools were used for managing pandemic induced disruption.
- This offers an opportunity **to restructure the data ecosystem** for managing the disruptions of the future that are more likely to be driven by climate change.

Policies for data sharing in India

- The National Data Sharing and Accessibility Policy (NDSAP), 2012 recognises the importance of data.
- NDSAP recognised the importance of data **in improving decision making**, meeting the **needs of civil society** and **generating revenue** by permitting access to datasets.
- In 2012, **a government portal, data.gov.in** was also established as a unified platform to enable sharing of data available with ministries, departments and other public agencies **for wider public use**.
- The sharing of data in this platform, apart from others, is further streamlined through the nodality of Chief Data Officer-CDO in respective ministries.

Challenges

- Challenge remains about whether the collected data is usable, accessible and if it captures the details that end users are interested in.
- Even after years of the portals operationalisation, there are multiple data-sets that **arent updated regularly**.

- Though NITI Aayog has brought indices to track climate actions such as under SDG-13 of SDG India Index, but it **remains vague in tracking improvements in climate resilience**, by solely using number of lives lost due to extreme weather events.

Reforms needed in data-ecosystem

- 1) Complete dataset:** There is a need **to collect complete datasets** required to assess climate risks and vulnerabilities.
 - This involves collection of datasets that are sex-disaggregated and geo-spatial and collect more nuanced dimensions like disaster response capacities.
 - **Targeted research:** There is a requirement of targeted research for designing better questionnaires and identifying new nodes for data collection.
- 2) Reliability of data:** The data collected has to be made reliable and usable through an accountability framework.
 - **Legislation:** A separate legislation in this regard would bring in the much-needed consistency in periodic collection of identified datasets and their proactive sharing in designated platforms.
- 3) Centralisation of data:** There is a need for **centralising public data** that currently exists with different departments and public institutions.
 - The **National Data Governance Centre** was planned to be set up in 2019 for precisely this objective.
 - But it is yet to be operationalised.

Consider the question "How data driven approach could help India deal with the future disruptions that are more likely to be from climate change? Suggest the reforms needed in India's data ecosystem."

Conclusion

It is time that India places itself on track to address the issues around the known unknowns of climate change through data driven approach.

Source:

<https://www.financialexpress.com/opinion/data-central-to-effective-climate-action/2258964/>

WILDLIFE CONSERVATION EFFORTS

Odisha's blackbucks double in 6 years

Enviro & Biodiversity | GS3: Conservation, Environmental Pollution & Degradation, Eia

Note4Students | From UPSC perspective, the following things are important :

Prelims level : Blackbuck

Mains level : Not Much



Odisha's blackbuck population has doubled in the last six years, according to figures from the latest population census.

Blackbucks in Odisha

- Blackbucks are found only in the Ganjam district in the southern part of the state, which is where the census was carried out.
- It is known in Odisha and Ganjam as Krushnasara Mruga.
- The people of Ganjam believe the sighting of a blackbuck in a paddy field is a harbinger of luck for them.
- It used to be sighted in the Balukhand-Konark Wildlife Sanctuary in Puri district till 2012-13, but now has vanished from the area.
- The blackbuck is a Schedule-1 animal according to the Wildlife (Protection) Act, 1972 (amended in 1992) and is considered as **Vulnerable** according to the Red Data Book.

Reasons for their rise

- Improvement of habitats, the protection given by the local people and forest staff were some of the reasons for the increase of the population.
- The people of Ganjam had been enthusiastically protecting the animal like the Bishnois of western Rajasthan and the Vala Rajputs of Saurashtra.

Answer this PYQ:

Q. With reference to Eco-Sensitive Zones, which of the following statements is/are correct?

1. Eco-Sensitive Zones are the areas that are declared under the Wildlife (Protection) Act, 1972.
 2. The purpose of the declaration of Eco-Sensitive Zones is to prohibit all kinds of human activities, in those zones except agriculture.
- Select the correct answer using the code given below:**
(a) 1 only (b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2

Back2Basics: Wildlife (Protection) Act, 1972

- WPA provides for the protection of the country's wild animals, birds, and plant species, in order to ensure environmental and ecological security.
- It provides for the protection of a listed species of animals, birds, and plants, and also for the establishment of a network of ecologically important protected areas in the country.
- It provides for various types of protected areas such as Wildlife Sanctuaries, National Parks, etc.
- There are six schedules provided in the WPA for the protection of wildlife species which can be concisely summarized as under:

Schedule I:

These species need rigorous protection and therefore, the harshest penalties for violation of the law are for species under this Schedule.

Schedule II:

Animals under this list are accorded high protection. They cannot be hunted except under threat to human life.

Schedule III & IV:

This list is for species that are not endangered. This includes protected species but the penalty for any violation is less compared to the first two schedules.

Schedule V:

This schedule contains animals which can be hunted.

Schedule VI:

This list contains plants that are forbidden from cultivation.

URBAN TRANSFORMATION - SMART CITIES, AMRUT, ETC.

Cost and complications of transplanting a tree

Enviro & Biodiversity | GS1: Urbanization, Their Problems & Remedies
Note4Students | From UPSC perspective, the following things are important :
Prelims level : Not Much
Mains level : Tree transplantation and its feasibility

The Central Public Works Department (CPWD) wants to transplant over 1,800 trees which are inside what used to be the Indira Gandhi National Centre for the Arts (IGNCA) complex, as part of the Central Vista redevelopment project.

Transplantation of trees

- The transplantation of trees is a complex and delicate process whose outcome cannot be predicted.
- A tree cannot be transplanted by simply uprooting it and placing it in a pit dug elsewhere. The process involves multiple steps and requires significant expertise.

How it is done?

- First, the soil around the tree is dug up to isolate the roots. The big branches are lopped off, leaving only small shoots for regeneration. This is done to make transportation of the tree to the new location easier.
- The root system is covered with wet gunny bags to protect the roots and to keep the tree hydrated.
- The tree has to be first sent to a nursery to acclimatize to a new kind of soil, and to regenerate.
- Once new shoots start sprouting, the tree is lowered into a pit created in its new spot.

What factors determine the success of a transplant?

- Even after all steps are meticulously followed, a lot depends on luck. The survival rate of a transplanted tree is about 50%.
- Not all trees can be transplanted. While peepal, ficus, semal and sheesham are tolerant to transplantation, trees such as dak, palash, arjun, shahtoos and jhilmil are not.

(1) Roots

- Any tree that has a tap root system cannot be transplanted, as the root goes deep into the soil, and it is not possible to isolate it without damage.

(2) Size

- Transplanting any tree with a trunk girth of more than 80-90 cm is not advisable as the tree cannot bear the shock, and will eventually die.

(3) Age

- That effectively means that big, old trees cannot, in most cases, be removed to another location.

(4) Soil

- It is important to consider soil type before transplantation.
- A tree growing on, say, the Delhi Ridge will not easily acclimatize to the soil in the Yamuna floodplain, as the two ecosystems are entirely different.

How expensive is transplantation?

- The cost of transplanting an average-sized tree might come to around Rs 1 lakh, which included post-transplantation care.
- For larger trees, the cost could go up to Rs 3 lakh.
- Private and voluntary organizations, however, claim that the cost is between Rs 5,000 and Rs 10,000 per tree.

SCIENCE TECH ART CULTURE

CORONAVIRUS - DISEASE, MEDICAL SCIENCES INVOLVED & PREVENTIVE MEASURES

Indian SARS-CoV-2 Genomic Consortia (INSACOG)

Science Tech Art Culture | GS3: Awareness In The Fields Of It, Space, Computers, Robotics, Nano-Technology, Bio-Technology, Pharma Sector & Health Science

Note4Students | From UPSC perspective, the following things are important :
Prelims level : Indian SARS-CoV-2 Genomic Consortia (INSACOG)
Mains level : Not Much

In early March, members of the Indian SARS-CoV-2 Genomic Consortia (INSACOG), an advisory group to the Central government, warned of a new and contagious form of the novel coronavirus.

What is INSACOG?

- INSACOG is a consortium of 10 labs across the country tasked with scanning COVID-19 samples from swathes of patients and flagging the presence of variants that were known to have spiked transmission internationally.
- It has also been tasked with checking whether certain combinations of mutations were becoming more widespread in India.
- Some of these labs had begun scanning for mutations in April 2020 itself, but it was not a pan-India effort.

- The institutes involved were laboratories of the Department of Biotechnology, the CSIR, the ICMR, and the Ministry of Health & Family Welfare (MoHFW).
- The National Centre for Disease Control (NCDC) under the MoHFW was tasked with coordinating the collection of samples from the States as well correlating disease with the mutations.
- The work began in January by sequencing samples of people who had a history of travel from the United Kingdom and a proportion of positive samples in the community.

What are the findings?

- The foreign variants identified were primarily the B.1.1.7 (first identified in the United Kingdom) and the B.1.351 (first found in South Africa) and a small number of P2 variants (from Brazil).
- However, some labs flagged the growing presence of variants identified in India that were clubbed into a family of inter-related variants called B.1.617, also known as the double mutant variant.
- It was primarily due to two mutations E484Q and L452R on the spike protein.

- The B.1.617 family was marked as an international variant of concern after it was linked to a recent spike in cases in the UK.
- INSACOG labs also found that the B.1.1.7 variant, which is marked by increased infectivity, is distinctly more prevalent in several northern and central Indian States in comparison to southern States.

Beyond identifying patterns, why is genome sequencing useful?

- The purpose of genome sequencing is to understand the role of certain mutations in increasing the virus infectivity.
- Some mutations have also been linked to immune escape, or the virus ability to evade antibodies, and this has consequences for vaccines.
- Labs across the world, including many in India, have been studying if the vaccines developed so far are effective against such mutant strains of the virus.
- They do this by extracting the virus from COVID-19-positive samples and growing enough of it. Then, blood serum from people who are vaccinated, and thereby have antibodies, is drawn.
- Using different probes, scientists determine how much of the antibodies thus extracted are required to kill a portion of the cultured virus.

- In general, the antibodies generated after vaccination and this was true of Covaxin, Covishield, Pfizer and Moderna jabs were able to neutralize variants.
- Antibody levels are not the only markers of protection and there is a parallel network of cellular immunity that plays a critical role in how vaccines activate immunity.
- The current evidence for most COVID-19 vaccines is that they have almost 75% to 90% efficacy in protecting against disease but less so in preventing re-infection and transmission.

Challenges faced by INSACOG

- Given that the novel coronavirus is spreading, mutating, and showing geographical variations, the aim of the group was to sequence at least 5% of the samples.
- For many reasons, this has so far been only around 1%, primarily due to a shortage of funds and insufficient reagents and tools necessary to scale up the process.
- While some of these issues, the INSACOG, in spite of being peopled by expert scientists, is ultimately an advisory group to the Central government and part of its communication structure.
- Warnings about emerging variants were not made public with sufficient urgency and the sharing of datasets, even within constituent groups of the INSACOG, was less than ideal.

ISRO MISSIONS AND DISCOVERIES

[pib] 3D distribution of Molecular & Atomic Hydrogen in Galaxies

Science Tech Art Culture | GS3: Awareness In The Fields Of It, Space, Computers, Robotics, Nano-Technology, Bio-Technology, Pharma Sector & Health Science

Note4Students | From UPSC perspective, the following things are important :
Prelims level : Read the attached story
Mains level : Formation of stars

Indian scientists have estimated the three-dimensional distribution of molecular and atomic hydrogen in a nearby galaxy which can help lead to clues to the star formation processes and the evolution of the galaxy.

Study on Hydrogen distribution

- Galaxies like the one we reside in, the Milky Way, consist of discs containing stars, molecular and atomic hydrogen, and helium.
- The molecular hydrogen gas collapses on itself in distinct pockets, forming stars, its temperature was found to be low --close to 10 kelvin, or -263 C, and thickness is about 60 to 240 light-years.
- The atomic hydrogen extends both above and below the discs.
- Indian scientists have estimated that molecular hydrogen extends farther from the disc in both directions, up to about 3000 light-years.

- This gaseous component is warmer than the one straddling the disc and has comparatively lesser densities, thus escaping earlier observations.
- They called it the diffuse component of the molecular disc.

Answer this PYQ in the comment box:

Q. Which one of the following sets of elements was primarily responsible for the origin of life on the Earth?

- Hydrogen, Oxygen, Sodium
- Carbon, Hydrogen, Nitrogen
- Oxygen, Calcium, Phosphorous
- Carbon, Hydrogen, Potassium

Why does this study matter?

- The molecular hydrogen gas converts to individual stars under the pull of gravity, thus holding clues to the star formation processes and the evolution of the galaxy.
- If a significant part of the gas extends beyond the thin disc of a few hundred light-years, it may explain why astronomers also observe stars at a few thousand light-years perpendicular to the galactic disc.

Reclining Buddha and his various other depictions in art

Science Tech Art Culture | GS2: Arts & Culture, Federalism

Note4Students | From UPSC perspective, the following things are important :

Prelims level : Reclining Buddha, Various Mudras

Mains level : Buddhist arts in India



On this Buddha Jayanti, Buddha Purnima, or Vesak India's largest statue of the Reclining Buddha was to have been installed at Bodh Gaya. The ceremony has been put off due to Covid-19 restrictions.

The Reclining Buddha

- A reclining Buddha statue or image represents The Buddha during his last illness, about to enter Parinirvana, the stage of great salvation after death that can only be attained by enlightened souls.
- The Buddha's death came when he was 80 years old, in a state of meditation, in Kushinagar in eastern Uttar Pradesh, close to the states border with Bihar.

Answer this PYQ from CSP 2014 in the comment box:

Q. Lord Buddha's image is sometimes shown with a hand gesture called Bhūmisparśa Mudra. It symbolizes-

- Buddha's calling of the Earth to watch over Mara and to prevent Mara from disturbing his meditation*
- Buddha's calling of the Earth to witness his purity and chastity despite the temptations of Mara*
- Buddha's reminder to his followers that they all arise from the Earth and finally dissolve into the Earth and thus this life is transitory*
- Both the statements a and b are correct in this context*

Significance of the position

- Buddha is lying on his right side, his head resting on a cushion or relying on his right elbow, supporting his head with his hand.
- After the Buddha's death, his followers decide to build a statue of him lying down.
- It is a popular iconographic depiction in Buddhism and is meant to show that all beings have the potential to be awakened and be released from the cycle of death and rebirth.

Connection with Gandhara Art

- The Reclining Buddha was first depicted in Gandhara art, which began in the period between 50 BC and 75 AD, and peaked during the Kushana period from the first to the fifth centuries AD.

- Since the Buddha was against idol worship, in the centuries immediately following his Parinirvana (483 BC), his representation was through symbols.
- As the devotional aspect subsequently entered Buddhist practice, however, iconographic representations of The Buddha began.

Try this question from CS Mains 2016:

Q. Early Buddhist Stupa-art, while depicting folk motifs and narratives, successfully expounds Buddhist ideals. Elucidate.

Reclining Buddha outside India

- In Sri Lanka and India, the Buddha is mostly shown in sitting postures, while the reclining postures are more prevalent in Thailand and other parts of southeast Asia.
- There are several statues of the Reclining Buddha in China, Thailand, Japan, Indonesia, and Malaysia.
- The largest in the world is the 600-foot Winsein Tawya Buddha built-in 1992 in Mawlamyine, Myanmar.
- In the late 15th century, a 70-meter statue of the Reclining Buddha was built at the Hindu temple site of Baphuon in Cambodia's Angkor.
- The Bhamala Buddha Parinirvana in Pakistan's Khyber Pakhtunkhwa province, which dates back to the 2nd century AD, is considered the oldest statue of its kind in the world.

Reclining Buddha in India

- Cave No. 26 of the UNESCO World Heritage Site of Ajanta contains a 24-foot-long and nine-foot-tall sculpture of the Reclining Buddha, believed to have been carved in the 5th century AD.
- It shows the Buddha reclining on his right side, and behind him are two sala trees.
- At the base of the sculpture are his begging bowl, a water pitcher and walking stick.
- While his disciples are shown sitting in mourning, celestial beings are shown on top, rejoicing in anticipation of the Buddha's arrival in heaven.

Back2Basics: Mudras of Buddha

Dharmachakra Mudra

- It is also called as the gesture of Teaching of the Wheel of Dharma that describes one of the most important moments in the Buddha's life as he performed the Dharmachakra mudra in his first sermon in Sarnath after he attained enlightenment.
- It is performed with the help of both the hands which are held against the chest, the left facing inward, covering the right facing outward.

Dhyana Mudra

- It is also known as Samadhi or Yoga Mudra.
- It is performed with the help of two hands, which are placed on the lap and place the right hand on the left hand with stretched fingers (thumbs facing upwards and other fingers of both the hand resting on each other.)

- This is the characteristic gesture of Buddha Shakyamuni, Dhyanī Buddha Amitabh and the Medicine Buddha.

Bhumisparsa Mudra

- This gesture is also known as touching the Earth, which represents the moment of the Buddhas awakening as he claims the earth as the witness of his enlightenment.
- It is performed with the help of the right hand, which is held above the right knee, reaching toward the ground with the palm inward while touching the lotus throne.

Varada Mudra

- This mudra represents the offering, welcome, charity, giving, compassion and sincerity.
- It is performed with the help of both the hands in which palm of right hand is facing forward and fingers extended and left hand palm placed near centre with extended fingers.

Karana Mudra

- It signifies the warding off of evil which is performed by raising the index and the little finger, and folding the other fingers.
- It helps in reducing sickness or negative thoughts.

Vajra Mudra

- This gesture denotes the fiery thunderbolt that symbolises the five elements, air, water, fire, earth, and metal.
- It is performed with the help of right fist and left forefinger, which is placed by enclosing the erect forefinger of the left hand in the right fist with the tip of the right forefinger touching (or curled around) the tip of the left forefinger.

Vitarka Mudra

- It signifies the discussion and transmission of the teachings of the Buddha.
- It is performed by joining the tips of the thumb and the index fingers together while keeping the other fingers straight, which is just like the Abhaya Mudra and Varada Mudra but in this mudra the thumbs touch the index fingers.

Abhaya Mudra

- It is a gesture of fearlessness or blessing that represents the protection, peace, benevolence, and dispelling of fear.
- It is performed with the help of right hand by raising to shoulder height with bent arm, and the face of palm will be facing outward with fingers upright whereas the left hand hanging down while standing.

Uttarabodhi Mudra

- This denotes the supreme enlightenment through connecting oneself with divine universal energy.
- It is performed with the help of both the hands, which are placed at the heart with the index fingers touching and pointing upwards and the remaining fingers intertwined.

Anjali Mudra

- It is also called Namaskara Mudra or Hridayanjali Mudra that represents the gesture of greeting, prayer and adoration.
- It is performed by pressing the palms of the hands together in which the hands are held at the heart chakra with thumbs resting lightly against the sternum.

INNOVATIONS IN SCIENCES, IT, COMPUTERS, ROBOTICS AND NANOTECHNOLOGY

[pib] Bharat Ratna Professor CNR Rao

Science Tech Art Culture | GS3: Achievements Of Indians In S&T
 Note4Students | From UPSC perspective, the following things are important :
 Prelims level : CNR Rao and his scientific contributions
 Mains level : Not Much



Bharat Ratna Professor C.N.R. Rao has received the International Eni Award 2020 for research into renewable energy sources and energy storage, also called the Energy Frontier award.

Who is CNR Rao?

- Rao is an Indian chemist who has worked mainly in solid-state and structural chemistry.
- Rao is one of the world's foremost solid state and materials chemists. He has contributed to the development of the field over five decades.

His scientific contributions

His work on transition metal oxides has led to a basic understanding of novel phenomena and the relationship between materials properties and the structural chemistry of these materials.

- Rao was one of the earliest to synthesize two-dimensional oxide materials such as La_2CuO_4 .
- He was one of the first to synthesize 123 cuprates, the first liquid nitrogen-temperature superconductor in 1987. He was also the first to synthesize Y junction carbon nanotubes in the mid-1990s.

- His work has led to a systematic study of compositionally controlled metal-insulator transitions.
- Such studies have had a profound impact in application fields such as colossal magnetoresistance and high-temperature superconductivity.
- He has made immense contributions to nanomaterials over the last two decades, besides his work on hybrid materials.

Answer this PYQ from CSP 2020 in the comment box:

Q. With reference to carbon nanotubes, consider the following statements:

1. They can be used as carriers of drugs and antigens in the human body.
2. They can be made into artificial blood capillaries for an injured part of the human body.
3. They can be used in biochemical sensors.
4. Carbon nanotubes are biodegradable.

Which of the statements given above are correct?

- (a) 1 and 2 only (b) 2, 3, and 4 only (c) 1, 3, and 4 only (d) 1, 2, 3 and 4

Citations for the Energy Frontiers award

- Professor Rao has been working on hydrogen energy as the only source of energy for the benefit of all mankind.
- Hydrogen storage, photochemical and electrochemical production of hydrogen, solar production of hydrogen, and non-metallic catalysis were the highlights of his work.
- The EF award has been conferred for his work on metal oxides, carbon nanotubes, and other materials and two-dimensional systems, including graphene, boron-nitrogen-carbon hybrid materials, and molybdenum sulfide (Molybdenite - MoS₂) for energy applications and green hydrogen production.
- Green hydrogen production can be achieved through various processes, including the photodissociation of water, thermal dissociation, and electrolysis activated by electricity produced from solar or wind energy.

Significance of this award

- This is considered to be the Nobel Prize in Energy Research.

SOCIAL MEDIA: PROSPECT AND CHALLENGES

New IT Rules 2021

Science Tech Art Culture | GS3: Social Media Networks & Internal Security

Note4Students | From UPSC perspective, the following things are important :
Prelims level : Provisions of IT Rules 2021

Mains level : Paper 3- Issues with IT Rules 2021

Important provision made in the IT Rules 2021

SOCIAL MEDIA

- Identify 'first originator' of content that authorities consider anti-national
- Appoint grievance officer, resolve complaints in 15 days
- File monthly compliance report on complaints received, action taken

DIGITAL NEWS

- Follow Press Council of India, Cable TV Networks (Regulation) Act norms.
- Self-regulatory bodies to oversee adherence to Code of Ethics
- I&B Ministry to form panel, oversight mechanism

OTT PLATFORMS

- Self-classify content into five age-based categories: U (universal), U/A 7+ (years), U/A 13+, U/A 16+, and A.

- Parental locks for any content classified as U/A 13+ or above.
- Age verification mechanism for content classified as 'A' (adult)

- The Rules mandate duties such as removal of **non-consensual intimate pictures within 24 hours**.
- The rules also mandates publication of compliance reports to increase transparency.

- Rules provides for setting up of a **dispute resolution mechanism** for content removal.
- It provides for adding a label to information for users to know whether content is advertised, owned, sponsored or exclusively controlled.

Advantage of the rules

- Removal of non-consensual intimate pictures within 24 hours,
- Publication of compliance reports to increase transparency,
- Setting up a dispute resolution mechanism for content removal,
- Adding a label to information for users to know whether content is advertised, owned, sponsored or exclusively controlled.

Issues with the rules

1) Affects right to free speech and expression

- The Supreme Court, in the case of Life Insurance Corp. Of India vs Prof. Manubhai D. Shah (1992) had elevated **the freedom to circulate ones views as the lifeline of any democratic institution**.
- So, the rules need to be critically scrutinised for the recent barriers being imposed by it.

2) Violation of legal principles

- The rules were framed by the Ministry of Electronics and Information Technology (MeiTY).
- However, the Second Schedule of the Business Rules, 1961 **does not empower MeiTY to frame regulations for digital media**.
- This power belongs to the **Ministry of Information and Broadcasting**.

- This action violates the legal principle of colourable legislation where the legislature cannot do something indirectly if it is not possible to do so directly.
- Moreover, the Information Technology Act, 2000, **does not regulate digital media**.
- Therefore, the new IT Rules which claim to be a piece of subordinate legislation of the IT Act, goes beyond the rule-making power conferred upon them by the IT Act.
- This makes the Rules **ultra vires to the Act**.

3) Deprives the fair recourse to intermediary

- An intermediary is now supposed to take down content within 36 hours upon receiving orders from the Government.
- This deprives the intermediary of a **fair recourse** in the event that it disagrees with the Government's order due to a strict timeline.

4) Privacy violation

- These Rules undermine the right to privacy by imposing a **traceability requirement**.
- The immunity that users received from **end-to-end encryption** was that intermediaries **did not have access to the contents of their messages**.
- Imposing this mandatory requirement of traceability will break this immunity, thereby weakening the security of the privacy of these conversations.
- This will also render all the data from these conversations vulnerable to attack from ill-intentioned third parties.
- The threat here is not only one of privacy but to the **extent of invasion and deprivation from a safe space**.

- Recent data breach affecting a popular pizza delivery chain and also several airlines highlights the risks involved in such move in the absence of data protection law.
- Instead of eliminate the fake news, the Rules proceed to hurriedly to take down whatever authority may deem as fake news.

5) Operational cost

- The Rules create **additional operational costs** for intermediaries by requiring them to have Indian resident nodal officers, compliance officers and grievance officers.
- Intermediaries are also required to have offices located in India.
- This makes profit making a far-fetched goal for multinational corporations and start-up intermediary enterprises.
- Therefore, not only do these Rules place a barrier on the **marketplace of ideas** but also on the economic market of intermediaries in general **by adding redundant financial burdens**.

Consider the question "What are the challenges associated with the social media? How the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 will help in dealing with these challenges? What are the issues with these rules?"

Conclusion

Democracy stands undermined in direct proportion to every attack made on the citizens' right. The IT Rules 2021 have tilted towards violation of rights. Therefore, these rules need reconsideration.

PROMOTING SCIENCE AND TECHNOLOGY - MISSIONS, POLICIES & SCHEMES

[pib] National AI Portal INDIAai

Science Tech Art Culture | GS3: Awareness In The Fields Of It, Space, Computers, Robotics, Nano-Technology, Bio-Technology, Pharma Sector & Health Science

Note4Students | From UPSC perspective, the following things are important :

Prelims level : INDIAai

Mains level : AI promotion moves by the government



The National AI Portal (<https://indiaai.gov.in>), celebrated its first anniversary on May 28, 2021.

National AI Portal

- INDIAai is the National AI Portal of India - a central hub for everything AI in India and beyond.
- A joint initiative of MeitY, NeGD and NASSCOM, the website aims to be the trusted content powerhouse in the backdrop of India's journey to global prominence in Artificial Intelligence.
- It serves as a central hub for AI related news, learning, articles, events and activities etc., in India and beyond.
- It has been set up to prepare the nation for an AI future.
- It is the single central knowledge hub on artificial intelligence and allied fields for aspiring entrepreneurs, students, professionals, academics, and everyone else.
- The portal focuses on creating and nurturing a unified AI ecosystem for driving excellence and leadership in India's AI journey, to foster economic growth and improve lives through it.

B2BASICS

Artificial intelligence (AI) is a wide-ranging branch of computer science concerned with building smart machines capable of performing tasks that typically require human intelligence. AI is an interdisciplinary science with multiple approaches, but advancements in machine learning and deep learning are creating a paradigm shift in virtually every sector of the tech industry.

Data is an essential weapon against Covid

Science Tech Art Culture | GS3: Awareness In The Fields Of It, Space, Computers, Robotics, Nano-Technology, Bio-Technology, Pharma Sector & Health Science

Note4Students | From UPSC perspective, the following things are important : Prelims level : Not much

Mains level : ` Paper 3- Role of data analytics during pandemic

The article highlights how data played an important role in decision-making in dealing with the Covid-19 pandemic.

Importance of data in decision making

- The COVID-19 pandemic has highlighted globally how important data is to governments in decision-making.
- **Epidemiological data** is of paramount significance for targeting and implementing control measures for public health in a timely manner
- Such data was used effectively in the **evidence-based response** and decision-making in countries like South Korea.
- Modern response to pandemics has focused on exploiting all the available data to **inform policy action in real time**.

How data analysis helped during pandemic

- Data analysis has revealed the need for continuous and repeated tracking of case numbers, fatalities and recoveries.
- The epidemiological concept of **flattening the curve** and its predictions are results of **data analysis and modelling**.
- Understanding testing adequacy or lack thereof allows us to measure our preparedness, **prognostic versus diagnostic ability**, and shape our responses to identify, manage, and care for new cases.
- Epidemic outbreak data like case data, medical and treatment data can be used to understand disease pathogenesis and severity.
- **Genome sequencing surveillance** helps identify and track viral genome sequence variants in real time and the evolution of the virus.
- The concept of **open access to various data** enables models to improve forecast and study the spread of the disease.'

Integration and analysis of multiple datatypes

- The integration and analysis of **multiple heterogeneous datatypes** eventually would yield a holistic picture.

- This helps guide policy decisions for control and management of public health.
- When **genome surveillance data is correlated with the magnitude of cases and their outcomes**, then we can understand the **transmissibility or infectivity of the virus**.
- **Geographical mapping of prevalence of mutants** allows us to understand viral spread and **explain recoveries or deaths in a specific area**.
- The roll out of vaccinations can shape viral evolution and drug-treatment strategies.
- Surveillance through studying genome sequencing of the virus, coupled to other epidemiological data allows us to identify these connections.

Challenges

- Part of the challenge lies in the **standardisation of data collection**, curation, annotation and the **integration of data analytics pipelines for outbreak analytics**.

Way forward

- Ensuring **data availability** and quality under operational constraints is critical.
- The use of **data standards** instils consistency, reduces errors and enables transparency.
- Embedded in the idea of data sharing lies the concept of **data security and confidentiality**.
- Concerns of privacy and security calls for a **systemic infrastructure with built-in safeguards** to ensure **data encryption** while preserving anonymity and ensuring privacy.
- As our dependence on **data-based decisions** becomes more and more critical, an urgent charter for **standardised digital health data** in India is required.

Consider the question "The COVID-19 pandemic has highlighted globally how important data is to governments in decision-making. Explain how data helps in decision making and challenges in evidence-based decision making based on data."

Conclusion

Rational and scientific methods necessitate data without which neither can we have information, nor knowledge or wisdom. Data sharing, and transparency and timely dissemination of data are critical to overcome the pandemic.

HISTORICAL AND ARCHAEOLOGICAL FINDINGS IN NEWS

Thomas Hickey's 19th century painting on smallpox vaccination

Trivia | GS1: Modern Indian History

Note4Students | From UPSC perspective, the following things are important :

Prelims level : Smallpox vaccination in colonial India

Mains level : Not Much



A 19th-century portrait of three women from Mysore has been going viral as "one of the most important scientific pictures in the history of medicine in India".

What did the portrait depict?

- Believed to be painted in 1805 by Irish-born artist Thomas Hickey, the oil on canvas was initially thought to be portraits of dancing girls or courtesans.
- The painting depicted one of the first vaccine drives in India, with bejewelled women from the Wadiyar dynasty posing for Hickey.
- The canvas was commissioned to promote participation in the smallpox vaccination programme and the women posing with the scars.

What is smallpox?

- Smallpox is an acute contagious disease caused by the variola virus, a member of the orthopoxvirus family.
- It was one of the most devastating diseases known to humanity and caused millions of deaths before it was eradicated.
- It is believed to have existed for at least 3000 years.

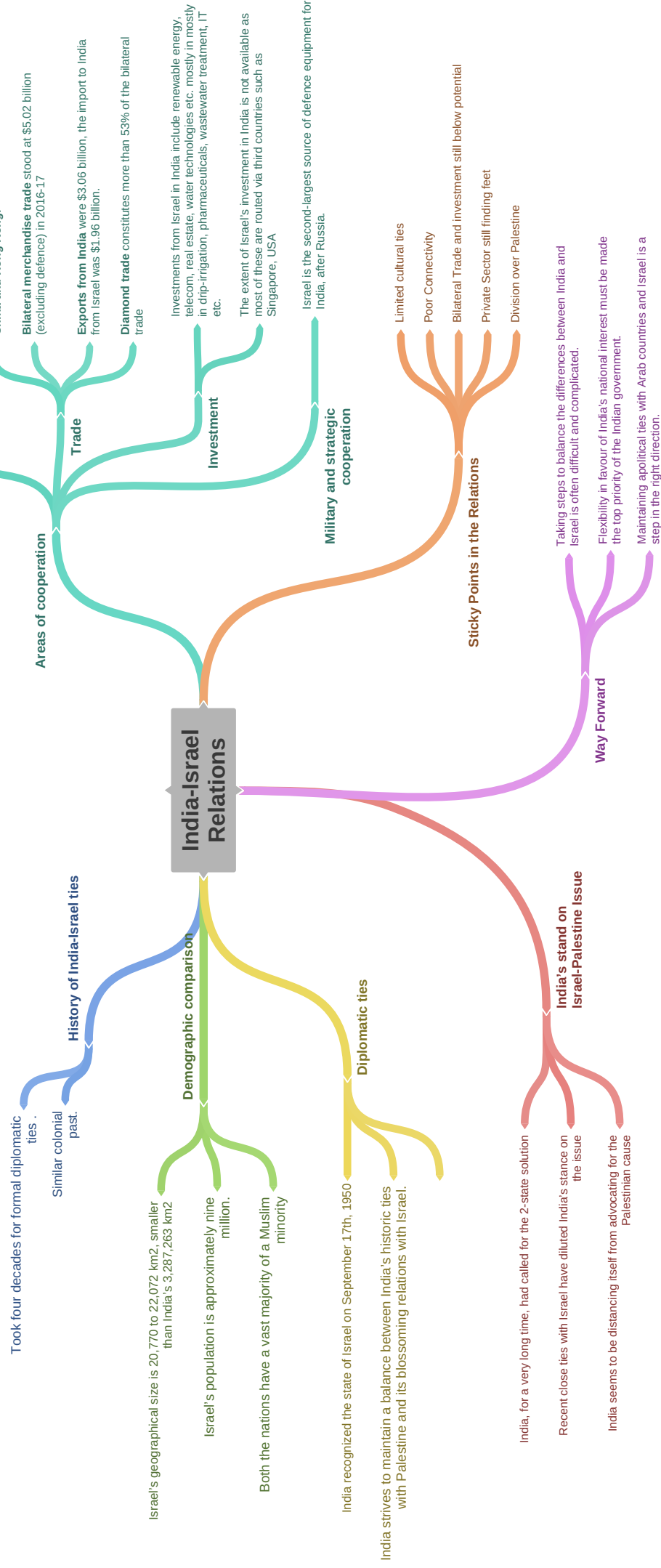
How and when did the smallpox vaccine reach India?

- The smallpox vaccine, discovered by Edward Jenner in 1796, was the first successful vaccine to be developed.
- On June 14, 1802, Anna Dusthall, an Anglo-Indian toddler, was the first person in India to be successfully vaccinated against the virus that relied on the cowpox virus, a mild cousin of smallpox to trigger immunity.
- The vaccine vesicle that came on the arm of the receiver was a source of lymphatic fluid or pus that would act as a vaccine, leading to an arm-to-arm immunisation chain.
- The vaccine subsequently travelled to different parts of India, including Hyderabad, Cochin, Madras and Mysore.

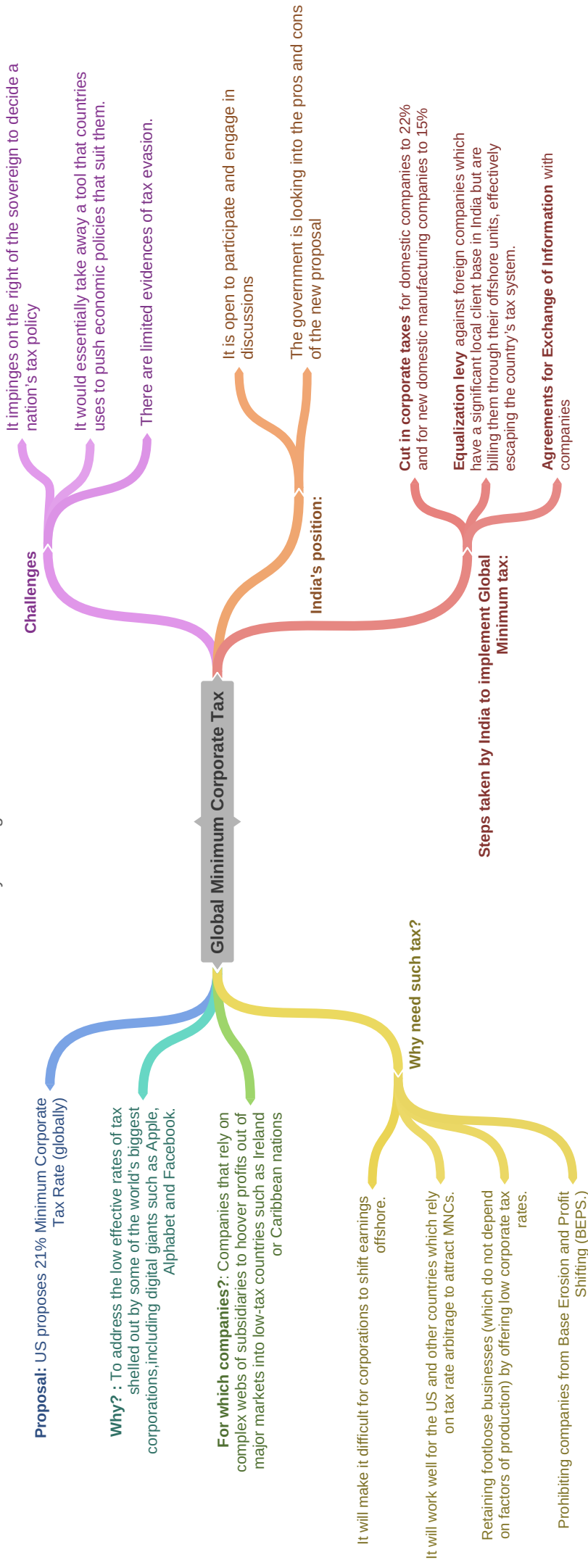
How was the drive carried out?

- While the lymph was at times reportedly dried and sealed between glass plates to be transported, it often did not survive long journeys, due to which the British had to primarily rely on a human chain.
- There was also opposition from the domestic population on the introduction of the cowpox virus and also because some believed the goddess of smallpox would be angered by the vaccination.
- With Tipu Sultan defeated in Mysore, and the reinstatement of the Wadiyars, the East India Company was trying to strengthen its position in South India.
- It protected the ex-pat population from an epidemic, making vaccination essential.
- Queen Lakshmi Ammanni, who had lost her husband to smallpox, supported their cause and wanted to vaccinate her population against the deadly virus.
- The painting was supposed to encourage participation in the vaccination drive.

Recently India's permanent representative to the UN made a carefully crafted statement at the UN Security Council "open debate" on the escalating Israel-Palestine violence.



Global Minimum Corporate Tax is a minimum tax rate for corporations all over the world to pay regardless of which jurisdiction they are registered.



The basic structure doctrine is a common law legal doctrine that the constitution of a sovereign state has certain characteristics that cannot be erased by its legislature.

