

Current Affairs

"A MONTHLY MAGAZINE FOR UPSC CIVIL SERVICES EXAMINATION"

ENHANCING CORPORATE PRESENCE in BANKS

Understanding Issues and Implications

BANK



NEXT IAS

Current Affairs

January, 2021

Chief Editor

B. Singh (Ex. IES)

CMD, MADE EASY Group

Editor

Aniruddh Pratap Singh



MADE EASY Publications

Corporate Office: 44-A/4, Kalu Sarai, New Delhi-110016

Visit us at: www.madeeasypublications.org

☎ 011-45124660, 8860378007

E-mail: infomep@madeeasy.in

© Copyright 2021

MADE EASY Publications has taken due care in collecting the data before publishing this book. In spite of this, if any inaccuracy or printing error occurs then Made Easy Publications owes no responsibility. Made Easy Publications will be grateful if you could point out any such error. Your suggestions will be appreciated. © All rights reserved by MADE EASY PUBLICATIONS. No part of this book may be reproduced or utilized in any form without the written permission from the publisher.

Disclaimer: The views and opinions expressed in this magazine are those of the authors and do not necessarily reflect policy or position of CURRENT AFFAIRS Magazine or MADE EASY Publications. They should be understood as the personal opinions of the author/ authors. The MADE EASY assumes no responsibility for views and opinions expressed nor does it vouch for any claims made in the advertisements published in the Magazine. While painstaking effort has been made to ensure the accuracy and authenticity of the informations published in the Magazine, neither Publisher, Editor or any of its employee does not accept any claim for compensation, if any data is wrong, abbreviated, cancelled, omitted or inserted incorrect.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without either the prior written permission of the Publisher.

MESSAGE TO THE READERS

The January 2021 Issue of the Next IAS Current Affairs Magazine (hereafter called 'The Magazine'), covers news events from 1st December 2020 to 31st December 2020 (hereafter called 'Coverage Period'). The Magazine has comprehensive coverage of all the topics from current affairs neatly categorized into major sections like Economy, International Issues, Polity & Governance, and so on.

This issue of the magazine has an in-depth analysis of issues such as '**Enhancing Corporate Presence in Banks**', '**Nuclear Disarmament**,

'Developing Resilience to Cyclones' and '**Five Years of Paris Climate Deal**'. The Magazine also covers the issues of '**Municipal Bonds**', '**Government to Regulate OTT services and Digital News**', '**Interplay between Subsidies and Agri-Pollution**' and many other issues which have become relevant in the coverage period.

The Magazine is designed for the needs of the students who are preparing for UPSC Civil Services Examinations. However, it is also helpful for Engineering Services Examinations, Banking Examinations and other government or Public Sector Enterprises examinations

Any suggestion for further improvement of the Magazine is welcome and may be e-mailed to currentaffairs@nextias.com

Team NEXTIAS

Contents

In-Depth

Enhancing Corporate Presence in Banks: Understanding Issues and Implications.....	7
Developing Resilience to Cyclones: Changing Patterns and Increasing Risk	11
Nuclear Disarmament: A Way to Secure Humanity's Future!.....	14
Five Years of Paris Climate Deal: Time to Step Up the Efforts.....	18

Feature Articles

Municipal Bonds: Boosting Infrastructure Development of Urban India.....	21
Interplay between Subsidies and Agri-Pollution	23
PM WANI.....	25
Spike in Ammonia Level in Yamuna	26
Solar Power in India.....	27
Haryana's Bill on Right To Recall Panchayat Member	29
Government to Regulate OTT and Digital News	31
Fusion Reactors: Possibilities and Challenges.....	33
Regulation and Taxation of Betting and Gambling in India	35
National Family Health Survey-5	37
Nullify Elections if NOTA wins: Petition in SC	39
Future of SAARC	41
Participation of Women in Indian Judiciary.....	43
Food Adulteration in India	44
Bioweapons.....	46
Road Requirement Plan for Left-Wing Extremism Affected Districts.....	48

1 Economy

Vadhavan Port to be India's 13 th Major Port.....	50
Assets Under Management (AUM) of NBFCs set to Grow at 5-6% in Next Fiscal Year	51
Industry Status to the Film and Entertainment Sector in Maharashtra ..	53
India to deploy Floating Structures across its Coastlines.....	54
IFSC Authority (Banking) Regulations, 2020.....	55

2 International Relations

Chinese Investment in Sri Lanka	56
ASEAN Defence Ministers' Meeting Plus.....	57
India Pakistan Relations	57
CAATSA.....	58
Currency Manipulator List.....	59
Rohingya Migrants in Bhasan Char Island.....	60

San Isidro Movement (MSI): Cuba.....	61
Invest India wins United Nations Investment Promotion Award for 2020.....	62
India-Uzbekistan Virtual Summit	62
India Vietnam Signs Key Agreements.....	63
Israel-Bhutan Ties	64
India Myanmar Thailand Trilateral Highway Project	65
State sponsor of Terrorism	66
Partners In Population and Development Initiative	67

3 Internal Security

Khalistan Movement	68
Himgiri.....	69
National Maritime Domain Awareness Centre.....	69
Saksham	70
MARCOS	71

4 Polity & Governance

The Arbitration and Conciliation (Amendment) Ordinance, 2020	72
Pardoning Powers.....	73
Maharashtra Bill against Sexual Crimes	74
Justice Jain Committee	75
Karnataka Prevention of Slaughter and Preservation of Cattle Bill, 2020.....	76
'Roshni Act': 'U-Turn' of Jammu and Kashmir Administration	77
Land Acquisition for National Highways	79

5 Social Issues

Unnat Bharat Abhiyan	80
Vision 2035: Public Health Surveillance in India	81
Jharkhand Bans Tobacco use among State Government Employees	82
WHO Prequalification Project.....	83
Assistance to the Disabled in India.....	83

6 Environment

Western Disturbance and Winter in North India	84
NCAER Study on National Monsoon Mission	85
Brown Tarballs in Himalayas	86
Indo-Gangetic Plains: Global Hotspots for Atmospheric Ammonia	87
La Nina in 2020.....	87

Malayan Giant Squirrel (Ratufa Bicolor)	88
Saguna Rice Technique	88
Ganga Utsav	89
Commission for Air Quality Management (CAQM)	90
Luhri Stage-I Hydro Electric Project	90
Rescue of Exotic Species	91
Satat Initiative	92
Skinks of India Report	93
Vulture Action Plan 2020-2025	94
Status of Leopards Report	94

7 Science & Technology

IPBES Report on Future Pandemics	95
Edinburgh Medal 2020	96
Augmented Reality	96
Change's 5 Probe	97
Hayabusa 2	98
Indian Medicine Central Council (Post Graduate Ayurveda Education) Amendment Regulations, 2020	99

8 Ethics

Ethics of Vaccination: Challenges and Issues	100
--	-----

9 Culture

New Religious Code on Sarna Tribals	102
Aadi Mahotsav	102
Himachal Pradesh for GI Tags	103
Hornbill Festival	104
Tharu Tribes	104
All India Trade Union Congress	105

10 Miscellaneous

Human Rights	106
Indigenous Games in Khelo India	106
CCTV in Police Stations	107
Ramanujan Prize for Young Mathematicians 2020	108
Global Teacher Prize 2020	108
Yogasana as a Competitive Sport	109
National Portal for Transgender	109
India's First Driverless Train	110

11 Test Yourself

Multiple Choice Questions	111
Subjective Questions	120

NEXT IAS

Under the leadership of
Mr. B. Singh
CMD,
NEXT IAS & MADE EASY



Learn **GS** from **India's Top Faculties**



Kapurja Sir
Economy

Ex. Faculty, Vajiram & Ravi
Now only at NEXT IAS



Vibhas Jha
Economy

Ex. Faculty, Vajiram & Ravi
Now only at NEXT IAS



Awadh Ojha
History

Ex. Faculty, Vajiram & Ravi
Now only at NEXT IAS



Abhishek Parmar
History

Ex. Faculty, Vajiram & Ravi
Now only at NEXT IAS



Rajkumar Rai

Indian Society,
Social Justice, Ethics
Ex. Faculty, Vajiram & Ravi
Now only at NEXT IAS



Atish Mathur
Polity / Governance

Ex. Faculty, Vajiram & Ravi
Now at NEXT IAS



Bhawani Singh
Current Affairs &
Contemporary Issues



A.P. Singh

Polity, Environment
& Ecology and
Current Affairs



Ruchika Bhardwaj
International Relations,
Internal Security & Essay



K.M. Pathi
Ethics-Integrity
and Aptitude



**Sikandar
Khan**
Geography



Ayaz Khan
Science and
Technology



Puneet Singh
Aptitude
(CSAT)



Rahul Sengar
Art & Culture
and Current Affairs



Mohit Sharma
Disaster Management
& General Science

GS FOUNDATION COURSE for CSE 2022

LIVE CLASSES

Morning Batch : 7th Jan'21 (9:30 AM - 12:30 PM)

Evening Batch : 25th Feb'21 (6:00 PM - 9:00 PM)

OFFLINE CLASSES

From 25th Feb'21

(6:00 PM - 9:00 PM)

EARLY BIRD OFFER : 10% Discount Valid till 31st Jan, 2021

OPTIONAL FOUNDATION COURSE for CSE 2021 & 2022

▪ **Economics**
by **Vibhas Jha Sir**

▪ **Sociology**
by **Rajkumar Rai Sir**

▪ **Mathematics**
by **Maneesh Singh Sir**

▪ **Philosophy**
by **Dharmendra Kumar Sir**
Founder, Patanjali IAS

LIVE CLASSES

commencing from **14th Jan'21**

OFFLINE CLASSES

commencing from **April'21**

🏠 27-B, Pusa Road, Metro Pillar No. 118, Near Karol Bagh Metro Station, New Delhi-60

📞 011-49858612, 8800338066, 8800550197 🌐 www.nextias.com



MADE EASY
India's Best Institute for IES, GATE & PSUs

Under the leadership of

Mr. B. Singh
Chairman &
Managing Director



LIVE CLASSES

at **MADE EASY PRIME**

EXPERIENCE
CLASSROOM LEARNING AT HOME



ESE+GATE 2022 & GATE 2022

- ✓ Live classes by India's top faculties (Fixed schedule of 3 hrs/day).
- ✓ Additional facility to watch recorded lectures with doubt clearing facility.
- ✓ Teaching pedagogy exactly similar to classroom course.
- ✓ Concept practice with workbooks and updated theory books.
- ✓ Assessment of performance through subject-wise tests.
- ✓ Systematic subject sequence and time bound completion of syllabus.

Course is separately available in **Hinglish (Hindi + English)** and **English medium**.

Evening Batch 28th Dec, 2020
5.30 PM - 8.30 PM

Morning Batch 18th Feb, 2021
8.30 AM - 11.30 AM

Easy EMI options available

☎ 8851176822, 9958995830
🌐 www.madeeasyprime.com

Scan to
download
app



android



iOS

OFFLINE CLASSES

Regular Batches from 22nd Feb, 2021 • Weekend Batches from 21st Feb, 2021

If covid condition does not improve, then candidates will get access to live/online classes, till resumption of offline classes.

Avail **10% Discount** till 31st Jan, 2021
on ESE & GATE long term Online/Offline Courses

Delhi | Hyderabad | Noida | Jaipur | Lucknow | Bhopal | Bhubaneswar | Pune | Indore | Patna | Kolkata

📞 011-45124612, 9958995830

🌐 www.madeeasy.in

ENHANCING CORPORATE PRESENCE IN BANKS: UNDERSTANDING ISSUES AND IMPLICATIONS

Recently, RBI in his Report of the Internal Working Group report has recommended allowing large corporate and industrial houses to promote and run banks in India.

About:

- **Internal Working Group (IWG):** Reserve Bank of India (RBI) had constituted an IWG to review the "Extant Ownership Guidelines and Corporate Structure for Indian Private Sector Banks."
- **The Terms of Reference of the IWG inter alia included**
 - ♦ review of the eligibility criteria for individuals / entities to apply for banking license;
 - ♦ examination of preferred corporate structure for banks and harmonisation of norms in this regard;
 - ♦ review of norms for long-term shareholding in banks by the promoters and other shareholders.
- The IWG in its final report has recommended allowing large corporate and industrial houses to promote and run banks in India.



THE KEY RECOMMENDATIONS OF THE IWG

- **The cap on promoters' stake in the long run (15 years)** may be raised from the current level of 15 per cent to 26 per cent of the paid-up voting equity share capital of the bank.
 - ♦ As regards non-promoter shareholding, a uniform cap of 15 per cent of the paid-up voting equity share capital of the bank may be prescribed for all types of shareholders.
- Large corporate/industrial houses may be allowed as promoters of banks only after
 - ♦ **Necessary amendments to the Banking Regulation Act, 1949:** To prevent connected lending and exposures between the banks and other financial and non-financial group entities.
 - ♦ **Strengthening of the supervisory mechanism** for large conglomerates, including consolidated supervision.
- **Well run large Non-Banking Financial Companies (NBFCs)**, with an asset size of ₹50,000 crore and above, including those which are owned by a corporate house, may be considered for conversion into banks subject to completion of 10 years of operations and meeting due diligence criteria and compliance with additional conditions specified in this regard.
- **For Payments Banks intending to convert to a Small Finance Bank**, track record of 3 years of experience as Payments Bank may be considered as sufficient.
- **Small Finance Banks and Payments Banks may be listed within '6 years** from the date of reaching net worth equivalent to prevalent entry capital requirement prescribed for universal banks' or '10 years from the date of commencement of operations', whichever is earlier.
- **The minimum initial capital requirement** for licensing new banks should be enhanced from ₹500 crore to ₹1000 crore for universal banks, and from ₹200 crore to ₹300 crore for small finance banks.
- **Non-operative Financial Holding Company (NOFHC)** should continue to be the preferred structure for all new licenses to be issued for universal banks. However, it should be mandatory only in cases where the individual promoters/promoting entities/converting entities have other group entities.
- **While banks licensed before 2013 may move to an NOFHC structure** at their discretion, once the NOFHC structure attains a tax-neutral status, all banks licensed before 2013 shall move to the NOFHC structure within 5 years from announcement of tax-neutrality.
 - ♦ Banks currently under NOFHC structure may be allowed to exit from such a structure if they do not have other group entities in their fold.
- RBI may take steps to ensure harmonisation and uniformity in different licensing guidelines, to the extent possible.
 - ♦ Whenever new licensing guidelines are issued, if new rules are more relaxed, benefit should be given to existing banks, and if new rules are tougher, legacy banks should also conform to new tighter regulations, but a non-disruptive transition path may be provided to affected banks.

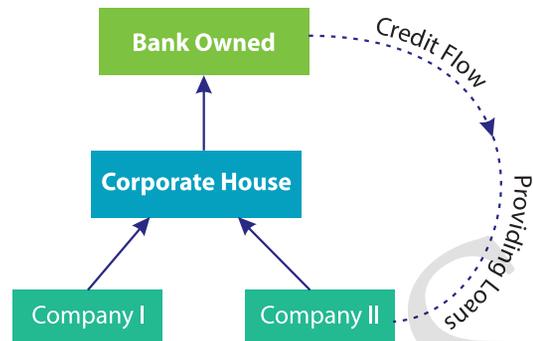
Arguments given by IWG for Enhancing Corporate Presence in Banks:

- **Credit inflow:** Credit crunch is a major problem of the banking systems in India today.
 - ♦ It has been suggested by the working group that participation of corporate sector in banking sector will increase credit flow.
- **Creation of New Banks:** By corporate participation, many new banks will be created which will certainly fulfill credit needs.
- Further, big corporate houses have ability to attract large investments which will help to solve the problems of current banking system.
- **International Standards of Banking Management:** Large corporates have experience of doing businesses in different countries across the world.
 - ♦ They can hire best reputed financial managers and other human resources required for management.
 - ♦ This will provide an impetus to expertise and management skills in the current banking system.
- **Advantage of reputation:** The reputation of MNCs operated by Indian entities who have previously applied for banking license will help Indian banking system.
 - ♦ **For Example:** Tata Sons who owns MNCs such as TCS and other reputed company globally will attract more FDI into banking sector thus creating credit.
- **Minimizing risk of failures:** The big corporate houses such as TATA sons have long historical reputation of running big businesses successfully.
 - ♦ Their large size backed by numerous funding sources coupled with regulation by Reserve Bank of India will minimize the risk of bank failures.
- **Re-entry of India Inc in the Banking Sector:** Many of the biggest industrial groups had aspired for this ever since private players were allowed into banking after 1993. This may help enlarge the Banking industry in India which is nascent when compared at the global stage.
- Further, big corporate houses can attract large investments which will help to solve the problems of the current banking system.
- **Greater Competition:** The entry of corporate players would engender greater competition in the Indian banking sector by increasing the supply of financial products available for customers.

Concerns with the recommendation of IWG:

- **Over-financing of risky activities:** The bank owned by corporate houses will lend to firms that are part of the corporate group.
 - ♦ It will allow them to undertake risky activities that are not easily financeable through regular channels.

- ♦ These risky activities often lead to failure of projects causing loss of depositor's money.
- ♦ This type of activity is called connected lending.



- **Case study:** Indonesia had banned the practice of connected lending but it didn't work.
 - ♦ Corporates easily picked up loopholes from the legislations to continue the process.
 - ♦ Any level of strictness in regulation proved to be a futility.
 - ♦ Hence, banning of corporate-owned banks remains the only option left.
- **Encouraging inefficiency by delaying or prolonging exit:** Even after the failure of industrial projects, corporates rarely will to exit or follow up insolvency procedures.
 - ♦ These projects are kept on life support by these corporates by refinancing them from banks.
 - ♦ This procedure will continue at the will of corporates when they will own the bank.
 - ♦ Hence, inefficient projects will be delayed and prolonged.
- **Entrenching dominance:** The accumulation of money and financing power of corporates will make them dominant in the market.
 - ♦ They will easily weed out their rivals over financing of a project.
 - ♦ Hence, it will create monopoly in different sectors of economy.
- **Against the views of various committees:** The recommendations of the working group are contrary to the views of different committees and various reports which opposed corporatization of the banking.
 - ♦ The Congress' Economic Programme Committee, 1948
 - ♦ Banking Commission by GOI, 1968
 - ♦ Banking Laws Amendment Act (1968)
- **Following committees recommended** to keep banks and industry apart and thus paved the path for Nationalization of Banks:
 - ♦ The Congress' Economic Programme Committee, 1948
 - ♦ Banking Commission by GOI, 1968
 - ♦ Banking Laws Amendment Act (1968)
- **Opposite to the opinion of Expert Group:** The expert group which was consulted by the Internal Working Group of RBI had opposed the move to allow entry of corporate sector into banks.



PRESENT SYSTEM OF BANK LICENSING IN INDIA

- RBI issues licenses to entities to carry on the business of banking and other businesses.
 - ♦ It allows banking companies to engage in banking and other related activities in accordance with the Banking Regulation Act, 1949.
 - **Bimal Jalan Committee:** Bimal Jalan Committee provided the current existing criteria to get bank licensing. The entities fulfilling following provisions were eligible for owning bank license.
 - ♦ **Eligible promoters:** It allowed private entities or group entities in public sector and Non-Banking Financial Companies (NBFCs) to own a bank.
 - ♦ They are eligible to hold a bank through Wholly-owned 'Non-Operative Financial Holding Company (NOFHC)', to be registered as NBFC.
 - ♦ These promoters should have good credentials and have past experience in this field for last ten years.
 - ♦ **Regulatory mechanism:** These banks will be fully regulated by provisions of Guidelines/Instructions issued by RBI and other regulators.
 - ♦ **Independent directors:** These banks must have at least 50% independent directors on its board of directors.
 - ♦ **Initial Paid up capital:** For new banks, it has been pegged at INR 500 crores, with the promoter NOFHC holding not less than 40% of capital, along with a 5-year lock-in period.
 - ♦ **Expansion of bank branches:** It made it mandatory for bank to open at least 25 per cent of its branches in unbanked rural centers.
 - ♦ **Priority sector lending norms:** The bank must fulfill priority sector lending norms.
 - **Banks which got license:** The committee gave in-principal approval for Bandhan Financial Services to operate as Bandhan Bank and IDFC (Infrastructure Development and Financial Corporation) to operate as bank.
 - **Differentiated Bank Licensing by Nachiket Mor Committee:** Apart from regular commercial banks, Nachiket Mor Committee recommended for creation of Small Finance banks and Payment Banks under differentiated licensing policy.
 - Regular commercial banks get their license under Universal Licensing Policy.
- Following steps were taken by Bimal Jalan Committee to reduce the presence of corporate entities:**
- **New holding company:** The entity owning the bank needs to float a new holding company structure and have 10 year of good track record.
 - **Limited shareholding:** Private entities or corporate sectors need to reduce the holding to 15 percent within 12 years.
 - More than 50% of the independent directors are needed on board of directors.
 - These independent directors will have no material relationship with the company. Hence bank will have corporate presence in minority in board of directors.
 - **Note:** The suggested provisions by the IWG of allowing corporate sector in bank means the board of directors will have majority of its member from industrial houses.

- ♦ All members except one in the expert group were of the opinion that corporate houses should not be allowed to own banks.
- **A leap backward:** Nationalization of Banks in India was done in order to limit the interference of the corporate sector.
 - ♦ The move checked monopoly of corporate houses on board of banks and unethical practices by them.
 - ♦ Re-introduction of corporate houses in banking sector will restore the age old regime.
- **Threat to 'Priority Sectors':** Concentration of wealth in form of bank deposits in private hands would leave less money with Public Sector Banks for priority sector landings.
 - ♦ As these corporate banks will be concentrated in areas of profitability, particularly the urban areas with less branches, majority of the population will not be benefitted from them.

Way Forward:

- Ending corporate dominance in banking sector has yielded better results in past.
- Priority Sector Lending ensured credit flow to the rural areas while rural branch expansion raised the level of financial inclusion.
- It helped an inclusive economic growth by raising growth rate of agriculture, cottage industry and food processing industries.
- Although corporate entry into the banking sector has as suggested by the working group will infuse credit but it will cause more harm to it than good.
- The political-corporate nexus will give birth to 'Crony Capitalists' which will reduce the scope of a competitive and open economy to grow at better pace.
- Hence, government must seek the opinions of different stakeholders and experts before considering the recommendations.

January, 2021



BRIEF HISTORY OF BANKING SECTOR IN INDIA

- **The Congress' Economic Programme Committee, 1948:** It was chaired Jawaharlal Nehru.
- It opined for nationalization of banks to keep away corporate sector and private players.
- Nationalization refers to an act of taking a private asset into the public ownership.
- The main aim of nationalization was to take deposits and assets of public withheld by banks into government's own hand.
- It was done to check unethical practices in these banks.
- Banking costs;
- Legislations affecting banking;
- Indigenous banking;
- Bank procedures;
- Non Banking financial intermediaries.
- Although Banking Commission, 1968 didn't call for nationalization of banks directly, but underlined the limitations of existing banking system of 1960s.
- **Banking Laws Amendment Act (1968):** The government through this amendment asked the banks to change the profile of directors and prohibited loans to directors and their firms.
- **Second phase of Nationalization of Banks, 1969:** 14 largest private banks of the country of the country were nationalized by passing Banking Companies (Acquisition and Transfer of Undertakings) Ordinance, 1969.
- It was later passed by both house of the parliament and pushed 80 percent of banking assets under the control of the state and 85% of the total deposits.

The first Phase of Bank Nationalization

- Imperial Bank of India (1949) was nationalized by recommendation of this committee.
- It was later renamed as State Bank of India in 1955.

The Second Phase of Bank Nationalization

- **Banking Commission, 1968:** This commission was setup to look into matters of

Fact Sheet

Small Finance Banks:

- The Nachiket Mor committee recommended to these types of bank to be opened in backward areas to provide banking services.
- These Banks have been envisaged to cater needs of selected areas.
- **Minimum Capital Requirement:** 500 cr.
- FDI limits, voting rights are similar to commercial banks which are operating in India.
- **Eligibility:** Micro Finance Institutions (MFIs) and Non-Banking Financial Companies (NBFCs) can convert to these types of Banks.
- Person having 10 years of experience in bank/cooperatives can apply for it.
- Non-Resident Indians having eligibility can apply for these banks.
- It debarred large corporate houses and from owning these types of banks.

- It has also debarred Cooperative Banks to apply for these types of banks.
- These banks can't set up their subsidiary banks and can't allow business correspondence.
- **Branch Expansion:** These banks must have 25% rural branches.
- **Lending activities:** These banks must provide loans under 'Priority Sector Lending' norms of commercial banks.
- 50% loans must be given to Micro-Small and Medium Enterprises.
- **Other Services:** These banks can issue credit as well as Debit card.

Payment Banks:

- These banks were also suggested by Nachiket Mor committee.
- These banks can't provide credit facilities and can have maximum deposit of 1 lakhs in saving account.
- These banks can neither set up subsidiaries nor can undertake non-banking financial services activities.
- These banks can offer debit cards but not credit cards to their customers.

DEVELOPING RESILIENCE TO CYCLONES: CHANGING PATTERNS AND INCREASING RISK

Cyclone Gati, Cyclone Nivar wreaked environmental, economic and social havoc in their path.

About:

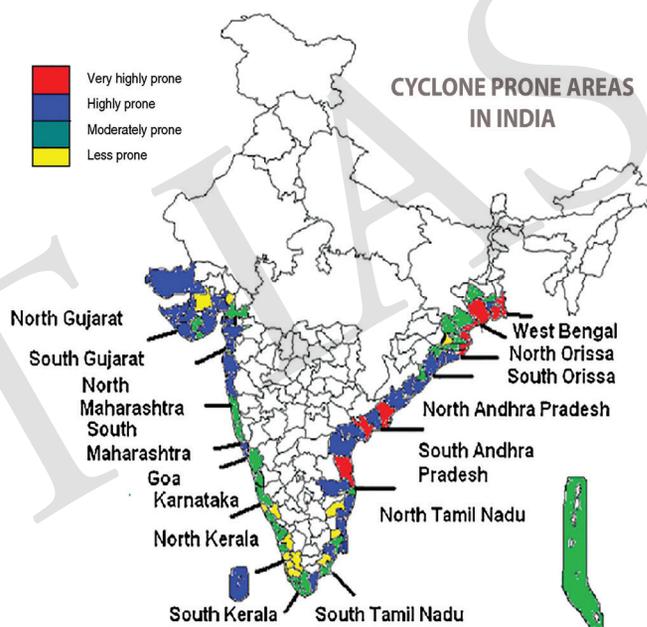
- Cyclone Nivar:** It was a very severe cyclonic storm which affected Tamil Nadu, Andhra Pradesh and Puducherry.
 - While the loss of life was very less compared to the large-size weather system, property and agriculture were affected.
 - Larger damage was averted due to timely warning by India Meteorological Department (IMD) and proactiveness, despite COVID-19 induced fatigue.
- Cyclone Gati:** It was also a very severe cyclonic storm and the strongest cyclone recorded in Somalia.
 - Locust:** It also has the potential to create favourable conditions for breeding of locusts in Somalia.

Recent cyclones in India and worldwide	
Cyclone Name	Country/Region affected (2020)
Marco, Laura	Gulf of Mexico
Nisarga	Arabian sea, Mumbai
Amphan	Bay of Bengal, Odisha
Burevi	Sri Lanka coast, Tamil Nadu

Changing patterns of cyclones in India:

- Most prone months:** Cyclones occur in the months of May-June (pre-monsoon) and October-November (post-monsoon), with a primary peak in November and secondary peak in May.
- Most prone areas:** While the entire 8000 km coastline of India is vulnerable to cyclones, the east coast is more prone to cyclones compared to the west coast and the entire coastline is exposed to nearly 10% of the cyclones worldwide.
- Increasing frequency:** The intensity and frequency of tropical cyclones in the Indian Ocean has been rising due to more availability of moisture on account of climate-change induced ocean warming.
- Changes over Bay of Bengal:** Cyclones have increased in frequency in this region in the peak months of November and May. However, for the months of June and September, the frequency has decreased. Further, in the warm ENSO (El Nino Southern Oscillation) phase, the frequency of cyclones in May and November is found to have decreased.

- Changes over Arabian Sea:** There is no significant change in cyclone trend in this region, although climate scientists predict the increase in number of cyclones and their intensity due to warmer Arabian sea.



- Why cyclones skipped October 2020?** Weak La Nina conditions along equatorial Pacific Ocean has been present since August this year. Further, the east-moving Madden Julian Oscillations (MJO) which was in favourable phase, intensified the low-pressure systems into a deep depression. There was a vertical wind shear between high and low atmospheric levels in September, which prevented the low-pressure systems and deep depression from strengthening into a cyclone.
- Cyclones not occurring in October is not new.** On 42 occasions between 1891-2020, no cyclones were formed in October, with the longest absence in 1950-54 in the last 130 years.
- Prediction by IMD:** The IMD has been getting better at forecasting slow-moving, linear tropical cyclones in the Bay of Bengal, with multiple satellites providing real-time cyclone data. However, the erratic nature of cyclones is also on the rise.
- National Disaster Response Force (NDRF)** teams equipped with disaster management equipment gets proactively deployed for response and relief measures.

January, 2021

- **Inundation:** However, heavy rainfall poses inundation threat and losses in suburban regions, as was seen in Chennai, where 31 cm of rainfall was received in one day during cyclone Nivar.
 - ♦ Such weather events are increasing in frequency in urban areas lacking proper town and infrastructure planning.
- **Storm Surge:** The northern part of Bay of Bengal is particularly vulnerable to severe storm surges along the coasts of Odisha, Andhra Pradesh and West Bengal.

India's Organisational structure to combat cyclones:

- IMD, established in 1875 is the National Meteorological Service of the country and the principal government agency mandated to observe, provide forecast, warnings, statistics and conduct research regarding severe weather phenomenon.
- It keeps round the clock watch over the North Indian Ocean and detects, tracks and predicts cyclonic storms using numerical models for tropical cyclone track and intensity prediction.
- It issues cyclone advisories 8 times a day to the panel countries of WMO/ESCAP.
- The IMD also implements the Regional Cyclone Operational Plan of WMO/ESCAP Panel.
- **The National Disaster Response Force (NDRF)** is tasked with carrying out rescue and relief operations under the National Disaster Management Act 2005.
- **National Cyclone Risk Mitigation Project (NCRMP):** This World Bank supported project aims to undertake suitable structural and non-structural measures to mitigate the effects of cyclones in the coastal states and UTs of India.
 - ♦ The Project has identified 13 cyclone prone States and Union Territories (UTs) and has classified them into two categories based on their vulnerability as follows:
 - ♦ **Category I:** Higher vulnerability States i.e. Andhra Pradesh, Gujarat, Odisha, Tamil Nadu and West Bengal.
 - ♦ **Category II:** Lower vulnerability States i.e Maharashtra, Karnataka, Kerala, Goa, Pondicherry, Lakshadweep, Daman and Diu, Andaman and Nicobar Islands.
 - ♦ National Disaster Management Authority (NDMA) under the aegis of Ministry of Home Affairs (MHA) will implement the Project in coordination with participating State Governments.
- **Mobile Apps:**
 - ♦ **'Mausam'** was launched by IMD to provide timely weather updates to the users.
 - ♦ **'Meghdoot'** app provides similar service in local languages to farmers for planning crops.
 - ♦ **'Damini Lightning'** provides lightning and thunderstorm forecasts and locations of occurrence.

Initiatives by state of Odisha

- ♦ Setting up Odisha Disaster Management Authority
- ♦ Construction of 809 multipurpose cyclones and flood shelters.
- ♦ Construction of coastal shelter-belt plantations.
- ♦ **Planting mangroves** in coastal districts.

Cyclone Warning System:

- **When is it issued?** When any coastal belt is expected to experience heavy rains, gales and tidal waves in due to a cyclonic storm or depression expected to intensify into a cyclonic storm.
- **1st Stage:** 'Cyclone Alert' is issued 48 hr prior to the expected commencement of adverse weather over coastal areas.
- **2nd Stage:** 'Cyclone Warning' is issued 24 hr in advance.
- Both are passed to All India Radio (AIR) for repeated and regular broadcast.
- Cyclone warnings are also sent directly to the users via INSAT, which was developed in 1987 and extended to all cyclone-prone areas.

Cyclone Gati and its impact on Regional Agricultural System

- **Conducive for Locust:** Cyclone Gati caused heavy rainfall in Somalia. Extreme weather events, heavy rainfall, rise in temperatures over desert areas and strong cyclonic winds provide conducive environment for locust breeding and migration.
- **Desert locust infestation threaten crop production** and pastureland across Somalia, Ethiopia and Kenya. The cyclones in 2018 and 2019 before Gati had also caused similar locust swarms, which moved as far as northern India after crossing the Persian peninsula and Arabian sea.
- **The locust swarms are expected to rise again** in coming times. As a result, in the early to mid-2021, the acutely food insecure population is likely to rise to over 2.5 million in Somalia.
- **Food security is also challenge** in this region on account of the resulting political, social and economic instability on account of the ongoing conflicts in the regions.

Way Forward: Disaster- proofing against cyclones:

- **Extensive assessment of post-cyclone situation** must be done to study the changing extreme monsoon weather.
- **Restore wetlands:** Encroachment upon floodplains, lakes and per-urban wetlands must be stopped in order to allow pre-existing natural water bodies to function as natural storm-water drains. This would result in lesser flooding or lesser post-cyclone inundation.

- **Data regarding annual flooding patterns** must be collected and put in the public domain for research and evidence-based cyclone mitigation plans.
- **Investments must be made in disaster-resilient infrastructure** and innovative solutions must be developed and put to use. Initiatives such as Coalition for Disaster Resilient Infrastructure (CDRI) becomes relevant here.
- **Surveillance systems must be put in place** to monitor development and spread of biological pests (such as locusts) in the aftermath of cyclones.
- In a climate-risked world, the frequency, intensity and erratic behaviour of cyclones is on the rise.
- It calls for investing in weather science and governance capacity.



WHAT ARE CYCLONES AND HOW THEY ARE NAMED?

- **Cyclones are caused** by atmospheric disturbances around a low-pressure area distinguished by swift and destructive air circulation.
 - **Cyclones are usually accompanied** by violent storms, bad weather and storm surges along coastlines.
 - **Direction of air circulation:** In the Northern hemisphere, the air circulates inwards in anti-clockwise direction and clockwise in the Southern hemisphere.
 - **Cyclones are classified as:** (i) extra tropical cyclones (also called temperate cyclones); and (ii) tropical cyclones (occurring between Tropic of Cancer and Capricorn).
 - **In India, cyclones are classified** by strength of associated winds, storm surges and exceptional rainfall occurrences.
 - **WMO criteria:** The World Meteorological Organisation (WMO, 1976) uses the term 'Tropical Cyclone' to cover weather systems in which winds exceed 63 km/h.
 - **Different names:** Cyclones are called as 'typhoons' in China sea and Pacific Ocean, 'hurricanes' in Caribbean Sea and Atlantic Ocean, 'tornados' in Guinea lands of West Africa and southern USA, 'Willy Willies' in North-Western Australia.
- are named by the Regional Specialized Meteorological Centers (RSMCs) and Tropical Cyclone Warning Centers (TCWCs).
- ♦ There are six RSMCs in the world, including the India Meteorological Department (IMD), and five TCWCs.
- **In the Atlantic and in the Southern hemisphere** (Indian ocean and South Pacific), tropical cyclones receive names in alphabetical order, and women and men's names are alternated.
 - **Nations in the Northern Indian ocean** began using a new system for naming tropical cyclones in 2000.
- How are cyclones named in Indian Ocean?**
- **WMO/ESCAP:** In 2000, a group of nations called WMO/ESCAP (World Meteorological Organisation/United Nations Economic and Social Commission for Asia and the Pacific), decided to start naming cyclones in the region.
 - ♦ The group comprised of Bangladesh, India, the Maldives, Myanmar, Oman, Pakistan, Sri Lanka and Thailand.
 - **WMO/ESCAP Panel on Tropical Cyclones (PTC)** in its Muscat Session agreed to assign names to the tropical cyclones in the Bay of Bengal and Arabian Sea, commencing from 2004, based on a list of names provided by the member countries.
 - **IMD is the RSMC for North Indian Ocean** and is responsible for tracking and naming the tropical cyclones in the region. It names them as per this list in alphabetical order, after the storms have formed over this region and reached the relevant intensity.
- **WMO/ESCAP increases to 13 members:** The WMO/ESCAP expanded to include five more countries in 2018 — Iran, Qatar, Saudi Arabia, United Arab Emirates and Yemen.
 - **New List:** In April 2020, IMD released a list of 169 names of future tropical cyclones that would emerge in the Bay of Bengal and the Arabian Sea.
 - **Criteria:** The Panel On Tropical Cyclones (PTC) accepts the names proposed by the members based on the following criteria
 - ♦ Name should be politically, culturally, religiously and gender neutral.
 - ♦ Name should not hurt the sentiments of any group of population over the globe.
 - ♦ It should not be very rude and cruel in nature.
 - ♦ It should be short, easy to pronounce.
 - ♦ The maximum length of the name will be eight letter.
 - ♦ It should be provided with its pronunciation and voice over.
 - **No Repetition:** The names of tropical cyclones over the north Indian Ocean will not be repeated.
- How Cyclones are named?**
- **RSMCs and TCWCs:** Cyclones that form in every ocean basin across the world

NUCLEAR DISARMAMENT: A WAY TO SECURE HUMANITY'S FUTURE!

UNGA passed two resolutions to curb nuclear weapons proliferation.

About:

- **UN General Assembly' First Committee adopted two India-sponsored resolutions:** 'Convention on the Prohibition of the use of Nuclear Weapons' and 'Reducing Nuclear Danger' under the 'Nuclear weapons' cluster.
- The two conventions manifest India's commitment towards the goal of nuclear disarmament.

I. Convention on the Prohibition of the use of Nuclear Weapons:

- **What is it?** The "Convention on the Prohibition of the use of Nuclear Weapons" requests the Conference on Disarmament in Geneva to start negotiation for an international convention prohibiting the use or threat of use of nuclear weapons under any circumstances.
- **It was tabled by India in 1982** in the UN General Assembly.
- It reflects India's stand for a multilateral, universal and legally binding agreement for generating necessary political will among nuclear weapons states to negotiate for total elimination of nuclear weapons.

II. Resolution on Reducing Nuclear Danger:

- **What is it?** 'Reducing Nuclear Danger' resolution draws global attention to the risks of unintentional or accidental use of nuclear weapons and underscores the need for a review of nuclear doctrines.
- **It calls for concrete steps** for reducing above risks and de-alerting and de-targeting nuclear weapons.
- It was tabled in 1998.

Conference on Disarmament (CD)

- **Formed in 1979** as the single multinational disarmament negotiations forum.
- **It has 65 states as Members** (including India) and 38 states as Observers.
- **It has a special relationship with UN and reports to the General Assembly**, while adopting its own agenda and rules of procedure. It works on consensus basis.
- **Decalogue:** It has a permanent agenda known as the 'Decalogue' which consists of ten issues such as Nuclear weapons in all aspects, other weapons of mass destruction, Conventional weapons, Reduction of military budgets, and others.

What is Nuclear Disarmament:

- Nuclear disarmament is the process of reducing and eradicating nuclear weapons while ensuring that countries without nuclear weapons are not able to develop them.
- It aims to eliminate the possibility of a nuclear war.

Arguments in favour of Nuclear Disarmament:

- **Catastrophic harm:** Nuclear weapons wreak devastation and have long-term radiation effects that affect future generations as well.
- **Humanitarian:** The very nature of destruction emanating from the use of nuclear weapons is against the very spirit of humanity. Nuclear warfare can significantly desiccate the future of humanity.
- **Ethical:** Nuclear weapons do not discriminate between armed personals and civilians. Unleashing nuclear weapons will lead to large scale loss of innocent lives and non-combatants which is ethical unacceptable even in times of war.
- **Economical:** While nuclear arsenal may have lower costs of development, the cost of the system as a whole and its maintenance can be exorbitant.
 - ♦ According to some estimates, the overall global expenditure related to nuclear weapons is close to \$1000 billion for the decade of 2010-2020.
- **Environmental:** The radioactive fallout from nuclear processes is detrimental to environment and affects nations across borders.
- **Only weapon of mass destruction not banned:** While biological and chemical weapons have been prohibited worldwide, since 1972 and 1993 respectively, nuclear weapons have not been constrained up to now. This is legal anomaly as all these weapons have the same nature of causing mass destruction.
- **Huge Proliferation risk:** Proliferation is the risk that states that have nuclear weapons increase their weapon stockpiles or that new states become nuclear-armed to match their enemies.
- **Terrorist threat:** Large stockpiles of nuclear weapons can be misused by terrorists or some rouge elements to compel the governments to give in to their demands.
- **Brinkmanship warfare:** There is a possibility that during times of escalating bilateral disputes, some country may use nuclear weapons as pre-emptive deterrence. This can cause a domino effect with the other country firing in retaliation.

India's stand on Nuclear Disarmament

- **India's stand:** India favours universal, verifiable and non-discriminatory nuclear disarmament leading to the complete elimination of nuclear weapons.
- India believes that nuclear disarmament can be achieved step-by-step through agreed multilateral framework and advocates for a meaningful dialogue among nations possessing nuclear arms for building trust and confidence.
- **No First Use:** India adheres to its 'No First Use' policy against nuclear weapon states.
- **National security imperative:** Questions have been raised on how much can India follow up on its commitment to nuclear disarmament, given that its nuclear arsenal is now an imperative in its national security.
 - ♦ However, universal nuclear disarmament will not adversely affect India's national security but likely to enhance it.
 - ♦ **Pakistan:** If the military nuclear arsenals of both Pakistan and India are removed, India has existing upper hand in military superiority. The risk of nuclear confrontation with Pakistan has limited India's retaliatory measures or military initiative for minor subversions by Pakistan.
 - ♦ **China:** In case of China, a non-nuclear China would not have added advantages over its conventional ones, while India can further buttress its technological weapons system. A nuclear-weapon state China in fact shifts the balance in China's favour on account of larger arsenal, advanced delivery systems, deployment of tactical weapons and their proximity to India.
- **In a nuclear weapon-free environment,** India would have advantage of a safer neighbourhood, free from the risk of a nuclear war brought on by an accidental, unauthorised or miscalculated use of nuclear weapons.

Challenges to Nuclear Disarmament:

- **Global efforts:** There is a lack of progress towards universal nuclear disarmament internationally.
- **Security imperatives:** Nations have shown more tendency to attach to nuclear power by giving credence to emerging perceived threats and therefore consider their own security imperatives.
- **Nuclear deterrence:** The biggest argument is that of deterrence. Supporters of nuclear weapons say that these weapons are effective as they deter the enemy from making massive moves for fear of Mutually Assured Destruction (MAD) if the issue goes nuclear.
- **Treaty compliance:** Verification of treaty compliance for complete destruction of nuclear arsenals, i.e. to verify that nations have destroyed their stockpiles, is deemed to be a very difficult mission.

- **All nations must be on board:** Unilateral nuclear disarmament is not a feasible policy option for any nation on account of the security threat in its neighbourhood.
- **Scientific and Technological:** Even if complete disarmament was achieved, the knowledge of the explosive nuclear weapons would continue and more weapons can be created anytime.
- **Arsenal dismantling:** To dismantle tens of thousands of weapons, to account for all the quantity of fissile material and placing it under safeguards, to verify each other's cuts, decommission idle military nuclear facilities, etc. would stretch scientific and engineering capacities.

Number of nuclear warheads by country in January 2020



Status of Nuclear Disarmament around the World:

- Approximately 14,900 nuclear warheads remain in the arsenals of the nine states- USA, UK, France, China, Russia, India, Israel, Pakistan, North Korea- roughly 4,000 of which are actively deployed.
- South Africa developed and destroyed its arsenal in 1991 to join NPT as a non-nuclear weapons state. Belarus, Kazakhstan and Ukraine returned their arsenal to USSR in mid-1990s to join NPT. Brazil and Argentina abandoned their nuclear-development programs before joining NPT.

Way Forward:

- Universal nuclear disarmament would remove nuclear apartheid by correcting the inequities due to the existing legal frameworks of nuclear disarmament, such as the NPT.
- India must continue its campaign against the current discriminatory non-proliferation order and strive for a more rules-based, legally-backed and consensus-driven order governing nuclear disarmament.
- Further, India must continue to maintain its credibility as a responsible nuclear stakeholder.
- India's nuclear weapons have and will continue to remain weapons of last resort to fulfil only one objective- deterring its adversaries from using nuclear weapons first.
- At the same time, the applications and possibilities of use of nuclear technology peacefully must be promoted.

January, 2021



INDIA'S NUCLEAR DOCTRINE

- It can be summarized as follows
 - Building and maintaining a credible minimum deterrent;
 - A posture of "No First Use" (NFU) nuclear weapons will only be used in retaliation against a nuclear attack on Indian territory or on Indian forces anywhere;
 - Nuclear retaliation to a first strike will be massive and designed to inflict unacceptable damage.
 - Nuclear retaliatory attacks can only be authorised by the civilian political leadership through the Nuclear Command Authority.
 - Non-use of nuclear weapons against non-nuclear weapon states;
 - However, in the event of a major attack against India, or Indian forces anywhere, by biological or chemical weapons, India will retain the option of retaliating with nuclear weapons;
 - A continuance of strict controls on export of nuclear and missile related materials and technologies, participation in the Fissile Material Cut-off Treaty negotiations, and continued observance of the moratorium on nuclear tests.
 - Continued commitment to the goal of a nuclear weapon free world, through global, verifiable and non-discriminatory nuclear disarmament.
- Strategic logic behind adoption of NFU:** For India, the primary and only purpose of nuclear weapons is deterrence of other nuclear weapons. Threatening retaliation is the only manner to use these weapons, which inherently involves deterrence, i.e., preventing someone from taking an action by threatening to punish them severely if they did.
- Nuclear Command Authority:** It comprises of a civilian controlled Political Council, chaired by the Prime Minister. It is the sole body which can authorize use of nuclear weapons.
- The Executive Council under the Nuclear Command Authority** is led by the National Security Advisor. It provides inputs for decision making and executes directions given by the Political Council.

Significance:

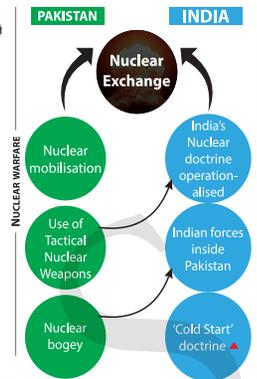
- Credible minimum deterrence** assures second-strike capability for India which will ensure India's survival in a nuclear attack by an adversary and cause massive, punitive nuclear retaliation causing 'unacceptable' damage to the aggressor.
- It does not mean infinite expansion of nuclear arsenal of India.

Nuclear Escalation Ladder

India's 'No First Use' policy states that nuclear weapons will only be used in retaliation against a nuclear attack on Indian territory or on Indian forces anywhere. A look at the India-Pakistan escalation ladder, at the top of which is a nuclear war.



- ▲ Swift deployment of troops on the western border within days if a full-blown war arises.
- ▲ If ever Cold Start was authorised it would be only in response to a credible threat from or action by Pakistan.



- Responsible stakeholder:** Adoption of NFU and nuclear minimalism has projected India as a strong, credible and responsible stakeholder in nuclear developments and trade in the world, which enforces its nuclear exceptionalism.
- Gandhian principles:** The doctrine also reflects the Gandhian principles of non-violence, and the idea for norms around the use of nuclear weapons, which India has always pursued since Independence.

Criticism:

- Weak policy:** It is argued that the nuclear doctrine exhibits general strategic passivity and political idealism on part of India in order to be viewed responsible internationally.
 - Conversely, India's NFU reflects deep realism, by recognising that nuclear weapons served only a very limited purpose of ensuring national survival, whose only threat is nuclear attack. Threatening retaliation is the only solution as there is no defence against these weapons.
- Western perception:** There is a growing consensus in Western non-proliferation community that in practice, India has already relinquished its nuclear doctrine.
- Pre-emptive strikes:** India has acquired the capability for nuclear arsenal, delivery systems, and ISR (intelligence, surveillance, and reconnaissance) systems, which may be used for pre-emptive strikes.
- Changing doctrine and instability:** Change in India's nuclear doctrine might entail Pakistan following suit, based on the calculation that India might be willing to carry out a counter attack and thereby eliminate the Pakistani nuclear threat entirely. This might fuel an arms race or more unstable nuclear weapons deployment patterns in Pakistan.
- Abandoning NFU:** Internationally, the momentum for NFU is gaining ground and therefore it does not bode well for India to abandon its policy outright.

Important Treaties on Nuclear Disarmament

Partial Test Ban Treaty (PTBT):

- PTBT prohibits testing of nuclear weapons in the atmosphere, underwater, and in outer space. However, it permits nuclear test explosions underground.
- It was originally signed between UK, USA and USSR in 1963 to control nuclear proliferation and nuclear arms race. Today nearly 120 states are party to it (including India).

Treaty for the Non-proliferation of Nuclear Weapons:

- **Coming into force in 1970**, it seeks to inhibit spread of nuclear weapons.
- 190 Parties to NPT are classified into two groups- nuclear-weapon state (NWS) (USA, UK, Russia, China and France) and non-nuclear-weapon state (NNWS)
- **The 3 important 'pillars' of NPT are**
 - ♦ **First Pillar:** The States-Parties commit to general and complete disarmament.
 - ♦ **Second Pillar:** NNWS forgo development or acquiring nuclear weapons.
 - ♦ **Third Pillar:** States-Parties can access and develop nuclear technology for peaceful applications.
- **The Treaty does not explicitly define nuclear weapons** and nuclear explosive devices.
- India, Israel, South Sudan and Pakistan never signed NPT and North Korea has declared withdrawal in the past.
 - ♦ India refused to sign it on the grounds that the nuclear-weapon states must agree to a clear plan for nuclear disarmament.
- In 1995, NPT was extended indefinitely, while India had been calling for its termination after 1995 and hoped for it to be replaced with another treaty that would facilitate elimination of nuclear weapons.

Comprehensive Nuclear-Test Ban Treaty (CTBT):

- It curbs the development of new nuclear weapons and the improvement of existing nuclear weapon designs.
- Its negotiation started in 1990s and it opened for signatures in 1996. It will enter into force after all 44 States listed in Annex 2 to the Treaty have ratified it.
- Once it enters into force, it will be legally-binding against nuclear-testing. **CTBT does not explicitly define nuclear weapons** and nuclear explosive devices.
- India, China, USA, Democratic People's Republic of Korea, Iran, Pakistan, Israel and Egypt have not ratified CTBT.

Treaty on Prohibition of Nuclear Weapons (TPNW):

- **Origin:** The Treaty has its origins in the Humanitarian Initiative, a group of non-nuclear weapons states who advocate nuclear disarmament on humanitarian grounds.

- **Adoption:** The Treaty was adopted in 2017 and will come into force on Jan 22, 2021, 90 days after the 50th state ratified it.
- **What does the Treaty do?** It legally binds and prohibits member states from developing, testing, producing, manufacturing, acquiring, possessing, or stockpiling nuclear weapons or other nuclear explosive devices.
- **Prohibitions:**
 - ♦ Transferring or receiving nuclear weapons and other nuclear explosive devices and control over them.
 - ♦ Using or threatening to use nuclear weapons and other nuclear explosive devices.
 - ♦ Stationing, installation, or deployment of nuclear weapons and other nuclear explosive devices in their territory.
- It is the first legally binding treaty of its sort.
- **India is not a member of TPNW** as it was not part of its negotiations (like other nuclear weapons states) and believes that this Treaty does not constitute or contribute to the development of any customary international law.

Nuclear Suppliers Group:

- It is a 48-member, consensus-driven group of nuclear supplier countries that seek non-proliferation of nuclear weapons through the implementation of two sets of Guidelines (called as "Non-Proliferation Principles") for nuclear exports and nuclear-related exports.
- It was formed in 1974 in response to India's nuclear test.
- The NSG holds consultations annually to control nuclear-related dual-use commodities and technology.
 - ♦ This dual-use control list includes materials, equipment, and technology that can be used both for nuclear weapons and fuel-cycle activities and for other, non-nuclear purposes.
- India applied for membership to the NSG in 2016, which has been blocked by China (and few other nations) on the grounds that as per NSG guidelines, India must first be a member of the NPT before its inclusion in NSG.
- At present, India has been granted a waiver from NSG to access nuclear materials and technology.
- France received NSG membership without signing NPT.

Other Nuclear Treaties	Also known as
Treaty for the Prohibition of Nuclear Weapons in Latin America	Treaty of Tlatelolco
South Pacific Nuclear-Free-Zone Treaty	Treaty of Rarotonga
African Nuclear-Weapon-Free Zone Treaty	Treaty of Pelindaba
Treaty on the Southeast Asia Nuclear-Weapon-Free Zone	Treaty of Bangkok
Central Asian Nuclear-Weapon-Free Zone Treaty	Treaty of Semipalatinsk

January, 2021

FIVE YEARS OF PARIS CLIMATE DEAL: TIME TO STEP UP THE EFFORTS.

Recently, Paris climate deal completed its 5 year cycle with countries submitting their plans for future climate action.

About:

- **5-year cycle:** The Paris Agreement works on a 5- year cycle of increasingly ambitious climate action carried out by countries.
- **NDC submitted:** It has recently completed its cycle with countries submitting their plans for climate action known as nationally determined contributions (NDCs).

What is Paris Agreement?

- **Legally binding:** The Paris Agreement is a legally binding international treaty on climate change
- **Adopted in 2015:** It was adopted by 196 Parties at COP 21 in Paris in 2015 before entering into force in 2016.
- Its goal is to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels.
 - ♦ It also aims to provide a framework for financial, technical and capacity building support to those countries who need it.

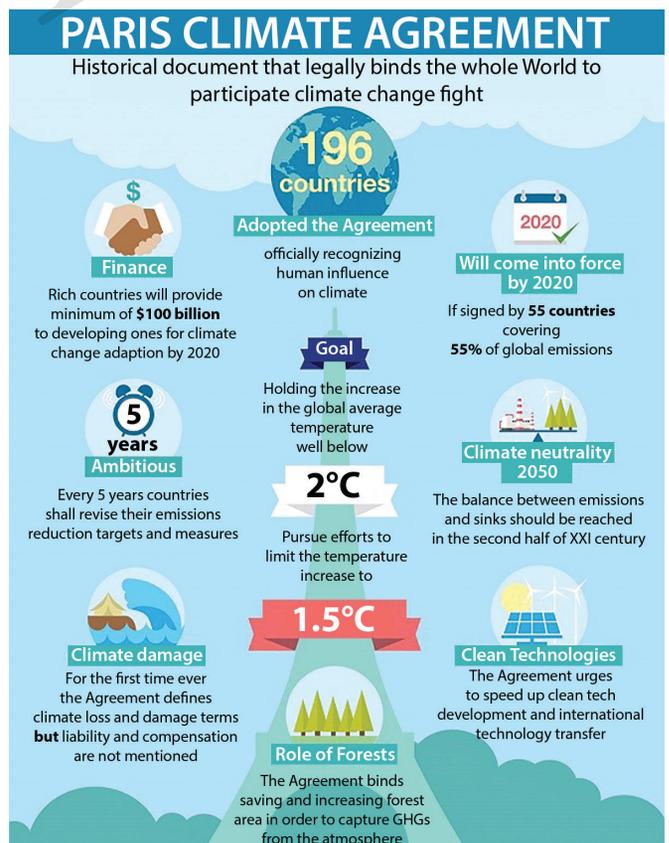
Major objectives:

- **Limit global temperature** rise by reducing greenhouse gas emissions.
- **Provide a framework for transparency**, accountability, and the achievement of more ambitious targets.
- **Mobilize support** for climate change mitigation and adaptation in developing nations.
- **CBDR-RC:** From the Kyoto Protocol, the predecessor of the Paris Agreement, developing and poor countries followed the principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC).
 - ♦ It acknowledges the different capabilities and differing responsibilities of individual countries in addressing climate change.
 - ♦ This is based on the historical context of emission pathways i.e., Rich countries developed by burning fossil fuels, industrialising and therefore becoming economically stable.

What are the major achievements?

- **Enhanced Transparency Framework:** With the Paris Agreement, countries established an enhanced transparency framework (ETF). Under ETF, starting in 2024, Countries are expected to report transparently on actions taken

- ♦ Progress made in climate change mitigation, adaptation measures
- ♦ Support provided or received.
- **More and more countries**, regions, cities and companies are establishing carbon neutrality targets.
- **Zero-carbon solutions** are becoming competitive across economic sectors representing 25% of emissions.
 - ♦ By 2030, zero-carbon solutions could be competitive in sectors representing over 70% of global emissions.
- **Clean energy shift:** The financing landscape has shifted decisively in favor of clean energy. Paris agreement has helped promoting clean technology improvements
 - ♦ Clean energy supermajors are overtaking oil companies in terms of market value.
- **Institutional change:** Institutions ranging from financial regulators to city authorities are embedding the deal's targets and principles in their policies, creating new avenues for accountability.



- **More than 400 public development banks** committed to align their activities with the Paris deal.
- **Participation by Non-Annex 1 nations:** At the 21st Conference of Parties (COP 21) to the United Nations Framework Convention on Climate Change (UNFCCC) in Paris, Non-Annex 1 countries agreed to shoulder the responsibility of reducing greenhouse gas (GHG) emissions along with developed and industrialized countries.
- **NDCs:** This took the form of Nationally Determined Contributions (NDCs) i.e. climate action plan of countries in moving forward, Long-term Low Greenhouse Gas Emission Development Strategies (LTSS) in the form of Net Zero targets.



Ban Ki-moon

“ Saving our planet, lifting people out of poverty, advancing economic growth... these are one and the same fight. We must connect the dots between climate change, water scarcity, energy shortages, global health, food security and women's empowerment. Solutions to one problem must be solutions for all.

Parties to the UNFCCC

The Convention divides countries into three main groups according to differing commitments:

- **Annex I: Industrialized countries** that were members of the OECD in 1992, plus countries with economies in transition (the EIT Parties),
- Russian Federation, the Baltic States, and several Central and Eastern European States.
- **Annex II:** OECD members of Annex I, but not the EIT Parties.
- They are required to provide financial resources to enable developing countries to undertake emissions reduction activities to help them adapt to adverse effects of climate change.
- **Non-Annex I:** Mostly developing countries.
- Countries especially vulnerable to the adverse impacts of climate change e.g., low-lying coastal areas, prone to desertification and drought etc.
- Others (such as countries that rely heavily on income from fossil fuel production and commerce)
- **LDCs:** The 49 Parties classified as **least developed countries (LDCs)** by the United Nations are given **special consideration** under the Convention on account of their limited capacity to respond to climate change and adapt to its adverse effects.

What are the major issues?

Five years since the adoption of the Paris Agreement, the world is still far from meeting the climate goals. Some factors responsible for this are:

- **Political resilience:** Withdrawing of the US from the Paris Agreement.
- **Lack of obligation** in the voluntary national contributions and a common accountability framework.
- **Rising emissions:** Global greenhouse gas emissions have continued to grow.
- **Emerging economies in Asia**, as incumbent energy industries meet a hunger for development by any means.
- **Advanced economies** are not cutting emissions fast or consistently enough to offset growth elsewhere.
- **Rising temperatures:** As emissions rise, so too do temperatures. 2020 is set to be 1.2 C warmer than pre-industrial times.
 - ♦ Moreover, temperatures is not expected to stabilise until emissions reach net zero, because carbon dioxide builds up in the air.
- **Droughts and floods** confounding subsistence farmers the world over.
- **Rising fossil fuel production:** To meet the Paris goals, the vast majority of hydrocarbons need to stay in the ground — but that is too blunt a reality to concede for countries economically reliant on them.
 - ♦ Also, the producers have a perverse incentive to exploit their reserves quickly while they still can go for a clearance sale.
- **More suffering for Vulnerable:** Within and between countries, it is poor and marginalized people who are most exposed to the climate crisis.
- **Climate finance** are adding to the debt burden of developing countries.
- **Greening growth in middle income countries** eternally takes priority over protecting the poorest from a problem not of their making.
- **Inadequate compensation for victims of climate disaster:** This is still a major issue with more people succumbing to climate change disaster, a compensation mechanism is need of the hour.

India's progress in fulfilling its Climate Commitments:

- India has reduced emission intensity by 21% over 2005 levels.
- Solar capacity has grown from 2.63 GigaWatts in 2014 to 36 GigaWatts in 2020.
- Renewable energy capacity is the fourth largest in the world and will reach 175 GigaWatts before 2022.
- India has also set a new target of 450 GigaWatts of renewable energy capacity by 2030.
- On the world stage, India has pioneered two major initiatives: (i) The International Solar Alliance; (ii) Coalition for Disaster Resilient Infrastructure.
- The **Emissions Gap Report 2020** of the UNEP includes India

January, 2021

among nine G20 members who are on track to achieve their unconditional commitments under the Paris pact, based on pre-COVID-19 projections.

- **The Climate Action Tracker website** has rated its climate efforts as “2-degree compatible” — that can contribute to limiting warming by the end of the century to 2° Celsius; making India the only major economy to be so highly rated.

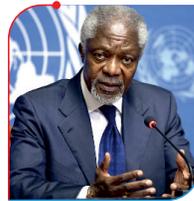
Impact of COVID-19 on Climate Commitments:

- The brief reduction in global GHG emissions brought about by the pandemic has allowed all countries to review their development trajectories.
- The unprecedented event has enabled them to deploy an extraordinary fiscal stimulus for the rehabilitation of economies — estimated at \$12 trillion globally — making green growth a possibility.
- India faces a particular challenge, in moving its pandemic rehabilitation spending away from traditional brown sector policies aligned with fossil fuel use to green territory.

Challenges with India’s path ahead:

- **Issues with afforestation and Carbon sink**
 - ♦ At the recent summit, Mr. Modi took credit for the expansion of forests, which, according to the national pledge under the Paris Agreement, will serve as a carbon sink of 2.5 bn to 3 bn tonnes of carbon dioxide equivalent by 2030.
 - ♦ This is a key goal, given that it has multiple benefits, protecting biodiversity, influencing the climate system, and providing resources for communities.
 - ♦ But it is fraught with uncertainty. The Centre has questioned the veracity of State afforestation data and said only a fourth of the claims they made were deemed credible.
 - ♦ Clearly, without a cohesive policy on verifiable afforestation, the carbon sink approach may yield poor dividends, with questions hanging over the spending.
- **An issue with Renewable energy additions and emissions**
 - ♦ Achieving 100 gigawatts of solar power capacity within the overall renewables goal, from 36 GW now, needs a steep scale-up that must actively promote rooftop solar installations.
 - ♦ There is little evidence that this is a high priority for most States.
 - ♦ Transport-related emissions, which are a major component of the whole, have risen sharply in the unlock phase of the pandemic as people prefer personal vehicles, but the issue received little support from States which failed to reorder cities for cycling and pedestrianization.

- ♦ Large-scale agriculture insurance against climate disasters also needs attention.



Kofi Annan

“ On climate change, we often don't fully appreciate that it is a problem. We think it is a problem waiting to happen.

What more needs to be done?

- Under the Paris Agreement framework, there is need for a mechanism for financial, technical and capacity building support to the countries who need it.
- **Finance:** Financial assistance from developed countries to countries that are less endowed and more vulnerable.
- **Climate finance for mitigation and adaptation** in order to significantly reduce emissions.
- **Technology:** Technology development and transfer for both improving resilience to climate change and reducing GHG emissions.
- **Capacity-Building:** Climate-related capacity-building for developing countries.

India’s Climate Commitments

In 2015, ahead of the UN significant climate conference in Paris, India announced three major voluntary commitments called the Nationally Determined Contributions (NDC):

- Improving the emissions intensity of its GDP by 33–35% by 2030 over 2005 levels.
- Increasing the share of non-fossil fuels-based electricity to 40% by 2030.
- Enhancing its forest cover, thereby absorbing 2.5 to 3 billion tonnes of carbon dioxide.

Way Forward:

- Although climate change action needs to be massively increased to achieve the goals of the Paris Agreement, the years since its entry into force have already sparked low-carbon solutions and new markets.
- There is need for countries framing long-term planning and development priorities, providing a vision and direction for future development.
- In the last year, even as the world battles the coronavirus pandemic, global momentum to address climate change has picked up, which is a welcome step in the right direction.

MUNICIPAL BONDS: BOOSTING INFRASTRUCTURE DEVELOPMENT OF URBAN INDIA

Recently, the municipal bonds issued by the Lucknow Municipal Corporation were listed on the Bombay Stock Exchange (BSE).

About:

- **Municipal bond:** It is essentially a debt security which issued by a municipality or municipal corporation to finance its capital expenditures such as the construction of highways, bridges or schools which are under its domain.
- **Maturity Period:** These bonds have maturity period of three years.
- **Return:** The return of these bonds is financed through tax collected by Urban Local Bodies on infrastructure projects in urban areas.
- **Sujit Prasad Committee:** Recently, SEBI had also constituted a municipal bonds development committee under its Executive Director Sujit Prasad.
 - ♦ It comprises representatives from municipal corporations, lawyers, professionals and market practitioners.
 - ♦ It will advise SEBI on issues related to regulation and development of primary and secondary market of municipal debt securities.

What is a Bond?

- A Bond is a fix income instrument, representing a loan made by an investor to a borrower. There are two types of Bonds:
 - ♦ Corporate Bonds (High-risk, High return)
 - ♦ Government Bonds (Low-risk, low return)

Types of Municipal Bonds:

There are two types of municipal bonds.

- **General Obligation Bonds:** These bonds are issued for development of any infrastructure projects in area under Municipal Corporation.
 - ♦ Revenue which is generated after completion of such projects is issued as returns to bond bearers.
 - ♦ It is not issued for a particular project and the municipal corporation can utilize funds for any project.
- **Revenue Bonds:** These bonds are issued for a particular infrastructure project under a municipal corporation.
 - ♦ Hence, returns depend on revenue generated through such project.
 - ♦ Funds generated through such bonds can't be used in other projects.

Municipal Bonds in India:

- **Bonds issued by different cities:** Bangalore Municipal Corporation was first civic body in India to issue these bonds in 1997.
- **Lucknow Municipal Corporation** is the first civic body in North India to issue such bonds worth Rs. 200 cr.
 - ♦ It has become the 10th civic body to issue Municipal bonds in India.
- Other cities are Ahmadabad, Bangalore, Amravati, Visakhapatnam, Surat, Bhopal, Indore, Pune and Hyderabad.
- **Pre-requisite Credit Rating:** Currently, the Municipal bonds are issued by different cities under smart city mission on the basis of their credit rating.
 - ♦ The ratings are used to evaluate the credit worthiness of any particular ULB for raising additional resources from the market.
 - ♦ Credit rating is issued in India by agencies such as CRISIL.

STRAINED BOND

About

₹ 1,750 crore of municipal bonds have been issued in India over last

20 years

Bengaluru was first city to issue municipal bonds in 1997 for ₹ 125 crore

Local bodies are looking at municipal bonds to raise money for urban reforms

Urban development min expects municipal bonds worth ₹ 6,000 crore to be issued in 2017-18

Seeks tax-free status for the bonds

This would mean loss of revenue of ₹ 180 cr per annum

Banks offer finances at 8-8.5%

Tax-free status would mean raising money at 7%



Significance of Municipal Bonds:

- **Financing Infrastructure Projects:** Rapid Urbanization in India requires huge capital for infrastructure development which is difficult to be financed by revenue generated through Urban Local Bodies (ULBs).
 - ♦ Hence, Municipal Bonds will provide impetus to infrastructure development in Urban Areas.
 - ♦ According to Janaagraha Centre for Citizenship and Democracy, a total of Rs 1,747 Crores (\$291 Million) of debt across 27 projects has been raised by municipalities in India since 1997 through these bonds.

January, 2021

- **Secured debt Instrument:** With a minimum maturity period of three years, municipal bonds are short term debt instruments, which are bonds issued by government to secure its financial liability and reducing the risk of economic failure.
- **Credit ratings based debt instrument:** These bonds are issued credit ratings by reliable agencies such as CRISIL.
- **Tax Benefits:** Municipal Bonds have been exempted from various types of taxes to make it as an attractive debt instrument and benefit investors.
- **GST and Municipal Revenue:** Many municipal corporations such as Brihanmumbai Municipal Corporation (BMC), raised huge revenue from octroi.
 - ♦ Abolition of octroi and other local taxes with the onset of GST led to deterioration of municipalities' revenues.
 - ♦ **ICRIER study:** As per a study carried out by the Indian Council for Research on International Economic Relations (ICRIER), total municipal revenue declined as per cent of GDP from 0.49% in 2012-13 to 0.45% in 2017-18.

SEBI Guidelines for Municipal Bonds

SEBI notified a new regulatory framework for issuing municipal bonds in India. A municipality should meet the following eligibility criteria to issue municipal bonds in India:

- **Positive Net Worth:** The municipality must not have a negative net worth in each of the three previous years.
- **No default in last one year:** The municipality must have no default in the repayment of debt securities, loans and/or interest availed from the banks or non-banking financial companies in the last year.
- **No will defaulters:** The municipality, promoter and directors must not be enlisted in the willful defaulters published by the Reserve Bank of India (RBI).

Limitations of Municipal Bonds:

- **Partial Tax Exemption:** Currently, the municipal bonds with a yield of below 8%, and a maturity period of greater than five years have been exempted from taxation.
 - ♦ It limits the significance of municipal bonds as tax-exempted debt instrument.
- **Difficulty in liquidation:** With a minimum maturity period of three years, these bonds impose a burden on the liquidity requirements of investors.
- **Low return as compared to equity shares:** Although these bonds offer higher returns in their class of debt instruments but faces tough competition from equity shares and other similar products in financial market.
- **Underdeveloped Secondary market** for trading of Municipal bonds also disincentives the investors.
- Conservative approach followed by insurance and pension firms to invest in municipal bonds.

Goal of Municipal Bonds

- **India's Urban Population:** It increased from 11.4% in 1901 to 34% in 2017. According to McKinsey, it is expected to rise by 40 percent of India's total population by 2030.
- **Share of Urban economy in GDP:** According to Census 2011, 31 percent of the India's population live in urban areas.
- **Engines of Economic Growth:** Urban areas contribute more than 60 percent of India's Gross Domestic Product (GDP).
- **Impact of urbanization on per-capita income:** Different studies have found that higher urbanization levels are associated with higher levels of per capita income.
 - ♦ Per capita income in terms of Net Value Added (NVA) is Rs 98,435 in urban India while it is only Rs 40,925 in the rural India.
- Hence, there is need to urbanize India by investing more in rural, urban and urban infrastructure.

Utility of Municipal Bonds in sustainable urban infrastructure:

- The rapid urbanization poses several challenges such as improving quality of urban services such as water, sanitation and urban transport; reducing urban poverty by employment. These demands need huge financial resources to cater the needs of infrastructure.

Requisite Investment in India's Urban Infrastructure:

- **Ahluwalia committee on Urban Infrastructure (2011):** High Powered Expert Committee on Indian Urban Infrastructure and Services was constituted by Ministry of Urban Development under chairmanship of Dr Isher Judge Ahluwalia in 2008. In its report in 2011, it had estimated investment requirement of Rs 39.2 lakh crore at 2009-10 prices for urban infrastructure over the 20-year period (2012-31).
- **Smart City Mission (SCM):** It estimated the total cost of projects which were proposed by the 60 smart cities (1st round declaration) at Rs 1.3 lakh crore.
 - ♦ **It proposed to finance only 42%** of the total project by state and central government combined
 - ♦ **The rest** has to be raised by cities through their own resources such as Municipal Bonds, collection of user fees, land monetization and property tax, Borrowing from financial institutions.

Way Forward:

- India's Urban Centers need huge investment in infrastructure due to its rapid urbanization by increasing growth rate of infrastructure development to achieve target of \$5 trillion economy by 2025.
- Although it has already envisaged infrastructure development under National Infrastructure Pipeline, Municipal bonds will further help to rebuild Urban India and achieve Sustainable Development Goals such as SDG 11 (Sustainable Cities and Communities).

INTERPLAY BETWEEN SUBSIDIES AND AGRI-POLLUTION

The article takes note of the relationship of agriculture subsidies with the rising amount of smog and pollution, especially PM 2.5.

About:

- **Pollution Problem:** Every year as winter approaches, New Delhi and surrounding areas tend to get choked by a layer of smog lying close to the ground to about a few Hundred metres.
- **PM 2.5 has been one of the main reasons** for Delhi's smog.
- **Accumulation of smog** in Delhi is due to many factors, one of which is stubble burning in fields nearby to Delhi especially those in Punjab, Haryana and Uttar Pradesh.
 - ♦ According to the Ministry of Earth Sciences' air quality monitor, SAFAR, the share of stubble burning in Delhi's pollution varies from 5 to 40 percent in a month.
- **But, agriculture's contribution to air pollution is larger** than what happens between crop seasons.

AQI LEVEL	Health Descriptor	Meaning
0 - 50	GOOD	Quality is considered satisfactory and poses little or no risk to health
51 - 100	MODERATE	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution
101 - 150	UNHEALTHY FOR SENSITIVE GROUPS	Although the general public is not likely to be affected at this AQI range, people with lung disease, older adults and children are at a greater risk from exposure to ozone, whereas persons with heart and lung disease, older adults and children are at greater risk from the presence of particles in the air
151 - 200	UNHEALTHY	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects
201 - 300	VERY UNHEALTHY	Health alert: everyone may experience more serious health effects
301 - 500	HAZARDOUS	Health warnings of emergency conditions; the entire population is more likely to be affected

Pollutants from agriculture use and their sources:

- **Carbon dioxide** – Stubble burning being the major reason for accumulation of Carbon dioxide which is the largest Greenhouse Gas.
- **Ammonia** - Atmospheric ammonia, comes from fertiliser use (over-use of urea) and animal husbandry practices.
- **Heavy metals** - The use of fertilizers, manure and other organic wastes containing heavy metals such as arsenic, cadmium, mercury and lead to an accumulation of these heavy metals in the soil.
 - ♦ **Farming techniques** like irrigation can also lead to an accumulation of selenium.
- **Methane** - Livestock produce significant amounts of methane as part of their normal digestive processes.

Major subsidies provided by the Government and its role in pollution:

- **Free power**
 - ♦ **Unclean Power:** More than 65% of electricity in India comes from thermal power plants. Providing power free to the farmers increases the non-judicious use of electricity thus causing greater air pollution.
 - ♦ **Free power, thus free irrigation** is one of the major reasons why paddy farming became so attractive in the Punjab, Haryana belt during green revolution. The issue of stubble burning flows from this unregulated sowing of paddy.

AGRICULTURAL POLLUTION		
Causes	Effects	Solutions
<ul style="list-style-type: none"> ▶ Excessive use of pesticides and herbicides ▶ Use of large amounts of fertilizer ▶ Contaminated water ▶ Heavy metals ▶ Soil erosion ▶ Animal management ▶ Manure management ▶ Introduced species ▶ Genetically modified organisms ▶ Land management ▶ Greenhouse gases from fecal waste 	<ul style="list-style-type: none"> ▶ Effects on human health ▶ Eutrophication ▶ Decrease in crop yields ▶ Soil pollution ▶ Air pollution ▶ Destruction of biodiversity ▶ Water pollution ▶ Effects on animals ▶ Effects on plants ▶ Effects on aquatic life 	<ul style="list-style-type: none"> ▶ Reduce the use of fertilizer and pesticides ▶ Avoid soil erosion by planting all over the year ▶ Plant trees or grasses along the edges of fields ▶ Adjust the intensity of tillage of a field ▶ Improve manure management ▶ Change our consumption behavior ▶ Prevent excessive nutrients from reaching the water ▶ Raise the awareness of farmers on the topic of agricultural pollution ▶ Education ▶ Convince others

January, 2021

- **Open-ended procurement of paddy:**
 - ♦ Procurement by Food Corporation of India (FCI) for only 2 major crops i.e. Rice and wheat has reduced the alternative sowing options for the farmers. Despite the huge stock reserves of grains with the FCI, the centre procures only these two crops and has reduced diversification.
 - ♦ **Subsidies account for almost 15 per cent** of the value of rice being produced in Punjab- Haryana belt.
- **Fertiliser Subsidy**
 - ♦ **The major causes of ammonia pollution** lie in the way fertiliser is used. Urea in granular form, is highly subsidised and is one of the cheapest forms of nitrogen-based fertiliser, easy to store and easy to transport.
 - ♦ **Urea is also one of the easily volatilised** fertilizers, thus disturbing the ground and surface water composition too.

Way Forward:

Step by step and multidisciplinary solutions are required for such deep-rooted problems.

- **Direct Benefit Transfer for electricity usage** - Under DBT, farmers will have to pay the bill for the power consumed for agriculture purposes. After that, they will get the subsidy in their bank accounts through DBT. A meter would be installed on every individual tubewell. **The Electricity Amendment Bill 2020** has proposed providing subsidy on power to farmers through Direct Benefit of Transfer (DBT).
- **Using renewable energy sources for electricity on farms** - Ministry of New and Renewable Energy (**MNRE**) has launched the Pradhan Mantri Kisan Urja Suraksha evam Utthan Mahabhiyan (PM KUSUM) Scheme for farmers to install solar pumps and grid connected solar and other renewable power plants.
- **Changing the procurement policy** of paddy and wheat - Pradhan Mantri Annadata Aay SanraksHan Abhiyan (PM-AASHA) will provide procurement for crops other than paddy and wheat in a bid to move towards diversification.
- **Using alternative and judicious use of fertilizers** may reduce the chemical burden on soil and control the water and soil pollution.
 - ♦ **Neem coated urea** – dissolves slowly in the soil and reduces volatility of Ammonia.
 - ♦ **Soil Health Card** - SHC is a printed report given to a farmer.
 - ♦ It will contain the status of his soil with respect to

12 parameters, namely N, P, K (Macro-nutrients); S (Secondary- nutrient); Zn, Fe, Cu, Mn, Bo (Micro - nutrients); and pH, EC, OC (Physical parameters).

- ♦ Based on this, the SHC will also indicate fertilizer recommendations and soil amendment required for the farm.
- ♦ **Paramparagat Krishi Vikas Yojana** - Under PKVY Organic farming is promoted through adoption of organic village by cluster approach and PGS certification.
- The irony of agricultural pollution is that taxpayers are essentially paying for it through a system of subsidies that motivates the behaviours of farmers for such emissions.
- **Indian farmers alternatively have to move towards diversification** into horticulture and even Dairy and poultry farming to improve sustainability of Indian agriculture.

PM-AASHA: Three Component

- **Price Support Scheme (PSS)**, physical procurement of pulses, oilseeds and Copra will be done by Central Nodal Agencies in combination with State governments.
 - ♦ It is also decided that in addition to NAFED, Food Cooperation of India (FCI) will take up PSS operations in states/districts.
 - ♦ The procurement expenditure and losses due to procurement will be borne by Central Government as per norms.
- **Price Deficiency Payment Scheme this scheme (PDPS)** - it is proposed to cover all oilseeds for which MSP is notified.
 - ♦ In this direct payment of the difference between the MSP and the selling/modal price will be made to pre-registered farmers selling his produce in the notified market yard through a transparent auction process.
- **Private Procurement Stockist Scheme (PPSS)** – to be launched in selected APMCs of district involving the participation of private company.
 - ♦ **It will cover oilseeds** for which MSP is notified. The selected private agency shall procure the commodity at MSP in the notified markets during the notified period from the registered farmers whenever the prices in the market fall below the notified MSP, maximum service charges up to 15% of the notified MSP will be payable by the Government.



PM WANI

Prime Minister Wi-Fi Access Network Interface (PM-WANI) got Cabinet approval in order to elevate wireless internet connectivity in the country.

About:

- The objective is to provide public Wi-Fi service through Public Data Offices (PDOs) spread across the length and breadth of the country just like what PCOs (Public Call Offices) did for telephone spread in India.
- The Public Wi-Fi Networks will be set up by Public Data Office Aggregators (PDOAs).
- This was first recommended by the Telecom Regulatory Authority of India (TRAI) in 2017.
- The Public Data Offices (PDOs) will be there with no requirement of the license, registration, or any other fees.

Key Highlights:

- The PDOs will either provide internet on their own or will lease from some other Internet Service Provider (ISP).
- **A central registry** will be set-up which will maintain details of all app providers, PDOAs and PDOs and it will be handled by the Centre for Development of Telematics (C-DoT).
- A customer wanting to access the network from a PDO's premise can do so only after an eKYC authentication.
- It will also have an app developer who will build a platform to register users and discover Wani-compliant Wi-Fi hotspots in an area and display them on the app.

Significance:

- **New Wave of Internet Users:** PM WANI will be able to connect a new wave of users not just to commercial and entertainment options, but also to education, telehealth, and agriculture extension, and bring greater accountability to the government by boosting transparency and interactivity.
- **Enabler for Digital India:** The scheme would enable small shopkeepers to provide Wi-Fi service and boost internet connectivity strengthening the Digital India mission.
- **Cutting The Red Tape:** Through PM WANI, the government is hoping that by cutting through layers of bureaucracy and eliminating licenses and fees, it can make it easy even for a tea shop owner to register online.
- **Domino Effect on Economy:** According to the TRAI report, public Wi-Fi system on the WANI architecture can lead to a 10% rise in net penetration which in turn can lead to a 1.4% increase in GDP.
- **Bridging the Digital Divide:** PM WANI can result in a rapid scale-up of the Internet in rural India, which will be

transformative, given the low level of penetration — 27.57 subscribers per 100 population in 2019.

- **Low-Cost Alternative:** Upcoming mobile technologies such as 5G may provide good quality data, but they involve high investment in the new spectrum, connectivity equipment, and regular subscriber fees.

Challenges in implementation of PM WANI:

- **Security Risks:** A public WiFi network has several security issues. That's because several people access the network at the same time on the same spot.
- **Low Speed:** As public WiFi network is usually accessed by several people at the same time, it results in a considerable loss of bandwidth resulting in a slow network speed.
- **Cheap Mobile Data:** As per TRAI in 2019, India now has among the cheapest mobile data per GB in the world, with mobile data prices have reduced by 95% in the last five years.

Way Forward:

- The public data offices (PDOs) of PM WANI can do what the PCOs did for phone calls, going well beyond 'ease of doing business' to genuinely empower citizens.
- What the citizen expects is robust service, protection of data integrity, transparency on commercial use of data, and security against cyberattacks.
- PM WANI should ensure the public data is protected and safe. In this context, the enactment of the public data protection bill, 2019, is the need of the hour.
- The government must also ensure true unbundling of hardware, software, apps, and payment gateways in the WANI system, as advocated by TRAI, to prevent monopolies.

INTERNET PENETRATION IN INDIA

- **As per the latest Telecom Regulatory Authority of India (TRAI) data**, about 54% of India's population has access to the Internet.
- **The 75th round of the National Statistical Organisation survey** shows that only 20% of the population has the ability to use the Internet.
- **The India Internet 2019 report** shows that rural India has half the Internet penetration as urban, and twice as many users who access the Internet less than once a week.
- **Digital Poverty:** So, with each move towards digitisation, the country is threatening to leave behind a large part of the population to suffer in digital poverty.

SPIKE IN AMMONIA LEVEL IN YAMUNA

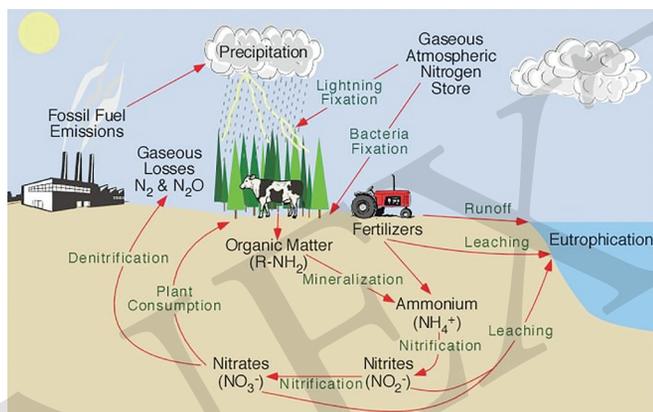
Ammonia levels peak in Yamuna on a regular basis

About:

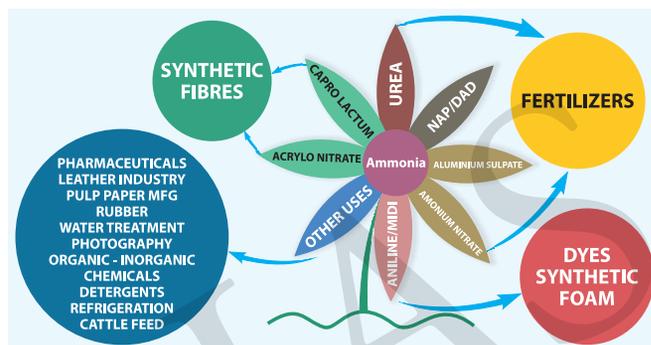
- **Increasing Ammonia levels** in Yamuna river reached nearly 3 parts per million (ppm), almost six times above the acceptable limit of 0.5 ppm. This is a recurring event for the past 20 years, which has increased in frequency now.
- **This affected water supply** in areas of Delhi after 2 water treatment plants had to be closed.

Ammonia in water bodies:

- **Ammonia (NH₃)**: It is a highly reactive, water-soluble, colourless gas, originating from natural and man-made sources. It is a component of the nitrogen cycle.



- **Sources of ammonia:** They include agriculture (manure, slurries, fertilizers), catalytic converters in petrol cars, landfill sites, sewage works, composting of organic materials, combustion, industry and wild mammals and birds.
- **Uses:** Ammonia is used as an industrial chemical in the production of fertilizers, plastics, synthetic fibres, dyes etc. and also as an agent to prolong disinfectant effect of chlorine in drinking water in municipal treatment systems.
- **Causes of ammonia spike in Yamuna:**
 - ♦ Effluents from dye units, distilleries and other factories in Panipat and Sonipat districts in Haryana,
 - ♦ Sewage from some unsewered colonies.
- **Effects**
 - ♦ Ammonia is toxic to fishes above 1 ppm
 - ♦ Long-term ingestion of ammonia (>1ppm) can damage internal organs in humans
 - ♦ Water contaminated with ammonia can cause temporary or permanent blindness if splashed into the eyes.
 - ♦ Contamination of ground and surface water.



Measures to Control Ammonia Level:

- Dilute contaminated water with fresh water from other sources.
- Prevent mixing of industrial effluents and drainage into river water by using of sandbags.
- **Maintain ecological flow:** Minimum amount of water that should flow in the river at all times.
- **Other measures:** Reducing protein-content in animal-feed, covering stored manure, decreasing use of nitrogen fertilizers, avoiding open burning of agricultural waste.
- **Ion Exchange with zeolite,** Sodium alumino silicate zeolites and Distillation, biological nitrification, ion exchange, ozone treatment, are ways to treat ammonia contamination.

Challenges in controlling Ammonia Pollution:

- **There is no state-of-the-art technology** available to Delhi Jal Board to treat high ammonia levels.
- **Availability of fresh water** from an alternate source becomes a challenge in drier months.
- **Limited capacity:** The current water treatment plants have capacity to treat ammonia upto 0.9 ppm only. Beyond this level, they are forced to shut down.
- Delhi and Haryana have contentions over sharing of river water.

Way Forward:

- **Increase capacity:** There is an urgent need to increase ammonia treatment capacity at water treatment plants to at least 4 ppm.
- The pollution control authorities of Delhi and Haryana must ensure stringent implementation of guidelines against dumping harmful waste into the river, making sure untreated sewage does not enter the river water.
- Maintaining a sustainable minimum flow in rivers.

SOLAR POWER IN INDIA

Recently, Solar power tariff touched record low of Rs 2 per unit in an SECI auction

About:

- **India's solar power capacity** stands at about 35 GW and the government is planning to increase it to 100 GW in the next couple of years to meet its ambitious targets under National Solar Mission.
- In this direction, a recently auction of solar tariff by SECI saw the solar tariffs plunge to record low rates.
- **Status of Solar energy in India:** Indian renewable energy sector is the fourth most attractive renewable energy market in the world with India ranking fifth overall in solar power generation.

Important Features:

India has an installed renewable energy capacity of 89.22 GW, of which solar alone comprises 36.05 GW.

- It is the third-largest solar market in the world.
- It is among the top 3 countries in terms of Renewable Energy attractiveness with an FDI inflow of US\$ 9.56 billion in last 20 years.
- **Rewa** Ultra Mega Solar park, Madhya Pradesh was the first solar project in the country to break the grid parity barrier with an installed capacity of 750 MW.
- **Other Major solar parks (See map):**
 - ♦ **Badla** solar park, Rajasthan.
 - ♦ **Pavagada** solar park, Madhya Pradesh

- Besides, India is also Asia's largest market for off-grid products with a potential of nearly 43 GW for grid connected rooftop.

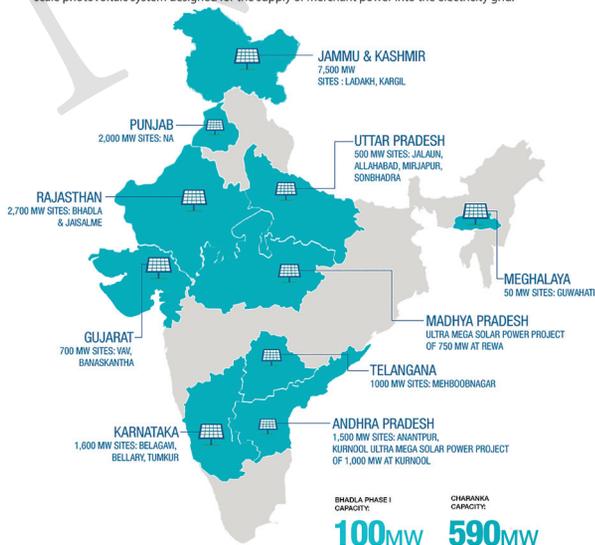
What are the major Government initiatives?

Some initiatives by Government of India to boost Solar energy sector are as follows:

- **Custom and excise duty benefits** to the solar rooftop sector by the Ministry of New and Renewable Energy (MNRE).
- Efforts by Indian Railways to cut down emission level by 33% by 2030
- 100% FDI in all renewable sources of power including solar.
- **Green Energy Corridor** of nearly USD 6.5 Bn investment to enable the flow of renewable energy into the national grid.
- **Fiscal Incentives** for accelerated depreciation and Concessional custom duty.
- **Easier environmental Clearances** by classifying renewable as to white goods category.
- **Promoting Financing under** National Clean Energy Fund and Priority sector lending from banks.
- It is projected that by use of renewables in place of coal can help save India close to Rs 54,000 crore (US\$ 8.43 billion) annually.

SOLAR PARKS IN INDIA

A photovoltaic power station, also known as a solar park, solar farm, or solar power plant is a large-scale photovoltaic system designed for the supply of merchant power into the electricity grid.



Renewable Energy in India

India has the fifth largest renewable power installed capacity in the world

- It accounts for 23.39% of total electricity generation in the country.
- It has a fast pace Compound Annual Growth Rate of 17.33%.
- As of November 2020, the total installed capacity for Renewables is 90+ GW with the following break up:
 - ♦ **Wind power:** 38.43 GW
 - ♦ **Solar Power:** 36.91 GW
 - ♦ **Biopower:** 10.31 GW
 - ♦ **Small Hydro Power:** 4.74 GW
- By 2030, renewable sources are expected to help meet 40% of India's power needs.

The solar industry in India has entered a period of cost efficiency thanks to advances in technology and competitive bidding but it has also got lenders worried on the sustainability of the projects and the security of their loans.

January, 2021

INTERNATIONAL SOLAR ALLIANCE

<p>What is International Solar Alliance? It is an Inter-governmental organisation to promote solar energy among member countries. It is headquartered in Gurgaon</p>	<p>How many have Joined In? As of now, 61 nations have Joined the alliance while 32 have ratified the Framework Agreement</p>	<p>\$83 bn India's requirement to meet its 175 GW goal</p>
<p>What is the concept? It is meant to bring together 121 countries that lie either completely or partly between the two tropics so as to harness solar energy and make the technology freely available to all nations</p>	<p>ISA TARGET 1,000 GW Solar generation capacity globally by 2030 \$1 trillion Investment required to achieve the 2030 goal</p>	
<p>175 Gigawatts (GW) generation from renewable energy is India's target for 2022</p>	<p>20 GW solar power capacity already installed in India, says Modi</p>	<p>Who's behind It? The idea was conceived and articulated by Prime Minister Narendra Modi during his Wembley Stadium speech at London in 2015</p>

Why the solar tariff is low and falling?

- According to International Renewable Energy Agency (IRENA), the country-wise average for the total installed costs of utility scale solar PV is lowest in India at Rs 5.5 crore per Megawatt compared to as high as \$2,427 per Kw in Canada. Major factors responsible for this falling prices are:
- **Role of Government:** The specialized bodies formed by the Government of India like the Ministry of New and Renewable Energy (MNRE) and subsequently the Solar Energy Corporation of India (SECI) have played a pivotal role in helping India become one of the cheapest producer of solar energy.
- **National Solar Mission:** It has put the much needed focus on solar power across the world.
- Competitive tariff-based bidding by SECI.
 - ♦ SECI implemented large-scale central auctions for solar parks in India.

SECI

- It is a fully-owned subsidiary of the Ministry of New and Renewable Energy.
- It is also the nodal agency to facilitate the implementation of the National Solar Mission.
- **Promotion of solar energy** through various public awareness campaigns and events.
- Aggressive financing models for example, Karnataka and Tamil Nadu promoted open access through concessional wheeling & banking facilities for solar.
- **Incentives and Policies:** The subsidies and incentives provided by the Government and Jawaharlal Nehru National Solar Mission (JNNSM).

- ♦ Accelerated Depreciation Benefit and tax holidays.
- ♦ Government subsidies for rooftop solar projects
- ♦ Shift from Public Private Partnership (PPP) to People Public Private Partnership (PPPP) model.
- **Land Certainty:** Historically land acquisition has always been a problem in India and is a major reason for cost escalation in infrastructure projects.
 - ♦ One of the probable reasons of the record low tariff is the lack of risk and uncertainty associated with land acquisition from the project cost of large scale solar projects.
- Due to the climatic condition of India with 240-300 sunny days in a year, land availability for solar generation is easily found.
 - ♦ Most draught prone zones in rural India are arid with high radiation and are viable for setting up large solar parks.
- **Low cost of labour:** India has the lowest cost of labour allowing solar industry to employ large number of people resulting in speedy project completion at the lowest cost.
- Construction of a solar plant requires only 20-30% high skilled manpower, and the rest are semi-skilled or unskilled labour, easily available and at affordable costs.
- **Price sensitivity:** India is a highly price sensitive market and for any industry to make significant footprint, price is a key indicator.
 - ♦ Once solar tariffs dropped below grid electricity tariffs, there has been super quick adoption, which has furthered the economies of scale, diving prices of components even lower.
- **India's 100 GW plan is, by far, the most ambitious** solar procurement programme globally, and so there is need for encouraging sustainable mechanism to secure cost of participation for bidders including long and short term stakeholders.

Way Forward:

- India imports close to 80 per cent of solar cells and modules for current solar capacity from China. Thus, there is need for a push towards Atmanirbhar Bharat and Make-in-India becomes more evident.
- With Government aiming to increase use of clean energy sources, there is need for undertaking various large-scale sustainable power projects and promoting green energy heavily.
- It will not only help India in cutting on its import payments but also create many employment opportunities at all levels, especially in rural areas.

HARYANA'S BILL ON RIGHT TO RECALL PANCHAYAT MEMBER

The Haryana Assembly has passed a bill to provide the right to recall members of Panchayati Raj institutions to those who elected them.

About:

- **The Haryana Assembly passed Haryana Panchayati Raj (Second Amendment) Bill, 2020** was passed that has the following provisions.
- **The Bill allows the recall of village sarpanches and members** of the block-level panchayat samitis and district-level Zila Parishad if they fail to perform.
- **Accountability to the voters:** People in rural areas will get the right to remove a sarpanch or members of the two bodies even before their tenure is over.

Conditions for recall:

- ♦ To recall a sarpanch and members of the two bodies, 50% of members of a ward or gram sabha have to give in writing that they want to initiate proceedings.
- ♦ This will be followed by a secret ballot, in which their recall will require two-third of members voting against them.
- **Enhancing the participation of women in the three-tier Panchayati raj system:** The Bill allows 50% reservation to them in gram panchayats, panchayat samitis, and Zila Parishad.
- **The Bill also proposed an 8% reservation to the "more disadvantaged"** among the Backward Classes.
- **Ninth state:** After passing the law, Haryana has become the 9th state in India to implement this instrument in direct democracy.
 - ♦ Currently, Uttar Pradesh, Uttarakhand, Bihar, Jharkhand, Madhya Pradesh, Chhattisgarh, Maharashtra, and Himachal Pradesh have this instrument available in their respective local bodies.

Arguments in favor of the Right to recall:

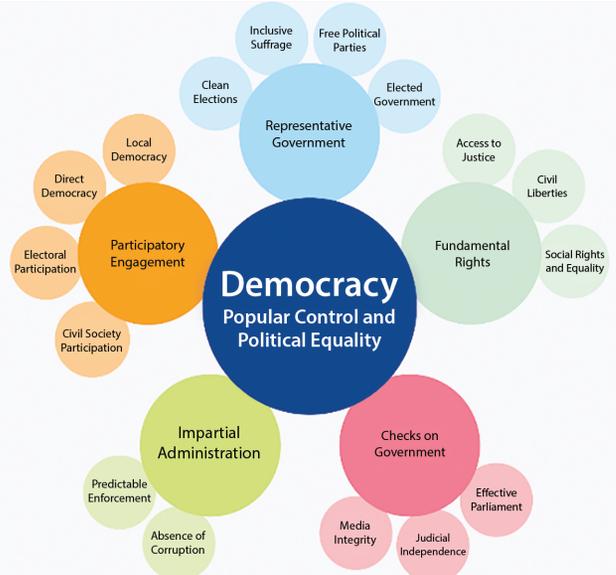
- **Ensures Accountability:** The Right to recall system provides an opportunity for electors of democracy to hold the representative accountable during the term of office.
 - ♦ It can be revoked when the voters deem it necessary to remove a legislator if he/she is not performing his duty.
- **Check on Corruption:** Such kind of right would be a significant check on corruption along with other measures such as the criminalization of politics.
- **Check money power:** It will deter candidates from spending crores of money while campaigning for the elections because they will have a perpetual fear of being recalled.
- **Chance to Rectify decision:** Advocates of the Right to recall seeing it as an option to correct wrong decisions without waiting for five years.

Supreme Court Judgment

State of Madhya Pradesh & Ors. v. Shri Ram Singh

In this case, the Supreme Court opined that the recall of delinquent representatives undoubtedly seems to be one way of achieving a corruption-free government.

Conceptual Framework: The Global State of Democracy



Right to Recall

- **Right to recall is an instrument of direct democracy** that can be used to remove or replace public servants elected by the democratic process.
- **Global Status:** It is being used internationally in many direct democracies such as Switzerland and indirect democracies such as Britain.
- Canada's Legislative Assembly of British Columbia has this provision since 1995.
- In the USA, the states of Alaska, Georgia, Kansas, Minnesota, Montana, Rhode Island, and Washington have it. Venezuela, the Philippines, and Switzerland also have a law to recall.

Limitations in implementation:

- **The problem is the method of Implementation:** Although the Right to recall has been implemented by many states in Panchayati Raj Institutions (PRIs) and Urban Local bodies (ULBs), methods of their implementation dilute the motive and character of the process.
 - ♦ **For example:** In Chhattisgarh, the process of recall can be initiated only after three-fourths of fellow councilors ask for a recall election.
 - ♦ Similarly, two-thirds of the registered voters of a constituency have to sign a petition in Bihar for the process to be initiated.
- **Limited to Third Tier of Government:** Right to recall in India is limited to the third tier of democracy as a larger share of revenue is devolved to MLAs and MPs of the respective area, their role in underdevelopment is more than ULBs or PRIs member.

Previous attempts to introduce the Right To Recall

- **Two private member bills** on right to recall have been introduced in parliament.
- The first, Constitution (Amendment) Bill about Voters' right to recall elected representatives was introduced by C. K. Chandrappan in 1974, which did not pass.
- The second one was introduced as a private member bill by Varun Gandhi as 'The Representation of the People (Amendment) Bill, 2016' met the same fate.

Arguments against 'Right to Recall':

- **Excessive control hampers work at the ground level:** It leads to an 'excess of democracy' where the independence of representatives is diluted also they find it difficult to make decisions based on harsh realities.
- **Increased Populist pressure:** It causes representatives to succumb to the populist pressure which checks them to go for long-term reforms.
- **Difficult for representatives to rise above local duties:** It limits representatives to its constituency and checks MPs and MLAs rise above the local duties and undertake national and state-level 'duties'.
- **Recurring recall elections:** Recall creates unnecessary chaos due to recurring recall election and further lead to destabilize the government in mid-term.
- **The economic burden on the exchequer:** There is always a question related to the practical aspect of conducting a recall which would involve enormous amounts of money along with manpower, time, etc.

- **Lessens Inclusiveness:** The introduction of recall would bring down inclusiveness as only those citizens who are politically alert would benefit from it.

Types of Democracy

Direct Democracy:

- People directly takes part in decision making procedure.
- Citizens vote to accept a proposal of law or reject it.
- Every matter is decided on the basis of opinion of the Citizens.

Eg. Switzerland.

Indirect Democracy:

- Citizens do not take part in the decision making procedure of the political system directly.
- Citizens elect their representatives and the representatives takes part in decision making procedure on behalf of his electors.

Eg. India

Way Forward:

- **Enhancing political awareness:** The main focus should be on enhancing the political awareness of the masses by various means possible and on ensuring a better turn-out of voters in the elections respectively.
- **Proper scrutiny:** A recall should be carried only after conducting proper judicial scrutiny on certain specific grounds and not on vague or ambiguous grounds.
- **Strong deterrence:** Recalled representative must be debarred from contesting the by-election held thereafter. Otherwise, all the money, manpower, time, etc. in conducting the recall would go in vain.
- **Strengthening existing mechanisms:** There are already in existence various neglected 'pre-election' measures that aim to ensure accountability such as provisions relating to disqualification and expulsion of members and the existing vigilance bodies to check corruption etc.

Instruments of Direct Democracy

- **Referendum:** A proposed legislation is referred to the electorate for settlement by direct vote.
- **Initiative:** People can propose a bill to the legislature for enactment.
- **Recall:** Voter can remove a representative or an office bearer before the expiry of his term when he fails to discharge his duty.
- **Plebiscite:** A plebiscite is a method of obtaining the opinion India's of people on any issue of public importance. It is generally used to solve territorial disputes.

GOVERNMENT TO REGULATE OTT AND DIGITAL NEWS

Over-the-top (OTT), digital news content now under the ambit of the Ministry of Information and Broadcasting.

About:

- **The central government has recently brought digital audio-visual content**, including films and web shows on Over-The-Top (OTT) streaming platforms, as well as news and current affairs on online platforms under the ambit of the Ministry of Information and Broadcasting.
- For this, **the Government of India (Allocation of Business) Rules, 1961 ("Rules") have been amended** to create a new sub-heading in the second schedule, titled "Digital/Online Online Media".
- **These platforms were so far** under the purview of the Ministry of Electronics and Information Technology.
- Earlier this year, the government had emphasized the need for a **light-touch regulatory approach** for video streaming platforms to create a 'level playing field' since all other media are regulated.
- The notification comes on the back of the Supreme Court seeking the Centre's response on a Public Interest Litigation (PIL) for regulating OTT platforms such as Netflix and Amazon Prime Video this October.
- **Further, recent controversies such as the Sudarshan TV case** had already brought to the fore the need to check web-based digital media.

What are OTT Platforms?

- OTT or Over-the-Top platforms are audio and video hosting and streaming services such as Netflix, Amazon Prime Video, Hotstar etc, which started out as content hosting platforms but soon branched out into the production and release of short movies, feature films, documentaries and web series themselves
- These platforms offer a range of content and use Artificial Intelligence to suggest users the content they are likely to view based on their past viewership on the platform.
- Most OTT platforms generally offer some content for free and charge a monthly subscription fee for premium content which is generally unavailable elsewhere.
- India is currently the world's fastest growing OTT (over-the-top streaming) market, and is all set to emerge as the world's sixth-largest by 2024.
- At present, the OTT platform's valuation stands at 35 billion INR, with nearly 500 million internet users, expected to grow at 8% per year.



Current Regulatory Mechanism:

- **Currently, there is no law or autonomous body** to monitor and manage the digital contents provided on these OTT platforms and it is made available to the public at large without any filter or screening.
- Unlike television, print, or radio which follow guidelines released by governments, OTT platforms classified as digital media or social media, had little to no regulation on the choice of content they offered, the subscription rates, certification for adult movies, and others.
- Last year, the government had capped foreign direct investment (FDI) in digital media at 26%. Also in clarification, the government added that the majority of directors on the board of a digital news platform and its chief executive officer should be Indian citizens, and foreigners deployed by them for over 60 days need a security clearance.
- After several hints from the government, 15 OTT platforms had come together under the aegis of the Internet and Mobile Association of India (IAMAI) in September to sign a code of self-regulation, formulating a framework for age classification, appropriate content description, and access control.
- **IAMAI:** The Internet & Mobile Association of India (IAMAI) is a not-for-profit industry body registered under the Societies Registration Act, 1860. Its mandate is to expand and enhance the online and mobile value-added services sectors. It is dedicated to presenting a unified voice of the businesses it represents to the government, investors, consumers, and other stakeholders.

Regulations followed in other Countries:

- India is not the first or only country to regulate digital media.
- All electronic communication in the US is regulated by the Federal Communications Commission, an independent

January, 2021

agency of the government that regulates communications by radio, television, wire, satellite, and cable.

- The US has sophisticated regulations for the internet inline with the free speech principle that favors minimal content regulation.
- China, Singapore, and South Korea, meanwhile, have Internet-specific censorship laws.

Impact of regulation:

- The regulation of OTT could also mean that these platforms would have to apply for certification and approval of the content they wish to stream.
- This in itself could give rise to many conflicts as most OTT platforms have content that could otherwise be censored by the certification boards in India.

Criticism of the move:

- **Difference between digital media and their aggregators:** The government considers digital media and digital aggregators in the same breath but they are different things.
 - ♦ **Digital Media Aggregators** are used for aggregating the content from the most popular media accounts to be able to analyze, moderate, curate, and display on their platforms.
 - ♦ **Digital Media Content providers:** These are the innovators or information producers that have certain views or movies or series, etc which need to be displayed on these OTT Platforms.
- **Lack of Clarity:** The intent of the regulation is unclear, whether it is looking at licensing or entry barriers, or any other curbs in digital media.
- **Hamper dissenting views:** The way people are active on digital media, the regulation can hamper the new dissenting views shown up by these platforms or affect any discourse that could have been started via films or shows about the state of the nation or people.
- **People's Grievances:** Also sometimes people put up their grievances on such platforms which are usually heard by authorities fast when are in the public domain.
- **Excessive control of authorities:** There is a fear that this will just end up facilitating more governmental interference and censorship, which becomes problematic when it comes to regulating digital news and create new conflicts. Just like India's theatrical business has long bowed down to diktats of the censor board, the same fate could happen to the digital media.
- **Similar to regressive steps taken by other states:** This regulatory mechanism is close to Section 118A of the Kerala Police Act without any penal provisions.

- **Contradicts Supreme Court's judgment:** The move if applied strictly will go beyond the mandate of the Supreme Court Decision to invalidate Section 66A of the Information and Technology Act.
 - ♦ Section 66A of the IT Act dealt with information related crimes in which sending information, using a computer resource or a communication device, which is inter alia offensive, derogatory and menacing is made a punishable offense.
 - ♦ **In Shreya Singhal v. Union of India judgment,** Justices Rohinton F. Nariman and J. Chelameswar had observed that the weakness of Section 66A lay in the fact that it had created an offense based on undefined actions: such as causing "inconvenience, danger, obstruction and insult", which do not fall among the exceptions granted under Article 19 of the Constitution, which guarantees the freedom of speech.
 - ♦ The court also observed that the challenge was to identify where to draw the line.

Section 118 A of Kerala Police Act

- It stipulates three-year imprisonment and/or a fine of Rs 10,000 "for producing any content, publishing or propagating the same through any means of communication to threaten, insult or harm the reputation of an individual".
- As it's a cognizable offense, the police could register cases, suo-moto, and arrest the culprits without warrants.
- It is a cause of concern for the electronic and print media as the provisions can be used to stifle dissenting voices.

Way Forward:

- **Light touch approach:** It cannot be denied that regulation, of the light-touch kind, which serves as an advisory for the content being presented to the viewers, plays a useful role.
- **Avoid rumor mongerism:** However, the Government should address the concerns of the involved stakeholders so that rumors around decisions should be addressed.
- **Involvement of all stakeholders:** The regulatory body should involve members from the relevant stakeholders.
- **Digital Awareness:** Consumers should be made aware of the impacts of their streaming and realize if there is a need to watch these videos multiple times. Every video viewed consumes energy every time.
- **Viewer's Responsibility:** The purpose of creating laws for OTT content is to prevent underage people from watching certain content. Ensuring on the viewer's part that kids in the home do not access such contents can help fulfill the very purpose.

FUSION REACTORS: POSSIBILITIES AND CHALLENGES

China powered up its 'artificial sun' nuclear fusion reactor for the first time.

About:

- China made significant advances in its nuclear power research capabilities by successfully powering up its first nuclear fusion reactor HL-2M Tokamak, also known as the 'artificial sun'.

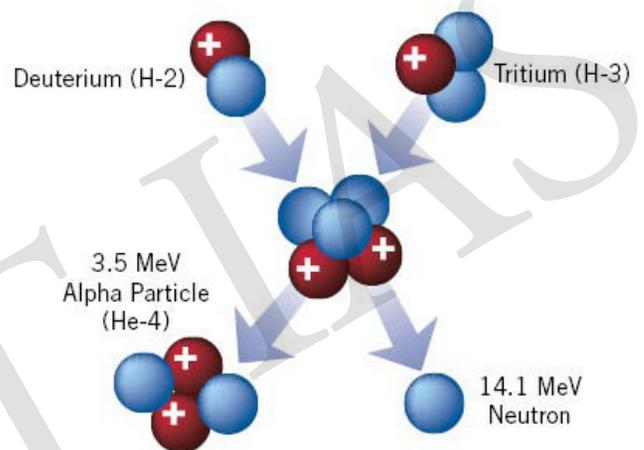
HL-2M Tokamak:

- What is it?** It is China's largest and most advanced nuclear fusion experimental research device, located in southwestern Sichuan province in China.
- Chinese researchers have been working on building smaller version of a nuclear fusion reactor since 2006.
- Technology:** It uses a powerful magnetic field to fuse hot plasma and reach temperatures of over 150 million degrees Celsius- 10 times hotter than the core of the Sun.
- Artificial Sun:** The reactor is nicknamed so on account of producing enormous amounts of heat and power.
- The device will be used in collaboration with other scientists working in the International Thermonuclear Experimental Reactor.

Nuclear Fusion: Process and Reactors

- Nuclear Fusion** is the process wherein lighter atoms combine to form heavier atoms accompanied by release of energy. This process powers the Sun and other stars, whereby they generate heat and light.
 - On Earth it is achieved by combining two isotopes of Hydrogen i.e deuterium and tritium.
- Process:** The Deuterium (H-2) and Tritium (H-3) atoms are combined to form Helium (He-4), the next element in the periodic table. A free and fast neutron is also released as a result.
- The neutron is powered by the kinetic energy converted from the 'extra' mass left over after combination of lighter nuclei of deuterium and tritium occurs.
- How is it achieved?** In a Nuclear Fusion Reactor, The two atomic nuclei are brought very close to each other, activating the nuclear forces which act as a 'glue' for the nuclei and overcoming the electrostatic forces that repel similarly charged atomic nuclei.
- Required conditions:** This requires high density, high temperature conditions to create plasma state (fourth state of matter), in which electrons are stripped away from atomic

nuclei to form ionized gas. The electrostatic forces can be overcome when this state is achieved and the process can be controlled via magnetic confinement in nuclear fusion reactors.



- Magnetic Confinement:** It employs a giant magnetic field to confine the movement of deuterium-tritium plasma. The magnetic field prevents the particles from coming into contact with the nuclear fusion reactor walls, thereby avoiding dissipation of heat of the nuclei and slowing down its movement.
- The Deuterium-Tritium (DT) fusion reaction produces the highest energy gain at the "lowest" temperatures.

What are isotopes?

- Isotopes are one of two or more species of atoms of a chemical element with the same atomic number (number of protons) but different number of neutrons.
- They have same position in the periodic table and nearly identical chemical behaviour different physical properties.
- Every chemical element has one or more isotopes.

Fusion Research:

- The nuclear fusion process was identified 1930s and experiments began in the 1940s.
- At the 'Atoms for Peace' conference in Geneva (1958), fusion research was established as an international collaborative venture.

Atoms for Peace conference (1958), Geneva

- It was organized under UN as the largest international gathering to focus on taming nuclear energy for peaceful uses, with nuclear fusion research brought to the fore.
- The conference was officially called "Second United Nations International Conference on the Peaceful Uses of Atomic Energy".
- Tokamak (originally developed in USSR in 1951), stellarator (Princeton Plasma Physics Lab, 1951), and reversed field pinch (RFP) device are three types of magnetic confinement systems developed, with Tokamak being the most promising.
- International Thermonuclear Experimental Reactor (ITER) project in France and the China Fusion Engineering Test Reactor (CFETR) are two important nuclear fusion projects underway, with the former being larger of the two.
- Around 20 fusion reactors are operational around the world today.

International Thermonuclear Experimental Reactor

- It is one of the most ambitious energy projects in the world, based in France, with 35 nations collaborating to create the world's largest tokamak and make commercial production of fusion-energy feasible.
- It will create the world's first net energy fusion device, i.e. the total power produced during fusion plasma surpasses the energy injected into it.
- **Goal:** To operate with a plasma thermal output of 500 MW (for at least 400 seconds continuously) with less than 50 MW of plasma heating power input. No electricity will be generated at ITER.
- **Members:** India (joined in 2007 as the 7th partner), China, the European Union, Japan, Korea, Russia and the United States for a 35-year collaboration.
- **ITER-India:** It is a special project under Institute of Plasma Research (Gandhinagar), which is the Indian Domestic Agency to design, build and deliver the Indian in-kind contribution to ITER.
- **ITER-India** is governed by the Empowered Board that is chaired by the Secretary, Department of Atomic Energy (DAE).

China Fusion Engineering Test Reactor:

- China aims to build a tokamak reactor under this project and launch it in 2030.
- It is smaller than ITER project but can produce 10 times the heat required to start a fusion reaction.
- Location- Anhui province, 400 km west of Shanghai.

Possibilities:

- **Source of energy:** Fusion Reactors can provide a clean source of energy, without much CO₂ emissions and achieve world energy security.
- **Raw materials:** Deuterium is found in ordinary seawater around the globe, thereby making the fusion reactor raw material easily available as long as there is water on Earth.
- **Other applications**
 - ♦ Process waste and recycle its elements.
 - ♦ Produce fuel for fission reactors.
 - ♦ Process radioactive fuel waste and activated materials.
 - ♦ Nuclear propulsion for spacecraft and probes for stellar exploration, submarine and aircraft carriers.

Challenges:

- **Cost:** Achieving fusion reaction is very expensive, making it difficult for a single nation to cover all the costs.
- **Technology**
 - ♦ It is difficult to successfully achieve and sustain fusion reaction at high temperatures.
 - ♦ Fusion plasma is very unstable and requires active controlling.
 - ♦ Heat extraction and its conversion into electricity is difficult in a fusion reactor.
- **Tritium safety:** Tritium decays into He-3 through beta emissions and eventually forms water, which is taken up by organisms. It also permeates through skin and many materials like rubber, concrete, steel thereby requiring them to be detritiated before recycling.

Significance:

- **Strategic:** Large infrastructural investment projects (such as BRI of China) require a continuous and enormous amount of energy, which fusion reactors can fulfill. Further, reliance on nuclear energy will save hydrocarbons for other uses.
- **Sustainable development:** Being a clean source of energy with hardly any long-term radioactive waste, it can propel environmentally friendly sustainable development and national economy.
- **Security:** It has lower risk of accidents, no risk of runaway nuclear reaction (as in fission reaction) or risk theft of atomic materials for diversion of use.
- **Long-lasting:** Nuclear fusion is an inexhaustible source of energy, lasting for thousands of years with the current available fuel.
- **Potential:** It is 3-4 times more powerful than fission reaction.
- **Reliability:** Nuclear energy is not susceptible to varying climate or weather changes or insufficient supply of natural resources.
- **National energy basket:** Increased share of nuclear energy in the national energy mix will reduce volatility in electricity prices.



REGULATION AND TAXATION OF BETTING AND GAMBLING IN INDIA

The Supreme Court has held that lottery, gambling, and betting are taxable under the Goods and Services Tax (GST) Act.

About:

- A petition was filed in Supreme Court by Skill Loto Solutions Pvt Ltd which challenged the levy of GST on lotteries.
- Challenging Section 2 (52) of the 2017 GST Act and notifications levying lottery tax, petitioners contended that the law was violative of the fundamental rights and contrary to the SC judgment (Sunrise Associates Vs. Government of NCT of Delhi 2006) that held that lotteries were merely actionable claims and cannot be defined as 'goods' under GST Act.
- The growing popularity of gaming platforms like Dream11 and Paytm First Games raises questions about whether they are proxies for online gambling as they can involve financial transactions but are currently classified as 'games of skill'.

Actionable Claim

- A claim to any debt secured legally without any mortgage and is recognized by the civil court.
- It includes a beneficial interest in that movable property that does not have the claimant.
- Section 3 of the Transfer of Property Act, 1882 has defined the actionable claim.

Statutory and Constitutional Provisions: "Goods Vs Actionable Claims":

- **Goods and Service Tax:** Lottery has been regarded as 'goods' within the meaning of the Central Goods and Services Tax Act, 2017 (CGST Act).
- The definition of 'goods' under Section 2(52) of the GST Act includes 'actionable goods' also.
- Item Number 6 under Schedule III to the GST Act, 2017 clearly states that all actionable claims except 'lottery, betting and gambling' have been exempted from GST.
- **Article 366 of the constitution:** Article 366(12) of the Constitution defines 'Goods' as "materials, commodities, and articles".
- It does not include 'Actionable Claims' or "Actionable Goods" under the definition of goods.
- **Sale of Goods Act, 1930:** Sale of Goods Act, 1930 also defines Goods.
- It has excluded 'actionable claims', such as lottery from the definition of goods.

Judgments of the Supreme Court and its observations:

- **Sunrise Associates vs. Govt. of NCT of Delhi and others, (2006):** The apex court in this judgment has held that lottery is an 'actionable claim'.
- **State of Bombay Vs. R.M.D. Chamarbaugwala and Anr. (supra): In this judgment (1957):** In this judgment supreme court has justified the regulation of betting and gambling. It further noted that these activities are inconsistent with provisions of 'Welfare State'.
- **Definition of Goods under Article 366(12) and Sale of Goods Act, 1930 is inclusive:** Supreme Court stated that it does not give any restrictive meaning to the definition of goods under these provisions. It cannot be given restrictive meaning.
- **The plenary power of parliament:** The Supreme Court has further stated that the legislative power of the Parliament is plenary. It has absolute power to make laws concerning goods and services under Article 246A and expand the meaning of goods and services.
- **Taxation is not discrimination:** The Supreme Court nullified the arguments against discrimination.
- It stated that taxation is not violative of Articles 14, 19(1) (g), 301, and 304 of the Constitution of India.
- It further stated that 'lottery, betting and gambling' were taxed in pre-independent as well as 'Post Independence India' under various acts.

Significance of the Verdict:

- **Social Welfare:** Lottery, betting, and gambling are not consistent with the norms and ethics of a 'Civil Society'. Thus the act of taxation and regulation by the state has been referred to as 'Social Welfare' by the Supreme Court.
- **Ensures Accountability:** Their regulation and taxation help in accounting for them and restricting their periphery.
- **Taxation reduces such activities:** Heavy Taxation also helps to reduce these activities.
- **Inconsistent with the concept of 'Welfare State':** Act of betting and gambling was never intended to be promoted by the state or the constitution-makers. Hence, they have not been elevated to the status of trade, business, or commerce.
- **Revenue to state exchequer:** Taxation from these activities form an essential part of the state government's exchequer. Hence, they can't be completely banned but regulated.

January, 2021

Limitations of the verdict:

- **No Ban on betting and Gambling:** Supreme Court has clearly stated that these activities are not in good faith for an ideal welfare state.
- But it has never stepped forward to ban these activities by terming them as illegitimate.
- **Taxation Vs Social Welfare:** Although SC has termed the act of taxation as an act of social welfare by the state, the real motive of legitimatizing them is to garner taxes rather than limiting their periphery.

Way Forward:

- The verdict is the right step towards limiting the scope of betting and gambling in India. These activities have been being practiced in India since ancient times and also mentioned in epics such as Mahabharata and Ramayana.
- These activities are also used for recreational purposes in Indian festivals. Hence are intrinsic to Indian social traditions.
- Banning these activities will not end them completely as they will persist illegally in the social periphery.
- Regulation and taxation is the best way to limit and account these activities while ensuring their co-existence with social traditions.



LEGAL PROVISIONS OF GAMBLING IN INDIA AND AN OVERVIEW OF THE ENTIRE ONLINE GAMING INDUSTRY

- The gaming industry in India has legal as well as illegal components. And not everything is about paid gaming; there is also a lot of free gaming, casual gaming, gaming just for entertainment.
 - **Some parts of it are regulated:** Betting on horse racing is regulated, casinos in Sikkim and Goa are regulated, certain games of skill are also regulated in States like Nagaland.
 - **Statutory Provisions:** The Public Gambling Act, 1867 governs gambling in India.
 - **Constitutional Provisions:** List II of the Seventh Schedule of the Indian Constitution has vested the State Governments with the power to legislate on matters concerning gambling and betting.
- Hence, the different state government has purposed different laws about it.
- **Legal and regulated in two states only:** After independence, many Indian states have enforced their Gambling Act which has prohibited all forms of gambling and betting in their respective states.
 - Goa and Sikkim are the only states which have allowed betting and gambling under state regulation.
 - These Gambling Legislations primarily refer to gaming/gambling activities that are held at the physical premises.
 - **Activities Included under Gambling Act:** Different state government has defined it differently-
 - ♦ Games held in physical premises which include the physical exchange of goods, money etc.
 - ♦ Online Gambling Games (included by Sikkim through Sikkim Online Gaming (Regulation) Act, 2008).
 - ♦ In all other states, online gambling is still an illegal act.
 - **Activities excluded under the Gambling Act:** The gambling under the Gambling Legislations does not include:
 - ♦ Betting on a horse race
 - ♦ Games of skill
 - ♦ Lotteries
 - **Game of Skills:** Games of skill are exempt from the ambit of gambling. These games include horse racing, teer, rummy and bridge. Thus basically they are legal.
 - ♦ Over the time Paytm First Games and Dream 11 has survived the scrutiny of government and functioning in public domain because they have got exemptions by various high courts as a game of skill.
 - ♦ Now the matter is listed afresh in Supreme Court whether this is game of skill or not.
 - ♦ If Supreme Court approve the whole industry survives otherwise it will go back into back burner.
 - ♦ Nagaland, for instance, has a separate legislation which details what are games of skill.
 - ♦ But for the most part, most States do not have that kind of clarity. So, it falls within the judiciary's ambit to interpret whether a particular game falls within the ambit of skill or not.
 - **Game of Chance:** A game of chance is a game whose outcome is random and does not depend on skill. For Example: Roulette played in Casinos. It is considered sin category.

NATIONAL FAMILY HEALTH SURVEY-5

Ministry of Health and Family Welfare released the factsheet of the NFHS-5 for 22 States/UTs.

About:

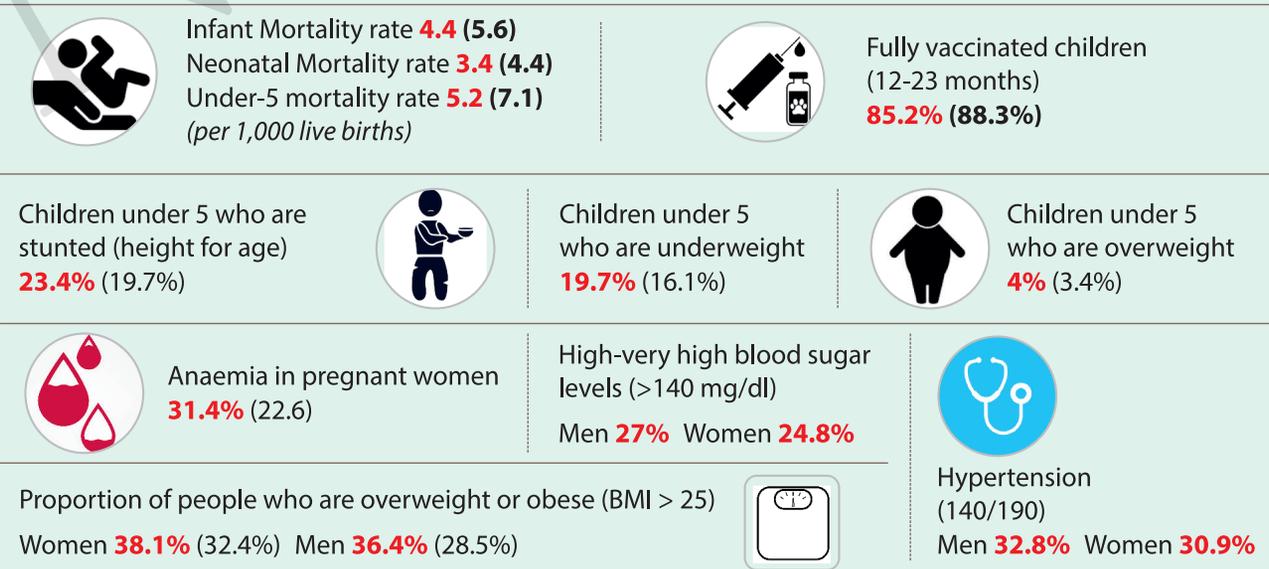
- Ministry of Health and Family Welfare published the results of National Family Health Survey- 5 (Phase I) covering important health metrics of 22 States/UTs.

National Family Health Survey-5

- What is it?** It is a large-scale, multi-round health survey conducted in a representative sample of households throughout India, providing state and national information for India on fertility, infant and child mortality, family planning practice, maternal and child health, reproductive health, nutrition, anaemia, utilization and quality of health and family planning services.
- Objectives:**
 - Strengthen India’s demographic and health database** by providing information that is both reliable and relied upon;
 - Strengthen the survey research capabilities** of Indian institutions to provide, analyse, and disseminate high quality data;
 - Anticipate and meet the country’s needs for data on emerging health and family welfare issues.
- Goal:**
 - To provide essential data** on health and family welfare needed by the Ministry of Health and Family Welfare and other agencies for policy and programme purposes.

- To provide information** on important emerging health and family welfare issues.
- How it is conducted?** The International Institute for Population Sciences (IIPS), Mumbai is the national nodal agency for survey co-ordination and technical guidance.
 - IIPS** collaborates with other Field Organizations for conducting survey in assigned states.
- Funding:** ORC Macro (USA) and other organizations provided technical assistance on specific issues. USAID, DFID, Bill and Melinda Gates Foundation, UNICEF, UNFPA, and Ministry of Health and Family Welfare (GOI) provided funding for various rounds of NFHS.
- Phase I:** The NFHS-5 Phase I surveyed 22 states/UTs viz
 - Andhra Pradesh, Assam, Bihar, Goa, Gujarat, Himachal Pradesh, Karnataka, Kerala, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Telangana, Tripura, West Bengal, Andaman Nicobar Island, Dadra and Nagar Haveli and Daman and Diu, Jammu & Kashmir, Ladakh and Lakshadweep.
- Phase II:** It consists of survey of remaining 14 states/UTs, which was delayed due to COVID-19 lockdown and will be completed in first half of 2021.
- Sample size of NFHS-5:** Contains 6.1 lakh sample households with disaggregated data up to district levels.

National Family Health Survey Figures (NFHS-5 2019-20)



Earlier Rounds of NFHS

- NFHS 1 was conducted in 1992-93, NFHS-2 in 1998-99, NFHS-3 in 2005-06 and NFHS-4 in 2015-16.
- Previous rounds were conducted under MoH&FW, with IIPS as the nodal agency in collaboration with USAID and ICF Macro.
- Earlier, MoH&FW used to conduct District Level Health Survey (DLHS) and Annual Health Survey (AHS).
- From 2015-16 onwards, the integrated NFHS came to be conducted every 3 years to meet requirements for appropriate data at the national, state and district levels.

Highlights of NFHS-5:

- State factsheet contains information on 131 indicators, many of which were also included in NFHS-4.
- 342 districts have been covered
- **New areas of focus:** Expanded domains of child immunization, components of micro-nutrients to children, menstrual hygiene, frequency of alcohol and tobacco use, additional components of Non-Communicable Diseases (NCDs), expanded age ranges for measuring hypertension and diabetes among all, aged 15 years and above.

Key Findings of NFHS-5 Phase I:

- **Total Fertility Rates (TFR)** has declined since NFHS-4 in most of the 22 Phase-1 States/UTs, with replacement level of fertility (2.1) achieved in 19 and only 3 states viz. Manipur (2.2), Meghalaya (2.9) and Bihar (3.0) have TFR above replacement levels now.
- **Contraceptive Prevalence Rate (CPR)** has increased substantially in most States/UTs with use of modern methods of contraception increasing in almost all States/UTs.
- **Family Planning** unmet needs witnessed a declining trend in most of the Phase-1 States/UTs. The unmet need for spacing (a major issue) has come down to less than 10 per cent in all the States except Meghalaya and Mizoram.
- **Full immunization drive** among children aged 12-23 months has improved with more than two-third of children fully immunized in all the States and UTs except Nagaland, Meghalaya and Assam. In almost three-fourths of districts, more than 70% children (12-23 months) are fully immunized against childhood diseases.
- **ANC visits:** There is increase in the per cent of women receiving the recommended four or more ANC visits by health providers in 13 States/UTs between 2015-16 to 2019-20.
- **Institutional births** have increased substantially with over four-fifth of the women delivering in institutions in 19 States and UTs. C-Sections have also increased substantially in many States/UTs especially in private health facilities.
- **Sex ratio at birth** has remained unchanged or increased in

most States/UTs, with most states in normal sex ratio of 952 or above.

- **Child nutrition** indicators show a mixed pattern across states, with improvement and deterioration across different states/UTs.
- **Anaemia:** More than half of the children and women are anaemic in 13 out of 22 States/UTs. Anaemia among pregnant women has increased in half of the States/UTs compared to NFHS-4, in spite of substantial increase in the consumption of IFA tablets by pregnant women for 180 days or more.
- **Blood glucose and blood pressure:** While there is variation in levels for men and women across states/UTs, men are more likely to have slightly higher levels in the range of high or very high blood glucose and elevated blood pressure.
- **Sanitation:** The percentage of households with improved sanitation facility and clean fuel for cooking has increased.
- **Women's empowerment indicators** portray considerable improvement across all the States/UTs with more than 60% women having operational bank accounts. Bihar saw an increase by 51% from 26% to 77%.

Significance:

- **Progress over time:** NFHS data is useful in setting benchmarks and examining progress in the health sector that India has made over time.
- **Programmes and Policy feedback:** It provides evidence for effectiveness of ongoing programmes.
- **Policy Formulation:** NFHS data helps identify the need for new programmes with area-specific focus.
- **Tracking SDGs:** Important indicators on population, health and family welfare, nutrition and others under NFHS help track progress of Sustainable Development Goals (SDGs).

Issues identified under NFHS-5 Phase I results:

- **State of Kerala:** The state has claimed improvement in primary healthcare services, but the NFHS data indicates otherwise - reduction in antenatal care visits to hospitals, increase in child stunting, wasting and underweight, drop in full vaccination in children, increase in anaemia etc.
- Most States/UTs show an increased prevalence of malnutrition/obesity among adults and children, showing inadequacy of healthy diet in terms of quality and quantity.

Way Forward:

- The ongoing NFHS-5 Phase II survey can be used to track coronavirus spread.
- This will help reduce operational cost of existing mechanism to track the disease.
- Piecemeal approach in framing health policies and programmes must be replaced with holistic approach, with direct interventions to improve nutrition, maternity support etc.

NULLIFY ELECTIONS IF NOTA WINS: PETITION IN SC

Recently, a petition was filed in the Supreme Court to nullify the election results and hold a fresh election if maximum votes would be polled in favour of NOTA in a particular constituency.

About:

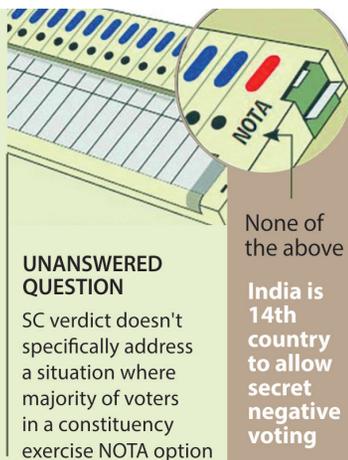
- **Use Article 324:** The plea urged Supreme Court of India to instruct Election Commission of India to act under Article 324 of the constitution.
- **Fresh Elections:** According to petition, if NOTA gets maximum number of votes, then election to that constituency shall be invalidated and fresh elections shall be held within six months.
- **Make it Right to Reject:** The petition has urged to convert NOTE from a simple 'Right to cast Negative Vote' into 'Right to Reject'.
- **Not allow contesting candidates:** It also demanded contesting candidates should not be allowed to participate in the fresh polls.

What is NOTA?

- NOTA stand for "None of the above".
- It empowers the electors to exercise 'Right to cast negative vote'.
- **PUCL case:** NOTA was introduced in India following the 2013 Supreme Court directive in the People's Union for Civil Liberties v. Union of India judgment.
 - ♦ It ruled to include a separate button in the EVM (Electronic Voting Machine) for the same. This button has been placed in the last panel of each EVM.
- **International Examples:** Colombia, Ukraine, Brazil, Bangladesh, Finland, Spain, Sweden, Chile, France, Belgium and Greece allow their voters to cast NOTA votes. The US also allows it in a few cases.

NEGATIVE VOTING: HOW IT WORKS

- ▶ EVMs will have NOTA (none of the above) option at end of candidates list
- ▶ Voters can express disapproval of candidates without being identified
- ▶ However, this won't affect poll outcome and candidate with maximum votes will be declared elected



Constitutional and legal Provisions before NOTA

- **Conduct of Elections Rules, 1961 rule 49-O, 1961:** It states that if the elector has been registered in the voter list and has put his signature or thumb impression on form 17 A during the process of polling and has decided not to vote, presiding officer must mention a remark against it. He is further required to obtain thumb impression and signature of elector against such remark.
- **Secrecy of ballot violated:** However, this provision was deemed unconstitutional by the Supreme Court as it did not protect the identity of the voter.

After NOTA: PUCL vs Union of India:

- The Supreme Court in this case opined that NOTA would provide 'Right to cast Negative Vote' rather than 'Right to Reject'.
- **Right to Reject:** It has been stated as a fundamental right of speech and expression under Article 19(1)(a) of Constitution of India".
- Thus, NOTA has not been granted to electors under 'Right to Reject' by Supreme Court of India.

Current Provisions if NOTA gets maximum votes:

- **NOTA votes counted as invalid:** According to Election Commission of India, currently NOTA votes are counted as invalid votes.
- **Hence, these votes are excluded** while counting valid ones and do not impact the result of the election process, if it is polled more than others.

Limitations of NOTA:

- **Undermining Equality of votes:** When one exercises his/her NOTA vote, vote is not accounted during counting process.
 - ♦ Hence, it undermines the concept of 'equality of votes' which is guaranteed by Universal Adult Franchise.
- The Election Commission of India (ECI) said that if a situation arose where the number of NOTA votes exceeded the number of votes polled by any of the candidates, the candidate with the highest number of votes would be declared winner.
- This, it said, was in accordance with Rule 64 of the Conduct of Elections Rules, 1961.
- This provision made the NOTA option almost redundant.

January, 2021

- **Undermining People's verdict:** The current provisions under NOTA are clearly a mockery of electoral system.
 - ♦ If majority of votes are casted for NOTA, it does not impact the election result. The candidate getting maximum votes except NOTA is declared winner.
- **Wastage of Votes:** Some argue that NOTA is a waste of votes since it does not hold any electoral value.

Significance of NOTA:

- **NOTA gives an option to the voters to express their disapproval** of all the candidates contesting in the election and provide a way to express their disenchantment in the contemporary political system of the country.
 - ♦ E.g. in Kerala, in 2016, a group of women activists urged people to not elect any candidate if no woman candidate was in the fray.
- **Ensuring people's participation in electoral process:** It has given an option to people to exercise their votes even if they do not like any candidate. Thus, they will exercise their statutory right of right to cast vote.
- **Ensuring Privacy:** Earlier 'Right to Reject' which was exercised using Conduct of Elections Rules, 1961 rule 49-O, 1961, which violated voter's privacy.
 - ♦ NOTA has ensured privacy of the voters as well as safeguarding their fundamental right.
- **No explanation for casting negative vote:** 49-O demanded reasons to be enlisted by voters while exercising 'Right to cast negative vote', which is not true in case of 'NOTA'.
- **Future Change:** Negative voting will lead to a systemic change in polls and political parties will be forced to project clean candidates. This may also help in controlling the criminalisation of politics.
- **Limiting muscle and money power:** Due to prominence of muscle and money power, non-criminal candidates have become scarce in political system.
 - ♦ Effective implementation of NOTA can eliminate criminality from democratic process.

Way Forward:

- The current petition aims to change 'Right to Cast Negative Vote' into 'Right to Reject'.
- It will invite a fresh by-election process causing loss of revenue of state.
- But, it will build voters confidence in transparent and effective election process which will bring 'Spotless Candidates' to mainstream politics.
- In a true sense, it will install people's legislators and will help in raising voting percentage and restoring democratic credentials of electoral process.

- When NOTA was introduced, some political leaders said that voting should be made mandatory to enhance the effect of the NOTA option.
- Voter's participation is an essence of democracy. Introducing a NOTA button can increase the public participation in an electoral process. The voters' participation in the election is indeed the participation in the democracy itself. Non-participation causes frustration and disinterest, which is not a healthy sign of a growing democracy like India.

Case study: Expanding the horizon of NOTA

Maharashtra: Realizing 'Right to Reject'

- Before Ahmednagar and Dhule municipal corporations, Maharashtra State election commission passed an order regarding NOTA.
- It states that if NOTA option receives the maximum votes in a constituency, then none of the contesting candidates will be declared the winner and fresh elections will be held.
- The order is applicable for all panchayats and municipalities in the state.

Haryana: NOTA as fictional candidate

- Haryana State Election Commission declared that it would treat NOTA as a "fictional election candidate" for municipal elections.
- It further stated that re-election will be held in case NOTA would garner maximum votes.

VVPAT

Voter Verifiable Paper Audit Trail

VVPAT will be used in all the polling stations in the forthcoming General Elections

VVPAT will be kept in voting compartment along with Ballot Unit

VVPAT has a transparent window which shows the printed paper slip when the vote is cast

The printed paper slip will display the Name, Serial Number and Election Symbol of the candidate for seven (7) seconds to the voter

After seven (7) seconds the printed paper slip will automatically get cut and drop in the sealed box below

VVPAT further enhances transparency and reliability in poll process



VERIFY YOUR VOTE

Bharat ka Bharosa

FUTURE OF SAARC

The 36th South Asian Association for Regional Cooperation (SAARC) Charter Day was observed in Thimphu on 8th December.

About:

- **SAARC Charter Day** is observed annually on 8th December. It marks the signing of the SAARC Charter in 1985 by the Leaders of SAARC Countries, Heads of State or Government of Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka at the First SAARC Summit held in Dhaka.
- **The Charter recognises the region's shared history** and the determination of the Member States.
- **The SAARC Development Fund (SDF) Board** has also approved funding of USD 7.75 M to support COVID-19 projects of the SAARC Member State Governments through their ministries of health.

regional cooperation. This cooperation may be witnessed in the establishment and initiation of various programs and forums for mutual benefits.

- **Scope and Sectors:** SAARC agenda has expanded considerably, exhibiting the intent and capacity to work collectively on issues of agriculture, rural development, health, population, women empowerment and economic development.

About SAARC

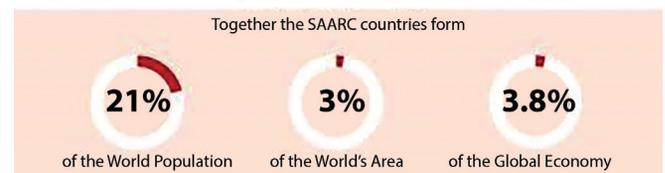
- It is the regional intergovernmental organization and geopolitical union of states in South Asia.
- The SAARC was founded in Dhaka on 8th December 1985.
- Its secretariat is based in Kathmandu, Nepal.
- **The objective of SAARC** is to accelerate the process of social, economic and cultural development in the region.
- Member countries are Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.
- **It also has nine Observers**, namely China, EU, Iran, Republic of Korea, Australia, Japan, Mauritius, Myanmar and USA.
- The SAARC maintains permanent diplomatic relations at the United Nations as an observer and has developed links with multilateral entities, including the European Union.

SAARC Specialized Bodies

- SAARC Development Fund (SDF)
- South Asian University
- South Asian Regional Standards Organization
- SAARC Arbitration Council

Role and achievements of SAARC:

- **Promoting peace and overall growth:** The underlying idea behind SAARC was to promote peace, accelerate economic growth, social advancement and ensure better standard of living of the people of South Asia.
- **Promoting regional cooperation:** Despite numerous problems, SAARC has made remarkable achievements and played a vital role in realizing its aims and objectives to promote



- **Economic integration:** A breakthrough in this regard came with the SAARC Preferential Trade Agreement (SAPTA), opening the way for a certain expansion of intra-SAARC trade.
 - ♦ The objective of SAFTA include; elimination of all sorts of barriers in trade and facilitation of free and fair movements of products; promoting fair competition and free trade environment in respect of existing economic conditions which will ensure the maximum benefit and establish an institution frame to promote regional cooperation.
- **SAARC convention on suppression of Terrorism:** Terrorism has been one of the serious problems faced by almost all

January, 2021

the countries of the South Asian region. To deal with this problem, the SAARC convention on suppression of Terrorism was signed and later the Additional Protocol on Terrorism was signed taking in to account the terrorist financing.

- **Financial cooperation:** The Meetings of Finance Ministers of SAARC take place at regular intervals. The establishment of an Inter-Government Export Group on Financial matters was the outcome of such meetings which laid down a roadmap for achieving the South Asian economic cooperation in phased manner.

Major problems of SAARC:

- **Regionalism:** It has a different meaning and purpose for each nation especially when they become a part of any regional organization. In most cases states that join hands in any regional cooperation mechanism, have certain basic differences, for most regional cooperation is limited to economics through free-trade agreements.
- **Inability to tackle inter-state conflicts:** It has often made it hostage to bilateral conflicts and national interests of member countries.
- **The lack of trust among member states:** It has often led manifestation itself in the ineffective administration of several of the initiatives taken by SAARC.
- **Some other problems:**
 - ♦ Strict rules followed at the official level and by the SAARC Secretaries.
 - ♦ Redtapism, paper work and bureaucratic hurdles at the secretariat level.
 - ♦ Unnecessary formalities.
 - ♦ Lack of political will at the leadership level.
 - ♦ Absence of collective vision for rejuvenating region in the face of the globalization challenge.

Suggestions:

- **No clear objectives:** There is need to prioritize regional objectives and streamline them as national priorities.
- **Connectivity:** The physical and soft connectivity among SAARC countries need to be developed and strengthened.
- **Shift in approach:** To develop policy approaches that takes in to account the political and economic complexities of SAARC equally.
- **Trade integration:** It needs to be expedited through faster implementation of SAFTA.
- **Moving away from regionalism:** Care needs to be taken not to hold regionalism as hostage to the twilight of bilateral relations.
- **Shift in Focus:** The focus needs to be on taking practical and quantifiable steps such as to associate all stakeholders, especially the private sector and think-tanks in the formulation and implementation of regional policies in different areas.

SAARC and India:

- **Founding member:** India is a founding member of the SAARC which aims to build a connected and integrated South Asia with the larger aim of promoting the development and progress of all countries in the region.
- **Neighbourhood First policy:** India's engagement with SAARC countries is based on a consultative, non-reciprocal and outcome-oriented approach, while focussing on delivering benefits like greater connectivity, improved infrastructure, stronger development cooperation in various sectors.
- **Technology transfer:** India has been steadfast in its commitment of sharing the fruits of technological advances. In this context, India has extended its National Knowledge Network (NKN) to the countries of South Asia.
- **South Asian University (SAU):** India is home to South Asian University (SAU). It aims to provide world class educational facilities and professional faculty to students and researchers from SAARC countries.
- **SAARC Disaster Management Center:** India also hosts the Interim Unit of SAARC Disaster Management Center (IU) at the Gujarat Institute of Disaster Management (GIDM), Gandhinagar. It serves the needs of all SAARC member states through policy advice, technical support on system development, capacity building services and training for holistic management of disaster risk in the SAARC region.
- **Terrorism:** India is fully aware of challenges in South Asia, with cross-border terrorism being the most serious of those challenges.
- **SAARC COVID19 Information Exchange Platform (COINEX) platform:** India has developed a 'SAARC COVID19 Information Exchange Platform (COINEX)' platform for use by all SAARC countries to facilitate exchange of specialized information and tools on COVID-19 among designated health professionals.

Way Forward:

- South Asia is seen as a geo-strategic, geo-economic unit by some and single Civilization whole by others. Nevertheless, after almost 30 years of its existence of SAARC, it has not been able to push the process of integration in full swing.
- Unless problems like Kashmir, Siachen, illegal immigration, sharing the water of rivers, are not solved, cooperation among South Asian countries cannot be successful.
- The organization has always become the victim of bilateral disputes among the member countries.
- SAARC provides its member states as a forum to discuss regional issues and voice national concerns.
- The most visible manifestation of this dynamism in SAARC has been the early operationalization of the SAARC Development Fund (SDF) and the inauguration of its permanent premises in Bhutan during the Sixteenth SAARC Summit.

PARTICIPATION OF WOMEN IN INDIAN JUDICIARY

Attorney General suggested steps for gender sensitization in the judiciary.

About:

- Recently, Attorney General KK Venugopal filed an affidavit in the Supreme Court on steps for gender sensitisation in the judiciary, citing lack of education, training, low representation of female judges as responsible for gender-biased adjudication.

Issue:

- Representation of women:** Out of 1113 sanctioned posts of the higher judiciary, only 80 are women. Among the 34 judges in the Supreme Court, only 2 are women. There has never been a female Chief Justice of India.
 - There is no centrally maintained data on the representation of women in tribunals and lower courts.
- Biased judgements:** The law clearly states that the victim must be protected from any contact and harassment by the accused. However, this is not followed at all times.
- Trivialization of violence:** Judicial orders such as making the victim tie Rakhi to the accused, marrying the accused etc trivialize the actual major issue of molestation, rape or other unacceptable behaviour that ought to fetch more stringent punishment.
- Patriarchal attitude:** There is often a patriarchal approach and attitude on part of judges while delivering judgements in cases of sexual violence.
- Poor retainment:** At the entry-level in law schools and the profession, the ratio of men and women is 50:50. As their career advancement, the ratio of women drops with each step upward. Not just at the level of judges, even among senior advocates, women comprise only a handful.
- Low number of women advocates:** Since lawyers elevated from the bar to the bench form a significant proportion of judges in the high courts and Supreme Court, it is worth noting that the number of women advocates is still low, reducing the pool from which women judges can be selected.

Reforms needed:

- Bail Conditions:** The Court in its adjudication should not-
 - Seek to minimize the magnitude of the crime by suggesting a compromise for the victim.
 - Suggest marriage to the accused because this is beyond the powers and jurisdiction of the Court.
 - Mandate contact between the victim and the accused.
- Victim protection:** Instead, the bail conditions must seek to protect the complainant from any harassment by the accused

(acid throwing, witness coercion, objectification) and allow hearing circumstances that warrant her protection.

- Training:** This includes the ability to identify stereotypes, bias and other irrational tendencies that must be abhorred during adjudication. The Attorney General suggested all lawyers go through gender-sensitization training for 2-3 years.
- Education of judges:** There must continuous legal education for all, starting as early as the law school.
 - There can be a compulsory subject on gender sensitization, which may be tested under the All India Bar Examination.
- Recruitment/promotion:** There must be greater representation of women at all levels of the judiciary, including the SC.
 - This will ensure a more balanced and empathetic approach to handling cases of sexual violence against women.
- Gender sensitization:** There is an urgent need for greater gender sensitization among members of the judiciary.
- Equality for women:** Achieving equality for women judges or advocates, in terms of representation at all levels of the judiciary and on policy-making judicial councils, should be the goal.
- Continuity in the profession:** Society must give up its 'strict gender roles' and stereotype to enable more women to take up or to continue court practice even after marriage.
- Judicial diversity:** Increased judicial diversity enriches and strengthens the ability of judicial reasoning to encompass and respond to varied social contexts and experiences. This can improve justice sector responses to the needs of women and marginalized groups.

Women Participation in Indian Judiciary

In a country where almost 48 percent of the population is women, including the current women workforce, less than 3.3% of the women have made it to the highest courts of India. Out of the 656 sitting judges in 23 HC (barring the HC of Andhra Pradesh), only 73 are women. No women was appointed as the Chief Justices in the past.

Way Forward:

- The Indian judiciary must take urgent reforms in terms of women representation in the judiciary, gender-sensitization, gender education, overcoming biases and stereotypes in all forms of courts and tribunals.
- This will improve faith in the Indian judicial system justice delivery by encouraging more women to report sexual crimes, besides helping society at large.



January, 2021

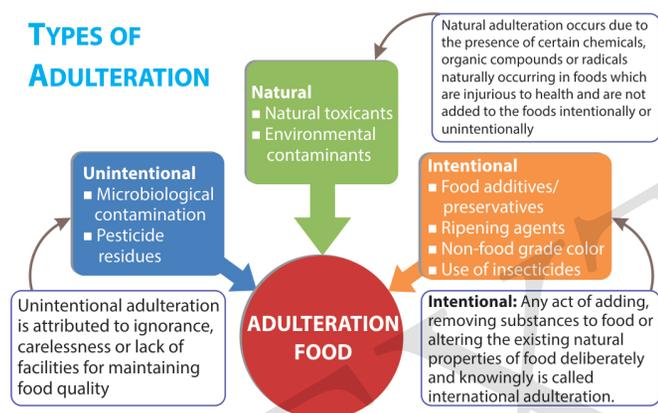
FOOD ADULTERATION IN INDIA

A recent investigation by CSE found that many branded honey were spiked with sugar syrup.

About:

- The Centre for Science and Environment conducted an investigation which found rampant sugar syrup adulteration of honey in most major and minor Indian honey brands.
- A total of 22 samples of 13 brands were tested for purity.
- Many major brands dismissed the study as being motivated to defame the reputation of the natural honey industry in India.

TYPES OF ADULTERATION



Honey Adulteration:

- **Food adulteration:** Food adulteration is the act of intentionally debasing the quality of food offered for sale either by the admixture or substitution of inferior substances or by the removal of some valuable ingredient.
- **How is honey adulterated?** Honey can be adulterated with cheaper sweeteners, syrups, molasses inverted by acids or enzymes from corn, sugar cane, sugar beet and syrups of natural origin such as maple.
 - ♦ Recently, adulteration of pure honey with synthetic honey based on C4 plant sugars has become a major issue.
- **Tests for honey purity/adulteration**
 - ♦ The purity of honey requires tests for the presence of C3 (derived from rice, beetroot) or C4 sugars (corn and sugarcane) or foreign oligosaccharides (starch-based polysaccharide sugars from rice and corn).
 - ♦ Nuclear Magnetic Resonance (NMR) is the advanced global standard test to detect modified sugar syrups in honey.
 - ♦ Other analytical tests- isotopic (stable isotope methodology), chromatographic, spectroscopic, trace elements techniques and thermal analysis.

Findings of the investigation:

- **Adulteration business:** The investigation revealed that the honey adulteration business was sophisticated and was designed to bypass the purity and quality standards laid down by the FSSAI.
- **China factor:** China is a leading manufacturer of sugar syrups and many Chinese firms openly advertise the selling of sugar syrup which was said to be high in 'fructose' or 'glucose' content which could bypass the purity tests.
- **Ease of import:** Any eligible importer could import these syrups, which could then be used for honey adulteration.
- **The advanced testing result:** The samples were also tested using advanced methods at a Germany-based lab, which detected the adulteration after confirming the origin of the products.

Food Safety and Standards Authority of India (FSSAI)

- **Statutory Body:** It has been established under the Food Safety and Standards Act, 2006.
- **Mandate:** Develop science-based standards for food articles and regulate their manufacture, storage, distribution, sale and import to ensure availability of safe and wholesome food for human consumption.
 - ♦ Provide procedure, mechanism, guidelines for accreditation of certifying bodies and laboratories.
 - ♦ Provide scientific and technical support for food safety policies.
 - ♦ Collect and collate data on food consumption, contaminants risks to raise alerts.
 - ♦ Provide training.
 - ♦ Contribute to the development of international technical standards for food, sanitary and phytosanitary standards.
 - ♦ Promote general awareness about food safety and standards.
- **Administrative Ministry:** Ministry of Health & Family Welfare, Government of India.
- **Headquarter:** Delhi

Issues:

- **Inadequate testing standards:** The adulteration has evolved into a business which can bypass the more commonly used adulteration tests.

Adulteration of other Foodstuffs		
Foodstuff	Common Adulterant	Health effects
Milk	Water, chalk, urea, caustic soda and skimmed milk	Stomach disorders
Khoya	Paper, refined oil and skimmed milk powder	Stomach disorders
Tea leaves	Same coloured leaves which may not be edible	Liver infection
Coffee	Tamarind seeds, mustard seeds and chicori	Diarrhoea
Wheat	Ergot, a type of fungus	Injurious to overall health
Vegetables	Dyes such as malachite green, and oxytocin saccharin, wax, calcium carbide, copper sulphate	Carcinogenic
Sweets	Silver foil on sweets must be 99.99% pure. Silver vark is commonly used which contains aluminium.	-
Sugar	Tar dye	-
Arhar	Metanil yellow for colouring	Neurotoxicity on long-term consumption
Turmeric	Metanil yellow, red oxide	Red oxide is carcinogenic
Asafoetida	Soapstone, foreign resinare or other earthy material	-
Black pepper	Papayas seeds, blueberry seeds.	-
Red chilli powder	Brick dust, salt powder, talc powder, artificial colour like Sudan Red	-
Saffron	Coloured dried tendrils of maize cob	-
Butter and cream	Dilution with water, cheaper plant oils like palm oil, sunflower oil, soyabean oil	-
Ice cream	Pepperonil, ethyl acetate, butyraldehyde, emil acetate, nitrate, washing powder	Pepperonil is a pesticide and ethyl acetate causes lung, kidney and heart diseases

- **Difficult to identify adulteration:** Adulterated honey is difficult to catch, with sugar syrups designed to go undetected.
 - ♦ Even if 50-60% of honey is adulterated with sugar, it goes undetected.
 - **Testing capacity:** India lacks sufficient testing labs and advanced technology to conduct tests like NMR more widely.
 - **Health impact:** Pure honey is rich with nutrients, anti-oxidants has anti-bacterial properties while being devoid of fats and cholesterol. Adulterated honey can have long-term negative health impacts, causing obesity and high blood glucose levels.
 - **COVID-19** has increased honey intake among people to boost immunity but adulterated honey instead makes matters worse.
 - **Honey trade:** The investigation found that honey exported from India passed the advanced NMR tests, which was conducted by FSSAI. But the test was not conducted on honey consumed domestically.
 - **Local bee-keeping industry:** It is fragmented and needs more policy focus.
 - **Environmental:** Bees are important for pollination and working of the natural ecosystem. Loss of bees leads to ecosystem collapse.
- Way Forward:**
- Food adulteration is a serious concern as it has adverse health impacts and affects the quality of the food and nutrition intake of the consumer.
 - While increased testing, up-gradation of testing technology and stricter implementation are needed, the food adulteration 'business' needs to be curbed through proper regulation.
 - ♦ Food safety authorities must seek necessary documents for scrutiny before issuing clearance to importers and food business operators importing golden syrup, invert sugar syrup and rice syrup.
 - Companies must be held accountable through more public testing of food products and sharing the information publicly.
 - There is a need to strengthen enforcement in India through tightened standards, testing, and also traceability.

BIOWEAPONS

In a virtual conference Vice Chief of Army Staff said that viruses can be used as bioweapons.

About:

- Virtually addressing participants at the 'National Defence Course Bangladesh on post-COVID-19 security challenges', the Vice Chief of Army Staff Lieutenant General S.K. Saini said that "future wars may gravitate towards zero cost wars, wherein a very virulent pathogen may immobilize high-technology arsenal".
- He said that "weaker militaries will continue to seek an asymmetric advantage in an unrestricted warfare milieu" while "social media will continue to be the vector of choice for the battle of narratives".

Biological Weapons:

- The biological weapons also called **germ weapons**, are any of several disease-producing agents such as bacteria, viruses, rickettsia, fungi, toxins, or other biological agents that may be utilized as weapons against humans, animals, or plants.
- Biological weapons, like chemical weapons, radiological weapons, and nuclear weapons, are commonly referred to as weapons of mass destruction.
- Some of the biological weapons programs have included efforts to produce: aflatoxin; anthrax; botulinum toxin; foot-and-mouth disease; glanders; plague; Q fever; rice blast; ricin; Rocky Mountain spotted fever; smallpox; and tularaemia, among others.

- **There are 3 types of agents** used based on the ability and extent of damage that can be caused. They are:

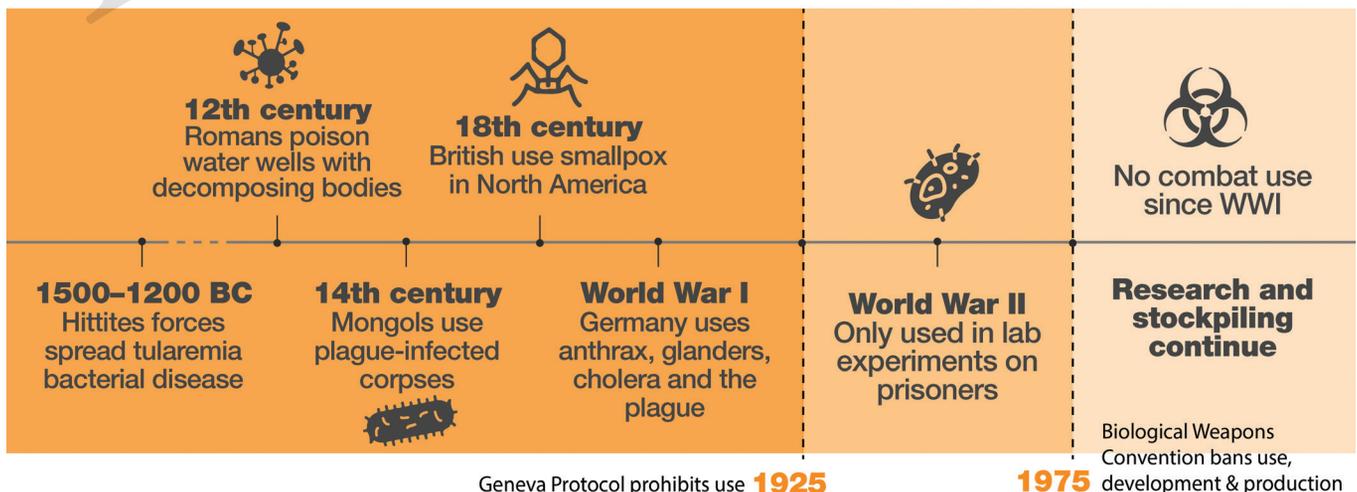
- ♦ **Category A:** High-priority agents. E.g. Anthrax, Ebola virus.
- ♦ **Category B:** Moderate-priority. E.g. Brucellosis, Q fever
- ♦ **Category C:** Low-priority. E.g. Yellow fever virus, Hantavirus.

Challenges posed by bioweapons:

- **Technology:** The technology used in biological weapons is relatively inexpensive, and because it is similar to that used in vaccine production facilities, it is easy to obtain.
- **More fear than physical damage:** It can cause widespread fear and panic beyond the actual physical damage it can cause.
- **Availability:** The microbial agents needed for most biological weapons are widely available.
- **Location identification:** It is difficult to gauge the extent of biological weapons development in other nations since production facilities require little space and are not easy to identify.
- **Small quantities required:** They can be used in very minute quantities but the effects are life-risking.
- **Bioterrorism:** There is growing concern that biological weapon designs or materials from this program might find their way to other nations or terrorist groups.
 - ♦ Finally, the series of revelations following the Gulf War regarding the true capacity and scope of Iraq's biological weapons program has been alarming.

BIOLOGICAL WEAPONS

Biological toxins were historically employed in warfare until their use was banned.



- **Involvement of Non-state actors:** In addition to creating many tons of pathogens and toxins, including B. anthracis and C. botulinum toxin, Iraq also admitted that it had loaded bombs and missiles with biological agents.

India and Bioterrorism:

- Few episodes in the past have heightened the threat of bioweapons in India such as the Scrub typhus outbreak in Assam and West Bengal of India during the Indo-Pakistan war in 1965.
- The outbreaks of pneumonic plague in Surat (Gujarat) and Bubonic plague in Beed (Gujarat) in 1994 resulted in mass casualties and increased attention to defense and intelligence outfits of India.
- In 2018, the Nipah Virus outbreak in Kerala has the physical attributes to serve as a potential agent of bioterrorism.
- Further, India also appears ill-equipped to face the threat of bioterrorism, as was evident from the H1N1 epidemic, which claimed over 2,300 lives in past years.

India's Effort to counter bioterrorism:

- To strengthen the area of bio-defense, the United States passed the 'Bioterrorism Act of 2002' but in India, there is no such dedicated law.
- To keep India's battle-ready to counter a bioterrorism attack, the National Disaster Management Authority (NDMA) has proposed a model instrument where participation of both government and private sectors is a sine qua non to defeat any such attack.
- In India, several nodal ministries have been earmarked for dealing with epidemics caused by bioterrorism.
- **National Disaster Response Force (NDRF)** is a specialized force constituted under the Ministry of Home Affairs to deal with chemical, biological, radiological, and nuclear (CBRN) attacks. It consists of 12 battalions, three each from the BSF and CRPF and two each from CISF, ITBP, and SSB.
- **Defense Research and Development Establishment (DRDE)** is India's primary biodefense laboratory of the Defense Research and Development Organization (DRDO). It is mainly involved in the development of defense against malicious biological, chemical as well as toxicological materials.
- **Disease Surveillance Project (IDSP)**, a decentralized and state-based surveillance program was formulated in 2004, which integrates the public sector, private sector, rural and urban health system, and has the incorporation of communicable and non-communicable systems (unusual clinical syndromes may be included during public health emergencies).

Measures to control the spread of Bioweapons:

- **Biosecurity:** Biosecurity is the method to protect and control the unauthorized access, loss, theft, intentional release

thereby the risk of transmission of infectious diseases in crops and livestock, quarantined pests, invasive alien species, and living modified organisms.

- **Education & Awareness:** ID professionals are most likely to recognize the diseases caused by biological weapons as they diagnose and treat patients with fever, pneumonia, rash, and flulike symptoms almost on daily basis.
 - ♦ Professional education and training curricula should be enhanced for ID professionals so that they can recognize the diseases that would follow the use of a biological weapon such as anthrax, plague, or smallpox.
- **Vigilance tools:** The early recognition of a bioterror agent is essential in ensuring effective containment and reduction of casualties.
- **Scientific research:** There is a need for research in new diagnosis, prevention, or treatment for infectious disease and to reward basic science research efforts that seek to produce novel diagnostic technologies, preventive, or therapeutic interventions for the diseases caused by biological weapons.

Way Forward:

- The considerable ease of production along with the immense mass casualty and civil disruption made them effective arms. Since bioterrorism attacks are unpredictable, early detection, containment, treatment, and communication are crucial for appropriate response against it. Thus, the Indian government along with friendly nations need to pool their resources and make major investments in the research and development of state-of-the-art devices that are capable of instantaneously detecting lethal bacteria and viruses in the environment.

Biological Weapons Convention (BWC)

- It is the first multilateral disarmament treaty banning the development, production, and stockpiling of an entire category of weapons of mass destruction.
- It was opened for signature on 10 April 1972. The BWC entered into force on 26 March 1975.
- There are 183 countries in the world, which are signatories to this convention.
- It bans the nations from producing, stockpiling, acquiring, or retaining biological agents that can be used as weapons
- India signed the convention in 1973.
- India ratified this treaty in 2015.
- The treaty is open for the states to have their biodefense programs. The next review conference i.e. 9th review conference will be held in Geneva in 2021.

Concerns associated with BWC:

- No formal verification regime to monitor compliance with this treaty. There is no legal mechanism to inspect any biotechnology and pharmaceutical industry.

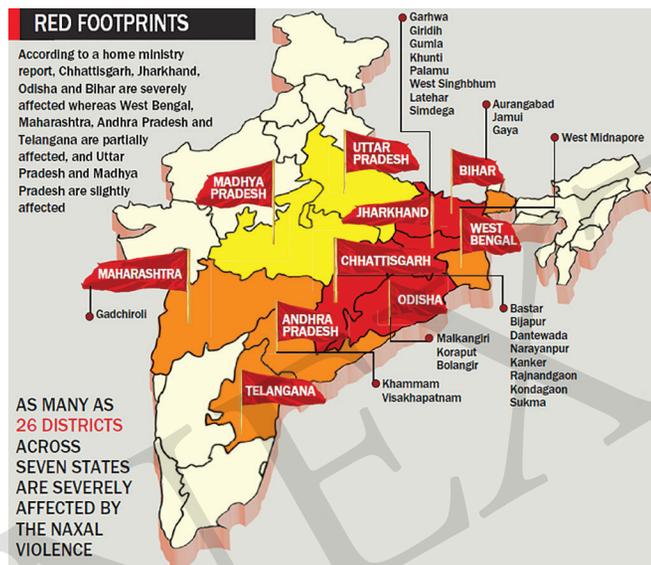
January, 2021

ROAD REQUIREMENT PLAN FOR LEFT-WING EXTREMISM AFFECTED DISTRICTS

Chhattisgarh to speed up Centre's Road Requirement Plan for extremism-affected areas.

About:

- The critical road projects to provide connectivity in Left Wing Extremism-affected areas have come to a halt due to security reasons.
- Chhattisgarh has proposed a new plan to the Centre, suggesting that it will divide the remaining contracts into small packets so that local contractors can take up the jobs.



- Ninety per cent of the 5422-km Road Requirement Plan — for connectivity in hotspots of 34 districts worst-affected by Maoist insurgency in eight states — stands completed, but progress remains a problem in Chhattisgarh.

Background of Left-Wing Extremism:

- Several Left Wing Extremist outfits have been operating in certain remote and poorly connected pockets of the country for a few decades now.
- In a significant development in 2004, the People's War (PW), and the Maoist Communist Centre of India (MCCI), merged to form the CPI (Maoist) Party.
- The CPI (Maoist) Party is the major Left Wing Extremist outfit responsible for a majority of incidents of violence and killing of civilians and security forces. The tribals are bearing the brunt of this violence.
- It has been included in the Schedule of Terrorist Organizations

along with all its formations and front organizations under the Unlawful Activities (Prevention) Act, 1967.

Reasons behind the rise of Left Wing Extremism:

- **Underdevelopment:**
 - ♦ First of all, out of the 100 districts in India with highest poverty rates only 26 districts are affected by the Maoists.
 - ♦ About education, out of the 100 districts in India with lowest literacy rates, there are only 20 districts which are under Maoist influence.
 - ♦ About healthcare, out of the 100 districts in India with highest infant mortality rates only 9 districts are gripped by Maoist terrorism.
- **Lack of governance:**
 - ♦ **Lack of a Long Term Strategic Perspective:** Development of these regions has been haphazard and does not lend to long term benefits. There is no plan of action ipso facto any accountability.
 - ♦ **Misindustrialisation:** Government has been mistaking industrialisation for development.
 - ♦ **Rights denied:** The tribals have been denied their constitutional rights and justice has been denied to them.
 - ♦ **Vested interests of NGOs:** The Non-Government Organisations (NGOs) operating in these regions have their vested interests consequently providing the space for Maoists to spread their agenda.
- **The promise of Equitable Land Distribution:** The Maoists promise that they would equitably distribute land and this lures the people to participate in their movement.
- **Socio-economic issues:**
 - ♦ **Education** must be the prime intervention and this needs to be addressed with innovation.
 - ♦ Lack of infrastructure.
 - ♦ India is faced with a youth bulge. The bulk of this population lives in rural areas and often fall prey to the call of Maoists in the absence of suitable employment.

The Dynamics of Maoist Insurgency:

- The central theme of Maoist ideology is violence. The Maoist insurgency doctrine glorifies violence as the primary means to overthrow the existing socio-economic and political structures.
- The Peoples Liberation Guerrilla Army (PLGA), the armed wing of CPI (Maoist), has been created with this purpose in mind.

- **First stage of insurgency:** The PLGA resorts to guerrilla warfare, this primarily aims at creating a vacuum at the grass-roots level of the existing governance structures.
- **Second stage of insurgency:** They coerce the local population to join the movement. Strident propaganda is also carried out against the purported and real inadequacies of the existing state structure.
- **Third stage of insurgency:** In areas under Maoist domination, the absence of governance becomes a self-fulfilling prophecy since the delivery systems are extinguished through killings and intimidation.
- In the meanwhile, many Front Organisations are created to facilitate mass-mobilisation in semi-urban and urban areas through ostensibly democratic means. These are led by well-educated intellectuals with a firm belief in the Maoist insurgency doctrine.
- These ideologies function as masks to cover the violent nature of the CPI (Maoist) ideology. They also form the propaganda/disinformation machinery of the party.

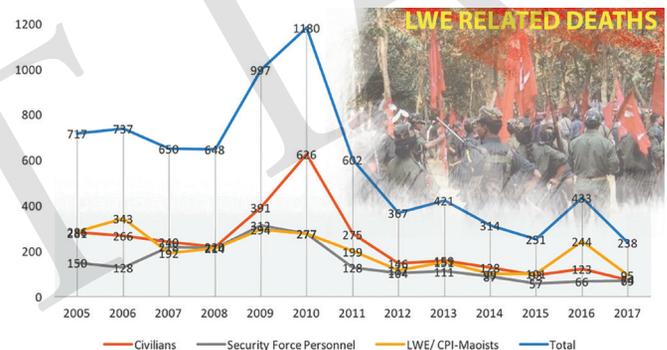
Monitoring Mechanisms:

- The Union Home Minister, the Home Secretary & the Special Secretary/Additional Secretary and a Review Group chaired by the Cabinet Secretary review the LWE situation regularly.

Government’s Initiatives for LWE affected States:

- **Greyhounds:** Greyhounds is a police Special Forces unit operating in the Indian states of Andhra Pradesh and Telangana. Greyhounds specialise in anti-insurgency operations against Naxalite and Maoist terrorists.
- **Operation Green Hunt:** It was by the government of India's paramilitary forces and the state's forces against the Naxalites. The operation began in November 2009 along with five states in the "Red Corridor".
- **SAMADHAN:** It was launched in 2017. The acronym stands for S-smart leadership, A-aggressive strategy, M-motivation and training, A-actionable intelligence, D-dashboard-based KPIs (key performance indicators) and KRAs (key result areas), H-harnessing technology, A-action plan for each theatre and N-no access to financing.
- **Security Related Expenditure (SRE) Scheme:** Under the Security Related Expenditure (SRE) Scheme, the central Govt. reimburses to the State Governments of 11 LWE affected States, the Security Related Expenditure of 90 districts relating to training and operational needs of security forces.
- **Civic Action Programme (CAP):** This Scheme has been adopted to bridge the gaps between Security Forces and local people through personal interaction and bring the human face of SFs before the local population.

- **Media Plan:** Under the scheme activities like Tribal Youth Exchange programmes organised by NYKS, radio jingles, documentaries, pamphlets etc. are being conducted.
- **Road Requirement Plan-I (RRP-I) for LWE affected areas:** This Scheme is being implemented by the Ministry of Road Transport & Highways for improving road connectivity in 34 LWE affected districts of 8 States.
- **Road Connectivity Project for LWE affected areas (RRP-II):** The Government approved for further improving road connectivity in 44 districts of 9 LWE affected States. Ministry of Rural Development is the nodal Ministry for this project.
- **LWE Mobile Tower Project:** To improve mobile connectivity in the LWE areas, the Government has approved the installation of mobile towers in LWE affected States.
- **Aspirational District:** The Ministry of Home Affairs has been tasked with the monitoring of Aspirational districts programme in 35 LWE affected districts.



Way Forward:

- The Government of India believes that through a holistic approach focussing on development and security-related interventions, the LWE problem can be successfully tackled.
- However, the Left Wing Extremists do not want root causes like underdevelopment to be addressed in a meaningful manner. They wish to keep the population in their areas of influence marginalized to perpetuate their out-dated and failed ideology.
- But that doesn't mean the government should dilute its development approach and tackle the situation high handedly. Rather the choice-based approach of Amartya Sen shall be taken forward with full vigour.
- This needs to be recognised by the civil society and the media to build pressure on the Left Wing Extremists to eschew violence and join the mainstream.
- Further, an ideology based on violence and annihilation is doomed to fail in a democracy which offers legitimate forums of grievance redressal.



1

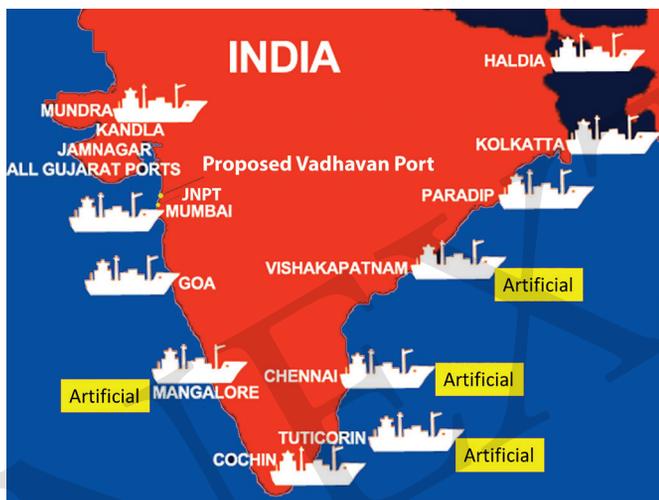
ECONOMY

VADHAVAN PORT TO BE INDIA'S 13TH MAJOR PORT

Recently, the Union Cabinet has given its 'in-principle' approval for setting up a Major Port at VadHAVAN near Dahanu in Maharashtra.

About:

- **Location:** VadHAVAN is situated in Dahanu Tehsil of Palghar district of Maharashtra.
- It is located at the distance of 165 km from Jawahar Lal Nehru Port and 156 km from Mumbai Port.



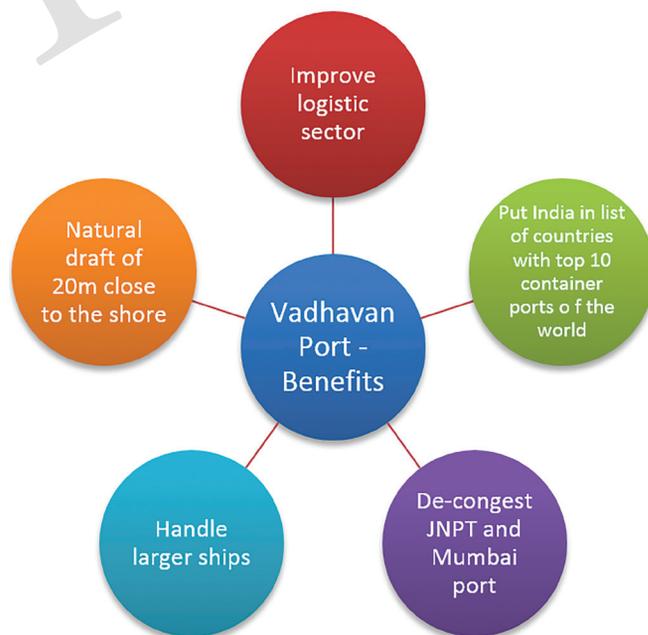
- **Need of Development:** The development of port has been envisaged because major upgrades and expansion in infrastructure is not possible in the Mumbai Port Trust and the Jawaharlal Nehru Port Trust at Nhava Sheva.
- **Scheme:** The proposed port is being developed under Sagarmala Programme of the Ministry of Shipping.
 - Under the Sagarmala initiative, the Government plans to develop six new ports across five coastal states of India. 189 projects with a projected cost of USD 21 Billion have been identified. Currently, 42 projects worth around USD 3.6 Billion is under implementation.
- **"Land Lord Model" of Port Development:** VadHAVAN port has been proposed to be developed under "Land Lord Model".
- **Jawaharlal Nehru Port Trust (JNPT)** will be major equity partner with more than 50% of share in this project.
- It will be the second major port to be developed under Land Lord Model after Kamarajar Port Ltd (Ennore port).

- **Eleven ports under Service Port Model:** Rest all eleven major ports in India have been developed under Service Port Model.

Hurdles in development of Port:

- **Resistance from Fisher folks:** The development of major port at the proposed site is being opposed by locals since 1998 under the banner of VadHAVAN Bandar Virodhi Sangharsh Samiti (VBVSS).
- This is a joint forum of fisher-folk of Maharashtra and Gujarat, opposing development of port.
- **Opposed by environment authority:** Further, the Dahanu Taluka Environment Protection Authority (DTEPA) had opposed the project in 1998, citing environment constraints.
- **Opposition from Gram Sabhas:** Currently, people from 17-gram sabhas are opposing the project.
- **Political hurdles:** The central and state governments which are being ruled by different parties are not in same line over the project.

Significance of the project:



- **De-congesting JNPT and Mumbai port:** The port will help to ease out huge traffic of Jawahar Lal Nehru Port (JNPT) and Mumbai port.
- **Enter top ten:** The development of VadHAVAN Port will help India to break into the ranks of countries with top 10 container ports in the world.

Port Development Models

Different Models of Port Development:

- **Service Port Model:** In this port development model, the port authority owns the land as well as all available assets i.e. fixed and mobile.
 - ♦ It performs all regulatory and port related functions and hence, the port trust acts as both the landlord as well as the cargo terminal operator.
 - ♦ Currently, all 11 major ports in except Ennore port has been run on this type of model.
 - ♦ This type of model is good for centralized economy but does not fit into market based regime of the current world order.
- **Landlord port model:** In this type of port development model in which the publicly governed port authority acts as a regulatory body and as landlord while private companies carry out port operations.
 - ♦ Port operations include cargo-handling activities and maintenance related activities.
 - ♦ Ownership is maintained by port authority while the infrastructure is leased to private firms.
 - ♦ These firms provide and maintain their own superstructure and install own equipment to handle cargo.
 - ♦ The private firms share pre-decided part of generated revenue with port authority.

- **Natural Draft and ability to handle larger ships:** JNPT and Mundra which are the two largest container handling ports of the country caters only mid size container ships.
 - ♦ With the natural draft of 20 meters close to the shore, Vadhvan port would be able to handle bigger vessels.
- **Improving Logistics sector:** India ranked 44 in the World Bank Logistics Performance Index in 2018.
 - ♦ Development of ports will certainly improve India's performance in global logistics index.

Way Forward:

- India has been looking for export oriented growth with an aim of doubling the agriculture export by 2022, merchandise export in next three years and defence export in next five years.
- Hence, port and port related infrastructure is being upgraded with schemes like Bharatmala and Sagarmala to improve logistics.
- Building of new ports and related infrastructure will help India to achieve \$5 trillion economy by 2024 and help it to achieve other targets of its 'Atmanirbhar Bharat' ambitions.

Advantages of Landlord port over Service Port Model:

- **Conflict of interest:** In Service Port Model, involvement of the port authorities in terminal operations leads to a conflict of interest.
- As port authority is involved in terminal operations along with private players undermines neutrality snubbing fair competition.
- **Privatization yielded successful results:** Privatizing cargo berths run by the state-owned ports has been a successful transition and has been profitable in past.
- **Indian Ports Association (IPA)** has also recommended Landlord Port Model over Service Port Model.

Sagarmala Programme:

- **Nodal Ministry:** Ministry of Shipping
- **About:** The Sagarmala Programme aims to enhance the performance of the country's logistics sector by development of new ports and infrastructure development of existing ports.
- **Components:** It has following components:
 - ♦ Port Modernization
 - ♦ New Port Development
 - ♦ Enhancement of Port Connectivity
 - ♦ Port Linked Industrialization
 - ♦ Development of Coastal tourism and community's livelihood
 - ♦ Development of coastal shipping and inland waterways.

ASSETS UNDER MANAGEMENT (AUM) OF NBFCS SET TO GROW AT 5-6% IN NEXT FISCAL YEAR

Recently, credit rating agency CRISIL has predicted that Asset under management of Non-Banking Financial Companies is expected to grow by 5-6% in next fiscal year.

About:

- Credit agency CRISIL has predicted that the assets under management (AUM) of non-banking finance companies (NBFCs) will improve significantly signifying Post-Pandemic economic recovery.

What is Assets under Management (AUM)?

- **Assets under management (AUM)** are the total market value of the investments that a person or entity manages on behalf of clients.
- **Investments may be in form of** securities, debt instruments etc. which are managed by institutions such as NBFCs, Banks, mutual funds and hedge funds.

January, 2021

- **Significance:** The total value of AUM is a measure of the size of a financial institution.
- **It also indicates towards financial health** of that financial institutions and size of a financial institution.
- **The larger AUM means higher revenues** generated from assets and thus higher income of financial institutions.

How does value of AUM change?

- **Dependence on financial market:** There is constant change in values of securities, debt, debentures, bonds, G-Secs etc. which are held by financial institutions due to fluctuations of financial markets.
- **Volatility due to frequent transactions:** A fund with frequent inflows and outflows will have higher volatility in its AUM than a fund with a very committed and stable investors' base.

- **Big inflows and outflows of funds** create an obstacle to the effective management of investing strategies.

Performance of AUM of NBFCs in India:

The performance of AUM of NBFCs in India can be assessed in three phases:

- **Phase I: High Growth Rate:** Growth rate of Asset Under Management (AUM) of NBFCs was all time high from 2014 to 2018.
- It grew with a growth rate of 18% during that period.
- **Phase II: IL&FS crisis:** In September, 2018 crisis in IL&FS impacted NBFCs and banking sector in India.
- It happened due to high NPAs and financial mismanagement.
- The growth rate of AUM in NBFCs dwindled during that period.

Fact Sheet

Non-banking Financial Companies (NBFCs):

- A Non-Banking Financial Company (NBFC) is a company which has been registered under the Companies Act, 1956.
- It is engaged in the business of loans and advances, acquisition of shares / stocks / bonds / debentures / securities which is issued by Government.
- It may also involve in trading of marketable securities, insurance business, and chit business e.t.c.
- Functions of NBFCs are regulated by RBI
- Housing Finance Companies (HFCs), infrastructure finance companies,
- Following types of companies are treated as NBFCs in India:
 - ◆ Asset Finance Company.
 - ◆ Loan Company.
 - ◆ Mortgage Guarantee Company.
 - ◆ Investment Company.
 - ◆ Core Investment Company.
 - ◆ Infrastructure Finance Company.
 - ◆ Micro Finance Company.
 - ◆ Housing Finance Company

Credit Assessment of financial institutions:

- **Credit Rating:** It is the process of a quantified assessment of the creditworthiness of a borrower.
- Credit rating can be assigned to any entity which seeks to borrow money.
- It may be an individual, a corporation, a state or provincial authority, or a sovereign government.

- **Credit Rating Agency:** Credit Rating is done by independent agencies such as Standard & Poor's, Moody's and Fitch globally. These agencies are called Credit Rating agencies.
- CRISIL Limited, India Ratings and Research Pvt Ltd, ICRA Limited, CARE, Brickwork Ratings India Pvt Ltd. e.t.c. are important credit rating agencies in India which having authorized by market regulator SEBI.
- Better credit ratings of financial institutions signify better financial health of financial institution attracting better investments.

IL&FS crisis:

- The IL&FS Ltd is an infrastructure finance company registered which has been registered with the Reserve Bank of India.
- It has been categorized as a 'Systemically Important Non-Deposit Accepting Core Investment Company'.
- **Functions:** IL&FS funded infrastructure projects primarily.
- Projects were funded through partner banks such as Central bank of India and partners such as Housing Development Finance Co.
- **Reasons of crisis:** Company ran out of cash and had a liquidity crunch in September 2018.
- At that time, it had a debt of more than Rs. 90,000 crore rupees.
- Due to liquidity crunch, it defaulted on payments and failed to service its commercial papers (CP) on the due date.
- The company's crisis put investor's money at risk which led to rapid fall in investment.

- **Phase III: Impact of COVID-19:** During Pandemic, collapse of economic activities across core sectors of economy slowed the growth rate of AUM in NBFCs.

Significance of high growth of AUM of NBFCs:

- **Increase in Investment:** Better growth rate of Assets under management of NBFCs shows restoration of investor's confidence in NBFCs post IL&FS crisis followed by COVID-19 Pandemic.
- **Post-Pandemic economic recovery:** As NBFCs are key investors in various infrastructure projects as well as key financier from household items to housing loans, improvement in their financial health signifies economic recovery after pandemic.
- **Money Flow in financial market:** Better growth rate in AUMs signifies credit and liquidity flow in the financial market.
- It will help India to recover from the losses caused during pandemic in a better way.
- Investor's confidence will have multiplier effect on market and will trigger money inflow.
- **Infrastructure Development:** It is a key area of priority to achieve self-reliance under 'Aatmanirbhar Bharat Abhiyan'.
 - ♦ **The 'National Infrastructure Pipeline'** envisages and investment of Rs 111 lakh crore on infrastructure projects by the year 2024-25.
 - ♦ Growth in AUM of NBFCs is a vital sign for such massive investment.

Way Forward:

- Better growth prospects of AUM of NBFCs by credit rating agencies like CRISIL will attract investments in form of domestic investment as well as Foreign Direct Investments.
- These investments are vital to fund massive infrastructure projects, industries, health care sector e.t.c to achieve the goal of self-reliant India ('Aatma Nirbhar Bharat') and become \$5 trillion economy by 2024.

INDUSTRY STATUS TO THE FILM AND ENTERTAINMENT SECTOR IN MAHARASHTRA

Maharashtra Government has decided to come out with policy for entertainment sector and to extend industry status to it.

About:

- **Formalization:** The government by this move aims to expedite the process of formalizing the film industry completely and making it investor's friendly.
- **Rebate shooting charges:** It further aims to rebate the shooting charges in order to attract domestic as well as international film makers.

ENTERTAINMENT INDUSTRY IN INDIA: LEGAL AND CONSTITUTIONAL PROVISIONS

- **Statutory Regulations:** Currently, Indian media and entertainment industries in is regulated by Cable Networks Act, 1995 and Prasar Bharti Act, 1990.
- **Amendment in the (Allocation of Business) Rules, 1961:** Recently, the Central government through this amendment had brought over-the-top or OTT platforms such as Netflix, Hotstar and Amazon's Prime Video under the purview of the I&B Ministry.
- **The Copyright Act of 1957:** It regulates the copyright issues in films and stories.
- **The Cinematograph Act of 1952:** It regulates certification, licensing and exhibition by means of cinematography.
- **Regulatory Bodies:** Ministry of Information and Broadcasting and the Prasar Bharti are two bodies which are responsible for regulation of films, serials and OTT contents.
- The Ministry of Information and Broadcasting ha vested its power to regulate film industry with:
 - ♦ National Film Archives of India
 - ♦ National Film Development Corporation
 - ♦ Central Board of Film Certification

Taxation on Entertainment Industry:

- **Subject matter of List II:** Entertainment is a subject of List II of the Seventh Schedule of the Constitution of India.
- It has been reserved as a revenue source for the state governments exclusively.
- **Pre-GST taxation regime:** Before commencement of Goods and Service tax, entertainment tax was levied by state government for various types of activities related to it.
- **These activities include:**
 - ♦ Services rendered by Artists and other technicians
 - ♦ Film Distribution
 - ♦ Exhibition of Movies
 - ♦ Amusement Parks
 - ♦ Sponsorship and Brand Promotion
 - ♦ Shooting Charges
- **Post-GST regime:** All types of Entertainment and service taxes are now covered under GST.
- It has eliminated cascading effects of taxes. Different areas and activities mentioned above have different rates of taxation under GST.
- Hence, state government has full authority to rebate or reduce taxation on entertainment industry under its jurisdiction.

January, 2021

- The draft for the policy will be prepared by Maharashtra Film, Stage and Cultural Development Corporation Limited (MFSCDC) and will be finalized by state cabinet.
- The draft aims to cover all aspects dealing with various platforms such as
 - ♦ Films,
 - ♦ Theatre,
 - ♦ Documentaries and
 - ♦ Serials to over-the-top (OTT) content.

Significance:

- **Status of MSME:** The proposal of the Maharashtra state government to provide status of film industry as MSME will benefit industry in many ways.
- **It will reduce the present complexities** and make the sector as eligible beneficiary of different schemes under MSME sector.
- **Simplification of taxation process:** The drafting committee has been assigned to look into possibilities of simplification of taxation process in the entertainment industry.
 - ♦ This will reduce cascading effects on taxes and elimination of unnecessary taxation on it.
- **Job creation:** Film industry is a labour-intensive industry.
 - ♦ The step of incentivizing industry and reducing tax burden will help to produce more jobs by attracting more investments in the sector.

Way Forward:

- Maharashtra hosts India's largest film industry in its capital Mumbai, called Bollywood.
- It represents 43 percent of Indian net box-office revenue and provides.
- Despite of being largest in terms of number of films produced every year, Indian film industry contributes merely 0.5% of India's GDP.
- A dedicated policy for regulation of film industry will lead to upliftment of the sector and increase its contribution in national economy.

INDIA TO DEPLOY FLOATING STRUCTURES ACROSS ITS COASTLINES

Recently, Ministry of Ports, Shipping and Waterways has issued draft guidelines of Technical Specifications of Floating Structures for public consultation.

About:

- The main aim of this draft is to set up and deploy world-class floating infrastructure all along the coastline.

- **It opines for world-class floating jetties** rather than conventional fixed concrete jetties which are being used at ports, dockyards and other places across coastal areas in India.

What are jetties?

- **A jetty is a long, narrow structure** that stretches from the shore into the water.
- **These are used as** protection of coast from tides and connect the land with deep water farther away from shore for the purposes of docking ships and unloading cargo.
- **These structures are made up** of wood, earth, stone, or concrete.
- Jetties which are used at docks are often referred as pier.
- **Jetties can also be popular tourist attractions** as these structures usually provide safe access to coastal areas.
- **For Example:** The Swakopmund jetty in Namibia is a popular tourist attraction as it offers beautiful view of Namibia's coastline.

Advantages of floating jetties over fixed jetties:

- **Cost Effective:** Floating jetties are cost-effective solution and much cheaper than conventional structures price.
- **Rapid Installation:** Floating structures or jetties can be deployed much faster as compared to conventional jetties.
- Floating structures can usually be built in 6-8 months as compared to 24 months for conventional structures.
- **Eco-Friendly infrastructures:** Environmental impact of materials used in floating jetties is minimal as compared to traditional jetties.
- **Expandable:** Floating Jetties are easily expandable as compared to traditional jetties.
- This is because these jetties are built on 'modular construction techniques'.
- **Easy Transportation:** Transportation of these infrastructures is easy in case of reconfiguration of ports.
- **Better for places having low tidal range:** As floating jetties adjust themselves with the level of water, these are better options in case of low tides than fixed quays.
- These types of jetties are ideal for places having large tidal range i.e. those places where variation in volume of water is usually larger.
 - ♦ At such places, these jetties provide constant freeboard, eases embarkation of ship's stores (the process of loading a passenger or merchant ship) and straightforward unloading of the fishermen's catch.
- **Thus these structures increase productivity of ports** while acting as all weather efficient infrastructures.

India's previous experiences with floating jetties:

- Indian government has implemented a few pilot projects in accordance with the international guiding principles.
- These successful pilot projects include setting up of passenger floating jetties in Goa, water-aerodromes at Sabarmati River and at Sardar Sarovar Dam for the seaplane services.
- Ministry of Ports, Shipping and Waterways is further planning more than 80 similar projects all along the coastline for overall development and upliftment of the coastal community.

Way Forward:

- Upgrading port infrastructure in accordance with international standard has been one of the main objective of India under Sagarmala project.
- It will help India to develop sustainably fulfilling 'Sustainable Development Goals (SDGs)' pertaining to 'Innovation and Infrastructure' (SDG 9) and Responsible Consumption and Production (SDG 12).
- It will further help India to achieve its infrastructure development targets under 'National infrastructure Pipeline' and become '\$5 trillion economy target' by 2024.

IFSC AUTHORITY (BANKING) REGULATIONS, 2020

IFSC Authority approved the draft International Financial Services Centres Authority (Banking) Regulations, 2020.

About:

- The **International Financial Services Centres Authority (IFSCA)** approved the draft banking regulations, thereby putting in place the rules for the various aspects of banking operations that would be permissible at the IFSC.

Salient features International Financial Services Centres Authority (Banking) Regulations, 2020:

- Laying down the requirements for setting up IFSC Banking Units (IBUs)
- **Non Residents:** Permitting people (having net worth not less than USD 1 Million) having residence outside India to open foreign currency accounts in any freely convertible currency at IFSC Banking Units (IBUs).
- **Permitting Indian resident** (net worth not less than USD 1 Million) to open foreign currency accounts in any freely convertible currency at IFSC Banking Units (IBUs) to undertake any permissible current account or capital account transaction or any combination thereof under the Liberalised Remittance Scheme (LRS) of the Reserve Bank of India.
- **Laying down the permissible activities** of IBUs including credit enhancement, credit insurance, and sale, purchase

of portfolios, engaging in factoring and forfeiting of export receivables, and undertaking equipment leasing, including aircraft leasing.

- Permitting the Authority to determine the business that a Banking Unit may be permitted to conduct in INR with Indian resident and persons who resident outside India, subject to settlement of the financial transaction about such business in freely convertible foreign currency.

International Financial Services Centre (IFSC)

- It caters to customers outside domestic economy jurisdiction and deals with flows of finance, financial products, and services across borders.
- **Services provided**
 - ◆ Fundraising
 - ◆ Wealth and asset management
 - ◆ Global tax management
 - ◆ Insurance services
 - ◆ Mergers and acquisitions across trans-national corporations
- The Special Economic Zones Act 2005 allows setting up an IFSC within an SEZ or as an SEZ after approval from the central government.
- Many commercial banks open 'Offshore Banking Units' within SEZ, deemed as overseas branches.
- GIFT City (Gujarat International Finance Tec-City Co. Ltd) Gandhinagar is India's first IFSC.

International Financial Services Centre Authority (IFSCA):

- A unified authority for the development and regulation of financial products, financial services, and financial institutions.
- Established under the International Financial Services Centres Authority Act, 2019.
- **Headquarter:** GIFT City, Gandhinagar, Gujarat
- Before IFSCA, the domestic financial regulators RBI, SEBI, PFRDA, and IRDAI regulated the business in IFSC.
- **Role**
 - ◆ Promote ease of doing business in IFSC
 - ◆ Develop strong global connect
 - ◆ Focus on the needs of the Indian economy
 - ◆ Serve as an international financial platform regionally and globally.

Significance:

- Banking is a major focus area of IFSC, expected to drive and facilitate the other constituent operations in the IFSC.
- A self-contained regulation laying down the major principles of banking operations at IFSCs is an important step in the IFSC reaching its desired potential.
- It will help ease of doing banking under the ambit of IFSC.

2

INTERNATIONAL RELATIONS

CHINESE INVESTMENT IN SRI LANKA

Sri Lanka announced on Tuesday the first large-scale Chinese investment in manufacturing in the country, a \$300-million tyre factory near a strategic deep-sea port.

About:

- Recently, Sri Lanka's Cabinet has approved the setting up of the tyre plant by Shandong Haohua Tire Co Limited under legislation that allows generous tax concessions.
- Western nations, as well as regional power India, have long been concerned about Chinese influence in Sri Lanka through projects under its gargantuan Belt and Road infrastructure initiative.
- The factory will be adjacent to the Hambantota port, which was leased to a Chinese company in 2017 after Sri Lanka failed to service the \$1.4-billion debt from Beijing, used to build it.
 - ♦ Shandong Haohua Tire Co Limited will export at least 80% of production, with the option of selling the rest on the local market.
- The announcement came just weeks after Prime Minister Mahinda Rajapaksa unveiled the country's 2021 budget, banking on a huge Chinese real-estate development in Colombo to attract more investment and revive the island's economy.
- **The Colombo Port City** — a \$1.4 billion land reclamation project which started in 2014 — has almost doubled the size of Sri Lanka's current financial district.

India's Strategic Concerns:

- **India's stand-off with China in Ladakh** and on its eastern border has only exacerbated its fears of strategic encirclement by China in the IOR.
- **New Delhi remains uneasy** about China's influence in Sri Lanka and its presence in Hambantota port, Gwadar in Pakistan, Chittagong in Bangladesh and Kyaukphyu in Myanmar.
- **The April 2019 terror attacks in Colombo** added to New Delhi fears of a rise in Islamic extremist militancy in Sri Lanka since any spill over would almost inevitably jeopardise its own national security.
 - ♦ **India viewed the attacks as the result of repressive measures** enacted on a minority of the Sri Lankan population.
- **India endeavours, therefore, to attain socio-economic influence** in a politically stable and prosperous Sri Lanka that abstains from human rights violations and respects all its communities.

- **Balancing India:** Prime Minister Rajapaksa has stated, however, that relations with India will not suffer, since his country cannot afford to become a proxy battleground between the two major Asian powers in their quest for influence in the Indian Ocean region.

India's efforts to gain ground in Sri Lanka:

- India, being Sri Lanka's geographically-closest neighbour, needs to maintain a robust posture in regard to its economic aid to Sri Lanka.
- Countries like the United States, Australia and Japan expect India to gain and maintain substantial influence in the region as that would support their Indo-Pacific strategies.
- **In November 2019, India offered a line of credit** of US\$400 million (\$556.5 million) for development projects and another US\$50 million (\$69.5 million) to help Colombo's counter-terrorism effort.
- **Currency exchange:** The COVID-19 pandemic has forced President Rajapaksa to seek a US\$1.1 billion (\$1.5 billion) currency exchange facility from India and also to request a debt-repayment pause, which is under consideration.
- New Delhi may draw some comfort from Colombo's current favourable foreign policy and attitude towards its neighbours, but must remain conscious that does not mitigate the potential threat posed by the Chinese presence in the IOR.

The Way Forward:

- Factors like Sri Lanka's frail economy and authoritarian government, China's thirst for a strong foothold in the region and its ability to influence strategically-valuable smaller states, together with India's sluggish economic growth and its struggle to gain leverage due to its limited financial have all created a competitive relationship between two nuclear states, with Sri Lanka being an immediate beneficiary.
- China's strategic gains, commercial or military, assist it in its quest for regional supremacy. India, by contrast, must counter China's efforts and continue to support Sri Lanka in housing projects, education, health, transportation systems, small and medium business development and training.
- The escalating Sino-Indian border tensions, the US-China trade war, rising Australia-China tensions, the forthcoming US elections, Japan's post-Abe foreign policy, the global post-pandemic economy and China's future status as a global manufacturing hub will be some of the key elements in deciding the prospective investments and the ensuing strategies in the dynamic Indo-Pacific.

String of Pearls

- This term seems to have been in use from a long time but publication of Energy Futures in Asia: Final Report in 2004 made it popular.
- The report said that China was working on a strategy to expand its influence in the Indian Ocean to extract maximum benefit from it and contain Indian hold in the region.
- String of pearl, in geostrategic parlance, refers to the Strait of Malacca, Sri Lanka, Pakistan, the Maldives, the Strait of Hormuz and Somalia. It also includes Bangladesh and Myanmar in Chinese strategy.



ASEAN DEFENCE MINISTERS' MEETING PLUS

Raksha mantri Shri Rajnath Singh attended the 14th ASEAN Defence Ministers' Meeting Plus.

About:

- **Tenth anniversary:** The meeting was organized online at Hanoi, Vietnam on the 10th anniversary of ASEAN Defence Ministers' Meeting (ADMM) Plus.
- **ADMM Plus** is an annual meeting of Defence Ministers of 10 ASEAN Countries and eight partner countries.
 - ♦ The eight members apart from ASEAN countries are Australia, China, India, Japan, New Zealand, South Korea, Russian Federation and the United States.
- **Emphasis was given on Indo-Pacific** region in particular as it confronts numerous traditional and non-traditional security threats.
- **India reiterated support to freedom of navigation** and overflight for all in International waters in accordance with the UN Convention on the Law of the Sea (UNCLOS).
- **Fight Terrorism:** A stronger commitment and need to strengthen International mechanism to fight terrorism, jointly and vigorously was called upon.



What is ADMM-Plus?

- It is a platform for ASEAN and its eight Dialogue Partners to strengthen security and defence cooperation for peace, stability, and development in the region.
- The ADMM-Plus currently focuses on seven areas of practical cooperation, namely
 - ♦ maritime security
 - ♦ counter-terrorism
 - ♦ humanitarian assistance and disaster management
 - ♦ peacekeeping operations
 - ♦ military medicine
 - ♦ humanitarian mine action
 - ♦ cyber security

INDIA PAKISTAN RELATIONS

India celebrated Vijay Diwas to commemorate India's victory over Pakistan in 1971 Indo-Pak War

About:

- **Vijay Diwas (Bijoy Dibos):** It was on this day in 1971 that the chief of the Pakistani forces, along with its troops, surrendered unconditionally before the Indian forces.
- **Creation of Bangladesh:** This day is celebrated to observe Bangladesh's victory over Pakistan in War of 1971 for the liberation of Bangladesh from Pakistan.
- **The Indo-Pak war of 1971** took place as the Indian government had decided to go against Pakistan to save Bengali Muslims and Hindus.
- **Instrument of Surrender was signed**, which was a written accord that enabled the surrender of the Pakistan Eastern Command in the Bangladesh Liberation War, marking the end of Indo-Pak war of 1971.

Kargil Vijay Diwas

- After the 1947 war, Pakistan occupied parts of Jammu and Kashmir. In 1950, the Line of Control (LoC) was demarcated between India and Pakistan.
- Before the 1999 Kargil war, the Indian Territory between Zojila and Leh at Line of Control (LoC) was guarded poorly.
- The Pakistan Army took advantage of Indian shortcomings, especially the lack of Indian troops during winter and intruded into Mushkoh, Dras, Kargil, Batalik and Turtuk sub-sectors between Zojila and Leh.
- **India undertook Operation Vijay in 1999** and moved to Dras to evict the intruders. India thus successfully took back the command of high outposts.
- Since then, July 26 has been observed as Kargil Vijay Diwas to commemorate the sacrifices made by soldiers in this war.

S-400 Air Defence Missile System

- The S-400 Triumf, (NATO calls it SA-21 Growler), is a mobile, surface-to-air missile system (SAM) designed by Russia.
- It is the most dangerous operationally deployed modern long-range SAM (MLR SAM) in the world, considered much ahead of the US-developed Terminal High Altitude Area Defense system (THAAD).
- The system can engage all types of aerial targets including aircraft, unmanned aerial vehicles (UAV) and ballistic and cruise missiles within the range of 400 km, at an altitude of up to 30 km.
- The system can track 100 airborne targets and engage six of them simultaneously.
- It represents the fourth generation of long-range Russian SAMs and the successor to the S-200 and S-300.
- The S-400 Triumf air defence system integrates multifunction radar, autonomous detection and targeting systems, anti-aircraft missile systems, launchers, and command and control centre.
- It is capable of firing three types of missiles to create a layered defence.
- It can also be integrated into the existing and future air defence units of the Air Force, Army, and the Navy.
- India's acquisition is crucial to counter attacks in a two-front war, including even high-end F-35 US fighter aircraft.

CAATSA

India's caution as US sanctions Turkey over the S400 deal.

About:

- **Sanction of Turkey:** The United States has imposed sanctions on Turkey over its acquisition of Russian S-400 air defence systems.
 - ♦ US have long been threatening sanctions on Turkey and had removed the country from an F-35 jet program.
- **India's special case:** India is set to get the consignment of the S-400 air defence system early next year. While it has got a waiver from the outgoing Trump administration, it hopes that the incoming Biden administration would not work towards reversing the decision.

CAATSA:

- It stands for Countering America's Adversaries through Sanctions Act (CAATSA).
- **It is a federal law** and was enacted in August 2017 to counter the aggression by Iran, Russia and North Korea through punitive measures e.g. imposing sanctions.
- **Section 231 of the Act** empowers the US President to impose sanction on persons engaged in a "significant transaction" with Russian defence and intelligence sectors. Two of the most stringent of these sanctions are:
 - ♦ Suspending export licences related to munitions, dual-use and nuclear-related items; and
 - ♦ Ban on American investment in equity/debt of the sanctioned person.

US VERSUS RUSSIA IN INDIAN ARMS MARKET

RUSSIA		THE US	
India's biggest arms supplier for decades. Sales worth \$65 billion since early-1960s	MiG fighters & Sukhoi-30MKI jets to Kilo-class submarines, Talwar/Tabar-class frigates & aircraft carrier INS Vikramaditya	Overtook Russia in bagging Indian deals over last 3/4 years. Sales worth \$15 billion since 2007	C-17 Globemaster-III strategic airlifter, C-130J Super Hercules aircraft & P-8I maritime patrol planes to M-777 ultra-light howitzers, Apache attack & Chinook heavy-lift helicopters
FUTURE PROJECTS		FUTURE PROJECTS	
<ul style="list-style-type: none"> ▶ Lease of 2nd nuclear-powered submarine (after first one, INS Chakra) for around \$1.5 billion ▶ Fiver S-400 Triumf air defence system for around \$5.5 billion ▶ Four Grigorovich-class stealth frigates (2 to be built in India) for around \$4 billion ▶ Joint production of 200 Kamov-226T light utility helicopters (140 in India) for \$1 billion 	<ul style="list-style-type: none"> ▶ US pushing F/A-18 "Super Hornet" or F-16 fighter production line in India to supply 110 jets for IAF for \$20 billion ▶ In contention for 57 multi-role fighters to operate from aircraft carriers ▶ Also for 111 armed naval light utility helicopters (Rs 21,738 crore). ▶ Also 24 multi-role helicopters with anti-sub warfare capabilities (Rs 12,000 crore). Another 123 such choppers later 		
			

How did the exemption for India come about?

- The U.S. President was given the authority in 2018 to waive CAATSA sanctions on a case-by-case basis as part of the National Defense Authorization Act (NDAA) for Fiscal Year 2019.

- ♦ CAATSA impacts Indo-US ties and dents the image of the US as a reliable partner.
- ♦ The NDAA that amends CAATSA does not mention any country, but the intended beneficiaries of the amended waiver are India, Vietnam and Indonesia.
- This exemption fortifies the growing defence and security cooperation in recent years which included
 - ♦ India signed a logistics pact with the US,
 - ♦ US designated India as a Major Defence Partner
 - ♦ Both countries coming together on Indo-Pacific strategy and cooperated in Quad.
- It also makes a point on principles that, as a sovereign country, India cannot be dictated about its strategic interests by a third country.
- **Since India is a Major Defence Partner** of the USA from 2016, it allows India to buy more advanced and sensitive technologies from America at par with that of the USA's closest allies and partners.
- **However, the USA fears** that acquisitions by countries like India on significant systems would either expose or put at risk platforms and its technologies to an adversary.
 - ♦ It has declared that the S-400 purchase by Turkey from Russia has put a risk to its F-35 aircraft system.
- Thus, the USA has repeatedly stated that India should not assume it will get a waiver.
- CAATSA, if implemented in its stringent form, would affect India's defence procurement from Russia.
- Apart from the S-400 air defence system, Project 1135.6 frigates and Ka226T helicopters will also be affected.

Way Forward:

- The defence procurement for India has become significant amid clashes with China on Line of Actual Control (LAC).
- Russia is an all-weather defence partner of India.
 - ♦ The bulk of India's military requirement is still dependent on Russia. This includes nuclear submarine INS Chakra, Supersonic Brahmos Cruise missiles, kilo class conventional submarine, MIG and Sukhoifighters, Vikramaditya aircraft carrier and MI helicopters.
 - ♦ Russia is India's major defence supplier for over 6 decades now, and Iran is India's second-largest oil supplier.
 - ♦ During Defexpo 2020 India and Russia exchanged 14 Memorandum of understanding. With these agreements, the defence trade between India and Russia is to cross 16 billion USD.
- However, India needs to balance its relationship with both Russia and the USA, so that its national interest is not compromised. India is neither like China, which has an inimical relationship with the U.S., and hence not bound by its diktats, nor like Turkey which is a NATO ally of the US.

CURRENCY MANIPULATOR LIST

The United States has once again included India in its monitoring list of countries with potentially "questionable foreign exchange policies" and "currency manipulation".

About:

- India has been included in the list a year after it was removed from the watch list in the US Treasury Department's semiannual foreign-exchange report to the US Congress.
- Vietnam and Switzerland have been labeled as currency manipulators.
- In 2019, the US Treasury Department had removed India from its currency manipulator watch list of major trading partners. India was last included in the currency watchlist in October 2018.

Currency Manipulator:

- This is a label given by the US government to countries it feels are engaging in "unfair currency practices" by deliberately devaluing their currency against the dollar.
- The practice would mean that the country in question is artificially lowering the value of its currency to gain an unfair advantage over others.
- This is because the devaluation would reduce the cost of exports from that country and artificially show a reduction in trade deficits as a result.
- An economy meeting two of the three criteria in the Trade Facilitation and Trade Enforcement Act of 2015 is placed on the Monitoring List. This includes:
 - ♦ **A "significant" bilateral trade surplus** with the US — one that is at least \$20 billion over 12 months.
 - ♦ **A material current account surplus** equivalent to at least 2 percent of gross domestic product (GDP) over 12 months.
 - ♦ **"Persistent", one-sided intervention** — when net purchases of foreign currency totaling at least 2 percent of the country's GDP over 12 months are conducted repeatedly, in at least six out of 12 months.

Effects of being in the list of Currency Manipulator:

- The designation of a country as a currency manipulator does not immediately attract any penalties but tends to dent the image in global financial markets.
- Once on the Monitoring List, an economy will remain there for at least two consecutive reports "to help ensure that any improvement in performance versus the criteria is durable and is not due to temporary factors," according to the US treasury department.
- The administration will also add and retain on the Monitoring List any major US trading partner that accounts for a "large

January, 2021

and disproportionate” share of the overall US trade deficit, “even if that economy has not met two of the three criteria from the 2015 Act”.

Reasons for India in the Monitoring List:

- **Trade Surplus:** India has for several years maintained a “significant” bilateral goods trade surplus with the US which has crossed the \$20 billion mark, according to the latest report. The bilateral goods trade surplus totaled \$22 billion in the first four quarters through June 2020.
- Based on the central bank’s intervention data, India’s net purchases of foreign exchange accelerated notably in the second half of 2019.

WHAT IT MEANS...

For India | There will be pressure on RBI to cut down intervention, allow the rupee to appreciate.

In terms of restrictions | The tag does not involve any kind of trade restrictions



For economy | A stronger rupee would partially offset the impact of rising oil prices on imports

For RBI | The central bank can increase diversification of its reserves to include non-dollar assets

ROHINGYA MIGRANTS IN BHASAN CHAR ISLAND

Bangladesh has begun relocating Rohingyas from refugee camps in Cox's Bazar to Bhasan Char.

About:

- Authorities in Bangladesh sent the first group of more than 1,500 Rohingya refugees to an isolated Bhasan Char island in the Bay of Bengal.
- **Concerns** have been raised over the habitability of the island.
- **Flood Proofing:** The Bangladeshi navy has spent over \$112 million (€92 million) to build flood protection, along with barracks, hospitals, and mosques.
- **Voluntary:** Bangladesh’s government has repeated that relocation will be entirely voluntary and no refugee will be forced.
 - ♦ **But,** Amnesty International and Human Rights Watch (HRW) have published statements from Rohingya who claim to have been forced or lured into relocating to the island.
- **Easing congestion:** Bangladesh has also said that the necessity of easing overcrowding in Cox’s Bazar outweighs the concerns.

Bashan Char:

- The Bhasan Char Island is located 34 kilometers from mainland Bangladesh.



THE ROHINGYA CRISIS

Who are the Rohingya?

- Rohingya are an ethnic group, largely comprising Muslims, who predominantly live in the Western Myanmar province of Rakhine. They speak a dialect of Bengali, as opposed to the commonly spoken Burmese language.
- They are descendants of Arab traders and other groups who have been in the region for generations.

Myanmar’s stand on Rohingyas

- Myanmar sees them as illegal immigrants from Bangladesh.
- Myanmar has not granted Rohingyas full citizenship.
- According to the 1982 Burmese citizenship law, a Rohingya (or any ethnic minority) is eligible for citizenship only if he/she provides proof that his/her ancestors have lived in the country before 1823. Else, they are classified as “resident foreigners” or as “associate citizens” (even if one of the parents is a Myanmar citizen).

Why did they flee their homes?

- The exodus began in 2017 after Rohingya Arsa militants launched deadly attacks on more than 30 police posts.
- Rohingyas arriving in Bangladesh said they fled after troops, backed by local Buddhist mobs, burnt their village.

What is India’s stand on Rohingyas?

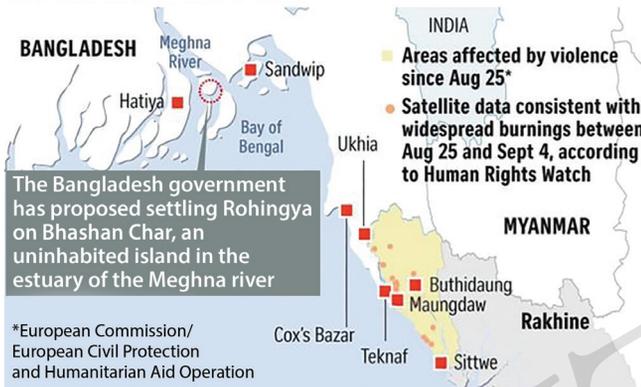
- **Refugee Card:** Approximately 40,000 Rohingyas are living in India. While UNHCR has provided refugees card to half the refugees from Myanmar, India does not recognize their cards, since it is not a signatory to the UN Convention on Refugees.
- They have reportedly reached India from Bangladesh through the land route being a burden on the limited resources of the country.
- India maintains that Rohingyas are a threat to its national security. India has so far refused to exert any pressure on Myanmar for taking them back.

UN convention on Refugees 1951

- India is not a signatory to the Refugee convention of 1951 and the optional protocol of 1967.
- **It is a United Nations multilateral treaty** that defines who is a refugee and sets out the rights of individuals who are granted asylum and the responsibilities of nations that grant asylum.
- The Convention also sets out which people do not qualify as refugees. e.g. War criminals.
- **The core principle is non-refoulement**, which asserts that a refugee should not be returned to a country where they face serious threats to their life or freedom.
- Countries that have ratified the Refugee Convention are obliged to protect refugees that are on their territory.

- Its name in Bengali means “floating island.”
- The Bhashan Char, also known as Thengar Char, is an uninhabited island around 30 kilometers east of Hatiya island in South-East Bangladesh.
- Bhashan Char island was formed about two decades ago on the mouth of the river Meghna.
- During the full moon or new moon half of the Island goes under the water, and during monsoon, 60% of the Island submerged under the water.

HOUSING THE REFUGEES



Concerns Raised by the United Nations and other NGOs:

- **Fragile Island:** The Bhashan Char which has formed recently from the sea falls in an ecologically fragile area prone to floods, erosion, and cyclone.
- **Unanswered questions:** Too many serious questions remain unanswered regarding protection, freedom of movement, access to livelihoods, logistics, and the availability of services.
- UN has also voiced concern over whether the Rohingya have been allowed to make a “free and informed decision” about relocating to the island.
- It is also unclear how NGOs will be able to provide relief services at this remote island.

SAN ISIDRO MOVEMENT (MSI): CUBA

San Isidro Movement is posing a stiff challenge to Cuba's authoritarian regime.

About:

- **The Movimiento San Isidro, or the San Isidro Movement (MSI) is a campaign by artists and activists demanding greater freedom of expression.**
- It started two years ago to protest state censorship of artistic works, and has now become a platform for Cuban dissidents both within and outside the Caribbean nation.

What is Cuba's San Isidro Movement (MSI)?

- **The movement started in September 2018**, when the Cuban government sought to enforce Decree 349, a law that would have given powers to the nation's Culture Ministry to restrict cultural activity it did not approve of.
- **Cuba US deal:** What gave crucial firepower to the movement was a landmark 2015 deal between Cuba and the US, one of whose provisions stipulated that the Cuban regime should allow its people greater internet freedoms in exchange for opening bilateral relations with US.
- Thus, the protesters managed to connect and amplify their message over the internet with relative ease, in a country where the government controls all modes of communication, and where no political opposition has been permitted.
- After the crackdown, the Netherlands and the Czech Republic also voiced concern for human rights in Cuba, as did various human rights groups, such as Amnesty International.

San Isidro

- **It is a Black majority locality** that is among Havana's poorest yet most culturally active wards.
- **It also forms part of the Old Havana UNESCO World Heritage Site.**

Havana

- It is the capital city of Cuba.
- Also, it is the largest province, major port and a leading commercial centre in the country.
- It is the fourth largest metropolitan city in the Caribbean region.

How internet freedoms could influence Cuba's future:

- Since 2018, when Cuba first allowed access to the web on mobile phones, its use among the island's residents has proliferated.
- About two-thirds of the population now enjoys some kind of internet access, giving them the chance to rally around causes using social media.

Cuba-India Relations:

- India was among the first nations to recognize Cuba following the 1959 Cuban revolution.
- India has always voted in favour of UN General Assembly resolutions calling for an end to the United States embargo against Cuba.
- Cuba has publicly expressed support for India's candidature for a permanent seat in the UN Security Council on numerous occasions.

January, 2021

- Both nations are also members of the Non-Aligned Movement.



- The main commodities exported from India to Cuba are pharmaceutical products, organic chemicals, plastic and rubber articles, machinery and mechanical appliances.
- The main commodities Cuba exports to India are tobacco products including cigars, raw hides and skins, and leather.

INVEST INDIA WINS UNITED NATIONS INVESTMENT PROMOTION AWARD FOR 2020

United Nations Conference on Trade and Development (UNCTAD) has declared 'Invest India' as winner of the 2020 United Nations Investment Promotion Award.

About:

- The award ceremony took place at UNCTAD Headquarters in Geneva.
- The Award recognizes and celebrates the outstanding achievements of the World's best-practice investment promotion agencies.
- The evaluation was based on UNCTAD's assessment of work undertaken by 180 national Investment Promotion Agencies across the world.
- The COVID-19 pandemic had generated important challenges for investment promotion agencies.
- UNCTAD reported best practices from investment promotion agencies in the IPA Observer publications. IPAs response to the pandemic became the basis for the evaluation of the 2020 United Nations Investment Promotion Award.

- UNCTAD is the central agency which monitors performance of investment promotion agencies and identifies global best practices. Germany, South Korea, and Singapore have been some of the past winners of the award.

Invest India

- Invest India, set up in 2009, is a non-profit venture under the Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government of India.
- It is the national investment promotion and facilitation agency.
- Invest India focuses on sector-specific investor targeting and development of new partnerships to enable sustainable investments in India.
- In addition to a core team that focuses on sustainable investments, Invest India also partners with substantial investment promotion agencies and multilateral organizations.
- Invest India also actively works with several Indian states to build capacity as well as bring in global best practices in investment targeting, promotion and facilitation areas.

INDIA-UZBEKISTAN VIRTUAL SUMMIT

India and Uzbekistan conducted a virtual summit to discuss bilateral relations and strengthen cooperation in the post-Covid world.

About:

- Both India and Uzbekistan have been involved in the Afghan Peace process, with a focus on connectivity with the country.
- India, via the Chabahar Port in Iran and the India-Afghanistan air corridor and Uzbekistan via a planned rail project connecting the 2 countries.
- India and Uzbekistan have been engaging under various formats including India Central Asia Dialogue at the foreign minister's level.
- The two Asian countries have maintained high-level exchanges in the recent past.
- India and Uzbekistan have strategic partnerships in various sectors such as political, trade and investment, defence, security, counter-terrorism, science and technology, nuclear energy, space, Information Technology and have promoted cultural and academic linkages.

Key Outcomes:

- **BIT:** India and Uzbekistan have agreed to work towards an early conclusion of Bilateral Investment Treaty to facilitate investment promotion and protection for further improvement of trade and economic cooperation.

About Uzbekistan

- It is a country in Central Asia.
 - It lies mainly between two major rivers, the Syr Darya to the northeast and the Amu Darya to the southwest, though they only partly form its boundaries.
 - Uzbekistan is bordered by Kazakhstan to the northwest and north, Kyrgyzstan and Tajikistan to the east and southeast, Afghanistan to the south, and Turkmenistan to the southwest.
 - Uzbekistan declared its independence from the Soviet Union on August 31, 1991. The capital is Tashkent.
- **Line of Credit:** The Indian side confirmed the approval of a 448 million US dollar Line of Credit to be extended by India for four developmental projects in Uzbekistan in the fields of road construction, sewerage treatment and information technology.
 - **India-Central Asia Dialogue:** The Indian side reiterated its commitment to further deepen the development partnership between India and Uzbekistan, including under the framework of India-Central Asia dialogue.
 - The Uzbek side conveyed its desire to explore the possibility of implementing priority developmental projects in Uzbekistan as part of the one billion US dollar Line of Credit offered by India for Central Asian countries during the second meeting of the India-Central Asia Dialogue.
 - **Security:** Noting the importance of a safe and secure regional environment for development and prosperity, the two sides agreed to cooperate in addressing threats and challenges to national as well as regional security.
 - **Law enforcement:** Both sides agreed to further strengthen cooperation between the law enforcement agencies and special services of the two countries, including under the framework of the Uzbekistan-India Joint Working Group on Counter-Terrorism.
 - **Anti-terrorism:** They also emphasized on the need for every country to ensure that its territory is not used to launch terrorist attacks against other countries.
 - ♦ Both sides also called for an early finalization of a Comprehensive Convention on International Terrorism.
 - **Peace in Afghanistan:** The leaders noted that establishment of peace and stability in Afghanistan is of great importance to the security and stability of the entire region. They called for the settlement of the Afghan conflict on the principle of Afghan-led, Afghan-owned and Afghan-controlled peace process.
 - Both sides agreed to strengthen their cooperation, including through mutual support, in the United Nations and other international and regional organizations.

- They called for **comprehensive reform** of the UN structures including the Security Council with expansion in both categories of membership. Uzbekistan reaffirmed its support to India's candidature for permanent membership of the UN Security Council.
- **NOTE:** Lal Bahadur Shastri Centre for Indian Culture in Tashkent completed its 25 years. The leaders appreciated the role it has played in strengthening India-Uzbekistan cultural relations.

INDIA VIETNAM SIGNS KEY AGREEMENTS

India-Vietnam sign nine key pacts and five announcements were made.

About:

- **India and Vietnam have signed agreements** in key areas such as defence, scientific research, renewable energy, nuclear energy, petro-chemicals, and cancer treatment.
- **A total of nine agreements** were signed and five announcements were made including implementation of the High Speed Guard Boat Manufacturing Project for Vietnam under the \$100 million Defence Line of Credit extended by India.
- **India also invited Vietnamese companies to invest in India** and highlighted the urgent need for a long-overdue review of ASEAN-India Trade in Goods Agreement (AITIGA) as a concrete step towards revitalising economic engagement between the two countries as well as the larger ASEAN region.
 - ♦ India wants the ten-member ASEAN to provide greater concessions and market access as part of the trade pact review as the ASEAN has benefitted much more from the existing agreement.
- **Vietnam is an important pillar of India's Act East Policy** and a prominent partner in the country's Indo-Pacific Vision.

Key Takeaways:

- **Both countries issued a Joint Vision Document and a Plan of Action** for bilateral engagement from 2021 to 2023.
- Both sides agreed to focus on all segments of the economy, including MSMEs, farming communities of the two countries and in renewable energy.
- Implementation of India's Defence Line of Credit for high-speed guard boats for Vietnam will see momentum.
- India's development and capacity building assistance to Vietnam through initiatives such as Quick Impact Projects (QIPs), ITEC and e-ITEC initiatives, PhD fellowships, as well as projects in water resource management in Vietnam's Mekong Delta region, SDGs, digital connectivity.

January, 2021

- Exploring a new and resilient supply chain as an alternative to the existing global supply chain networks with China as a key player, by enhancing already existing economic and trade linkages between the two countries.

TIMELINE OF ASEAN-INDIA RELATIONS



All about Vietnam

- It is a country occupying the eastern portion of mainland Southeast Asia.
- It is bordered by China to the north, the South China Sea to the east and south, the Gulf of Thailand (Gulf of Siam) to the southwest, and Cambodia and Laos to the west.

ASEAN-India Trade in Goods Agreement (AITIGA):

- The Framework Agreement on Comprehensive Economic Cooperation** between ASEAN and India was signed in October 2003.

- It served as legal basis** to conclude further agreements, including Trade in Goods Agreement, Trade in Services Agreement, and Investment Agreement that form the ASEAN-Indian Free Trade Area (AIFTA).
- Opening of Market:** Under the Agreement, ASEAN Member States and India have agreed to open their respective markets by progressively reducing and eliminating duties on 76.4% coverage of good.
 - It contains provisions on transparency, domestic regulations, recognition, market access, national treatment and dispute settlement.
- The Investment Agreement** stipulates protection of investment to ensure fair and equitable treatment for investors, non-discriminatory treatment in expropriation or nationalisation as well as fair compensation.

ISRAEL-BHUTAN TIES

Bhutan and Israel established formal ties with a formal ceremony in New Delhi where the Ambassadors of these countries to India exchanged agreements.

About:

- The establishment of diplomatic relations would create new avenues for cooperation between the two countries in water management, technology, human resource development, agricultural sciences and other areas of mutual benefits.
- The establishment of formal diplomatic relations represents a considerable setback for China and a quiet victory in the eastern Himalayas for India.
- The accord between the Majority-Jewish Israel and the majority-Buddhist Bhutan follows several years of secret talks with the aim of establishing an alliance.
- The development comes after Israel and Morocco agreed to normalize ties in a deal brokered with assistance from the US. Morocco became the fourth Arab country after the United Arab Emirates, Bahrain and Sudan to settle differences with Israel recently.
- With the announcement, Bhutan, which does not have ties with any permanent United Nations Security Council (UNSC) member, has taken the restricted number of diplomatic relations to 54 countries and the European Union.
- The two sides will not be setting up embassies in Thimphu and Tel Aviv however, and will coordinate through their missions in India.

Other Facts

- While Israel and Bhutan have not had formal ties, the two sides cooperate on development activities and agricultural training and Israel's Agency for International Development Cooperation MASHAV has trained hundreds of Bhutanese youth since 2013.
- The effort to make relations between the two countries was not connected to the **Abraham Accords**, in which four Arab Countries United Arab Emirates, Bahrain, Sudan and Morocco normalized ties with Israel with American mediation.
- Bhutan does not even have official diplomatic relations with the US.

All about Bhutan:

- Bhutan is a Buddhist kingdom in the Himalayas, bordering on India and the Tibet Autonomous Region of China.
- It has gone to great lengths to keep itself isolated from the rest of the world in order to avoid outside influences and to preserve its culture and natural resources.
- The country limits tourism, especially from outside South Asia.
- It is a landlocked country.
- Bhutan has no ties with China, having closed its border to the country on its north after China's 1959 invasion of Tibet.
- The Bhutanese are thought to be among the happiest people in the world, and the happiest in Asia, but they are also among the world's poorest.
- Its main export is hydroelectric energy to India.
- Bhutan became a constitutional monarchy, holding its first general election, in 2008. Before that, it was an absolute monarchy. Its king's official title is Dragon King.

INDIA MYANMAR THAILAND TRILATERAL HIGHWAY PROJECT

Bangladesh has expressed interest to join the ongoing India Myanmar Thailand trilateral highway project.

About:

- **For enhancing connectivity between South and South East Asia**, Bangladesh has expressed interest to join the on-going India Myanmar Thailand trilateral highway project.
- India has requested the neighbouring country to allow connectivity from West Bengal (Hilli) to Meghalaya (Mahendraganj) via Bangladesh.

- Since India has been working towards increasing its engagements with South East Asia under its '**Act East Policy**' the India-Myanmar-Thailand Trilateral Highway is one of the biggest infrastructure projects in the region.
- Also at the one-day virtual summit, India requested for one Land Port with a minimal negative list, beginning with Agartala-Akhaura and for transportation of goods from Chattogram port to the North East of India, it has proposed that its trucks use the Feni Bridge, on completion.
- It has been decided that the recently-constituted High Level Monitoring Committee headed by Secretary, Economic Relations Division from Bangladesh and the High Commissioner of India in Dhaka will regularly review the progress of the LOC Projects for their early completion.

India-Myanmar-Thailand Trilateral Highway (IMTTH):

- This highway is expected to help greatly in the transport connectivity – 1, 3660 km long cross border highway network and is currently under construction, expected to be completed by 2021.
- **It will be linking** Moreh (India) -Bagan (Myanmar) -Mae Sot (Thailand).
- **India has agreed to help build two vital road sections** — Kalewa-Yagyi of 120 km, and 69 bridges on the Tamu-Kyigone-Kalewa (TKK).
- From Indian side the work is going on since 2017 and according to sources by 2021 it is expected to be completed.
- The decision to extend the Trilateral Highway to Lao PDR and Cambodia to help deepen the India-ASEAN Relations was taken at the ASEAN-India Commemorative Summit 2012.
- **Shadhinota Shorok:** To commemorate the historic significance of the road from Mujib Nagar to Nodia on Bangladesh-India border during the Liberation War, the neighbouring country has proposed to name it as "Shadhinota Shorok".
- The National Highways Authority of India has been appointed as the technical executing agency and project management consultant for implementing this project.

Benefits of India Myanmar Thailand Trilateral Highway:

- **Connect ASEAN:** The India-Myanmar-Thailand (IMT) highways project is aimed at opening the gate to ASEAN through the land.
- **The project will boost trade and commerce** in the ASEAN-India Free Trade Area, as well as with the rest of Southeast Asia.
- Once completed, greater flows of trade and investment will take place along the route, stimulating the movement of goods and people, creating jobs, promoting tourism as well as raising the livelihoods of the peoples in the region.
- India has also proposed extending the highway to Cambodia, Laos and Vietnam.

January, 2021



ACT EAST POLICY

- **India's 'Act East' policy** is a diplomatic initiative to promote economic, strategic and cultural relations with the vast Asia-Pacific region at different levels.
- **When India launched the Look East policy** in 1991, its own economic strength, its global status and the external environment were not what they are at present.
- At the time of its launch, India was struggling to transition from a state-controlled economic regime to a more liberalised one.
- It took many years for the country to get adjusted to the newly emerging economic environment.
- India has upgraded its relations to strategic partnership and forged close ties with all countries in the Asia-Pacific region.
- India has also been actively engaged in regional fora such as Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), Asia Cooperation Dialogue (ACD), Mekong Ganga Cooperation (MGC) and Indian Ocean Rim Association (IORA).
- When in 2014, Prime Minister launched the Act East policy, India's economy was relatively robust and its global profile was higher than it was in the decades prior.
- India through this policy gave a new thrust to intensify economic, strategic and diplomatic relations with countries that share common concerns with India on China's growing economic and military strength and its implications for the evolving regional order.
- The ASEAN-India Agreement on Trade in Service and Investments has entered into force for India and seven ASEAN countries from 1 July 2015.
- On strategic issues, we have increasing convergence on security interests with key partners both in bilateral and multilateral format.
- Closer cooperation in combating terrorism, collaborating for peace and stability in the region and promotion of maritime security based on international norms and laws are being pursued.

Challenges before the Proposed Highway:

- **Myanmar's lethargy:** In its report on trade with ASEAN released in December, 2017, the Parliamentary Standing Committee on Commerce noted that the IMT is crucial move but the Government of Myanmar is not keen on signing proposed India-Myanmar-Thailand Motor Vehicle agreement and taking it forward.
 - ♦ Myanmar has earlier conveyed to India that it would proceed with the proposed motor vehicle agreement after comprehensively reviewing the implementation of similar

arrangements it has with other countries.

- Thailand's foreign ministry said the transport corridor can be turned into an economic corridor over time but that would require common regulations.
- All of these projects are known to be running behind schedule in their implementation. They will need to be expedited.
- **Feeder Roads:** Even more important will be to ensure that these connectivity links are supported by feeder highways and roads from further inland within the North East Region.

STATE SPONSOR OF TERRORISM

The United States has lifted Sudan's state sponsor of terrorism designation.

About:

- **Sudan has been listed** as a state sponsor of terrorism since 1993, when Sudan briefly hosted al-Qaida leader Osama bin Laden and other wanted militants.
- **The settlement required Sudan to pay \$335 million** for victims of the 1998 twin bombings against the US embassies in Tanzania and Kenya.
- **Delisting Sudan is also a key incentive** for the government in Khartoum to normalize relations with Israel.
 - ♦ The two countries have agreed to have full diplomatic ties, making Sudan the third Arab state after the United Arab Emirates and Bahrain to move to normalize relations with Israel.
 - ♦ After Sudan, Morocco also established diplomatic ties with Israel.
- This move could help the African country get international loans to revive its battered economy and end its pariah status.
- After its delisting, Sudan would rejoin the global economy and be able to access foreign investments and debt relief from international financial institutions (IFIs).

What is the US State Sponsor of Terrorism list?

- **The US Secretary of State** has been given powers to designate countries that "have repeatedly provided support for acts of international terrorism" as "State Sponsors of Terrorism".
- **US can place four categories of sanctions** on countries part of the list:
 - ♦ Restrictions on U.S. foreign assistance
 - ♦ A ban on defence exports and sales
 - ♦ Certain controls over exports of dual use items; and
 - ♦ Miscellaneous financial and other restrictions.
- Sanctions can also be placed on countries and persons that engage in certain trade with designated countries.

- **After Sudan's delisting, three countries remain with the designation:** Syria (listed in 1979), Iran (1984) and North Korea (2017).

State-Sponsored Terrorism

- It is pursued to achieve such clearly stated foreign policy objectives.
- Massive-scale state-sponsored terrorism reemerged in international politics in the 1960s and 1970s. Now, along with religious terrorism, state-sponsored terrorism has greatly altered the design of terrorist attacks around the world. Since its independence, India has been having the same problems as Pakistan.

TYPES OF TERRORISM



PARTNERS IN POPULATION AND DEVELOPMENT INITIATIVE

Inter-Ministerial Conference by Partners in Population and Development (PPD) was recently held.

About:

- **Key Highlights of the Address:** India mentioned that it is steadfast in its reaffirmation of the commitments made at the Nairobi Summit, to work towards ending all maternal deaths, fulfilling unmet needs for family planning, reducing gender-based violence, and ending harmful practices against women and girls.
- The timeline for achieving these targets is 2030.
- India is committed to ensuring Universal Health Coverage through its Flagship Programme, 'Ayushman Bharat'.
- India's National Health Policy 2017 aims at raising public health expenditure to 2.5 percent of the GDP.
- **On COVID-19,** India has been efficiently following the test, trace, and treats strategy. India's testing capacity has reached almost 1.5 million per day, with more than 149 million tests conducted so far.
- For achieving the Sustainable Development Goal target for reducing Maternal Mortality Rate to less than 70 by 2030 India has implemented a program called SUMAN which means Safe Motherhood Assurance.
- India is enacting stringent legislations and strengthening schematic interventions to address gender-based violence and eliminate all forms of atrocities against women and girls.

Partners in Population and Development Initiative:

- **Objective:** Partners in Population and Development (PPD) is an intergovernmental initiative created specifically to expand and improve South-to-South collaboration in the fields of reproductive health, population, and development.
- **Launch:** PPD was launched at the 1994 International Conference on Population and Development (ICPD) when ten developing countries formed an intergovernmental alliance to help implement the Cairo Program of Action (POA).
- **Endorsement:** This POA, endorsed by 179 nations, stresses the need to establish mechanisms to promote development through the sharing of experiences in reproductive health (RH) and family planning (FP) within and among countries and to promote effective partnerships among the governments, Non-Governmental-Organizations (NGOs), research institutions and the private sector.
- **Members:** It has 27 developing countries as members of the Initiative. India is a member.
- **Offices:** PPD has its Secretariat headed by the Executive Director, which is located in Dhaka, Bangladesh. It has a Regional Office in Kampala (Uganda), Taicang (China), and a Liaison Office to the UN in New York.
- According to their website, the PPD is the "only organization in the world fully dedicated to South-South partnerships."

Nairobi Summit

- **History:** In November 2019, the Nairobi Summit, also known as ICPD+25, was held in Nairobi, Kenya, to celebrate the 25th anniversary of the Cairo conference.
- **Host:** The United Nations Population Fund (UNFPA) and the Government of Kenya hosted the Nairobi Summit, which brought together governments, United Nations agencies, private sector organizations, women's groups, and youth networks to discuss and agree on initiatives to further advance the implementation of the ICPD Programme of Action.
- **Objectives:** Donor countries pledged around \$1 billion in support of sexual and reproductive health and gender equality programs. Additionally, some \$8 billion in combined new pledges were announced to achieve zero preventable maternal deaths, zero unmet need for family planning, and zero gender-based violence and harmful practices by 2030.
- The Summit opened with a review of all that had been accomplished since the first International Conference on Population and Development (ICPD) in 1994. The world has lowered maternal mortality and advanced gender equality – but not nearly enough, attendees reflected.

3

INTERNAL SECURITY

KHALISTAN MOVEMENT

A charge sheet was recently filed against 16 "foreign-based Khalistanis" by the National Investigation Agency (NIA).

About:

- The accused have been charge-sheeted with the **anti-terror Unlawful Activities (Prevention) Act** for allegedly indulging in seditious activities and promoting enmity on the grounds of region and religion in the country.
- According to it the accused were involved in a conspiracy for launching a secessionist campaign under the banner of 'Referendum 2020' for the creation of 'Khalistan'.

Khalistan Movement:

- A state called Khalistan existed in Punjab from 1709 to 1849.
- **Partition of 1947** left Sikhs in a lot of discontentment about their traditional lands being lost to Pakistan.
- **Punjabi Suba Movement:** The fight for a separate Sikh state owes its origins to the Punjabi Suba Movement. A Sikh-dominated political party called Akali Dal sought to create a separate Sikh Suba or Province.
- **States Reorganization Commission:** It was constituted to assess the demand for separate states on a linguistic basis. However, it rejected the Akali Dal's demand.
 - ♦ But after a series of violent protests, the Indira Gandhi government relented in 1966.
- **Merging of states:** The state was trifurcated into Punjabi-majority Punjab, Hindi-majority Haryana, and the Union Territory of Chandigarh.
 - ♦ Some hilly regions of the state were merged into Himachal Pradesh.
- **Anandpur Sahib resolution:** However this reignited the passion of Sikhs and sowed the seeds of the Khalistan movement.
- This is how a Sikh separatist movement seeking to create a homeland for Sikhs by establishing a sovereign state, called Khalistan in the Punjab Region was started.



ANANDPUR SAHIB

“ **THE ANANDPUR SAHIB RESOLUTION**
The Sikhs demand that an autonomous region in the north of India should be set up forthwith wherein the Sikh interests are constitutionally recognized as the fundamental State policy.

Intensification of the movement:

- The idea of Khalistan was an idea first created in the 1940s, remained idle but was revived by an NRI seeking a separate homeland for Sikhs.
- **Jarnail Singh Bhindranwale:** He took up residence inside the Golden temple, directing demonstrations and police clashes.
- **Operation Blue star** was conducted to capture Bhindranwale in Golden Temple Complex, but the operation resulted in a strong anti-India sentiment.
- **1984 riots:** PM Indira Gandhi was assassinated by her two Sikh guards in 1984 and that was followed by wide-spread riots against the Sikhs in Delhi & other parts, the genocide of Sikhs across India fuelled more anti-India sentiment.
- **Involvement of enemy country:** Pakistan's ISI tried to foment the violence by providing support to extremist groups (it was also the same time that Pakistan began to use terrorism as its strategy to defeat India in Kashmir)
 - ♦ Due to which many extremist groups like the Khalistan Liberation Force, Khalistan Commando Force, Babbar Khalsa, and umpteen others gained prominence and roamed around freely across Punjab.
- Punjab Police department succeeded in defeating the movement in the 1990s when Sikhs started to act against the protracted terrorist struggle and chose to side with the Indian nation.

Jarnail Singh Bhindranwale

- He was the admirer of Anandpur Sahib Resolution and a religious scholar who'd been traveling across Punjab advocating a return to the Khalsa or a more orthodox form of Sikhism.
- He targeted Hindus and 'modernized' Sikhs, who cut their hair and consumed alcohol in equal measure.
- Bhindranwale represented the extremist view, opposite of Akali dal, and called for a separate state.
- Jarnail Singh Bhindranwale inspired by the Khalistan ideology led the Khalistan as an extremist movement and turned against the Indian government.
- His demand for a separate nation-hood for Punjab was carried out through violent protests and killings of high-profile persons in the Indian government.

Reasons for the fall of the Khalistan movement:

- The operation Blue star, an operation by the Indira Gandhi government completed by the Indian army, flushed out Sikh militants from the golden temple in the 1980s.

- Lack of coordination amongst the Khalistan leaders.
- Lack of resources to fight a sustained frontal war with the Indian state.
- Presence of the Sikhs community Diaspora of the in India.
- Finally, the central government attempted to seek an apolitical solution through a consensus which thus was framed the Rajiv - Longowal accord which recognized the territorial, linguistic, and economic demands.

Current scenario of the Movement:

- Khalistan movement is a dormant movement in India presently.
- It does not hold many grounds in the urban or local populace of Punjab.
- Sikhs living in Canada, UK, or the USA providing ideological support to the movement.
- ISI of Pakistan is still pumping money and effort in reviving the movement to initiate the struggle anyhow.

Way Forward:

On the whole, Khalistan movement though prevalent in non-violent forms needs to be under constant vigil of Indian security forces on account of India's peace and security.'

HIMGIRI

Himgiri, the first of the three stealth frigates under Project 17A for the Navy, was launched into the water.

About:

- It is being built by Garden Reach Shipbuilders and Engineers (GRSE), Kolkata,
- The Indian Navy's lead Project 17A Frigate INS Nilgiri was launched at the MDL shipyard in Mumbai in late September 2019.
- INS Himgiri is the second to be launched from the batch.
- While INS Nilgiri is planned to be commissioned in August 2022,
- INS Himgiri will be commissioned in August 2023.

About INS HIMGIRI:

- **Frigate type:** The INS Himgiri is a follow-up of the Project 17 Shivalik-class frigate.
- **Number:** It is the first of three such Project 17A (P17A)-class advanced stealth warships.
- **Contract:** The armed forces have contracted the GRSE and Mazagon Dock to build the 7 ships under Project 17 A
- **Naming:** The ships are named after Indian Hills like Shivalik, Himgiri, Nilgiri, Taragiri, Udyagiri, etc.

- **Commission:** Earlier Himgiri was commissioned into the Indian Navy in 1974 and decommissioned in 2005.
- In 1976, Himgiri was the first ship of the Indian Navy to shoot a pilotless aircraft.

Project 17A:

- Under Project 17A, a total of seven ships are being built, out of which four are being built at Mazagon Dock Shipbuilders Limited (MDL) and three at GRSE.
- The coveted 'Project 17A' was cleared by the government back in 2015.
- **Frigates:** The Project 17A ships are guided-missile frigates.
- **Propulsion system:** P17A ships are the first gas turbine propulsion and largest combat platforms ever built at GRSE.
- **Features:** These frigates will come armed with advanced state-of-the-art sensors and boast top-notch stealth features.
- **Missiles:** They will represent the most advanced class of major surface warships for the Indian Navy in a decade, also featuring BrahMos supersonic surface-to-surface missiles.
 - ♦ There are two 30 mm AK-630M anti-aircraft artillery systems, one 127mm main gun, two torpedo tubes, 32 Barak-8 surfaces to air missiles, and launchers for eight BrahMos supersonic cruise missiles.
- **Weapons:** These will also have torpedoes and rockets to hit submarines and rapid-fire guns to destroy anti-ship missiles as well as a heavy main gun to engage ships and coastal targets.

Significance:

- The launch shows GRSE's commitment towards building the three state-of-the-art warships of Project 17A for the Indian Navy because of which GRSE has emerged as a leading shipyard over the years and has built over 100 ships.
- Yard skill sets and infrastructure at the Kolkata shipyard got upgraded to meet new challenges.
- The ships are built using indigenously developed steel and this will uphold India's vision for Atmanirbhar Bharat.

NATIONAL MARITIME DOMAIN AWARENESS CENTRE

The Navy's Information Management and Analysis Centre (IMAC), is all set to become a National Maritime Domain Awareness (NDMA) Centre.

About:

- With the highest density of fishing vessels of almost 3 lakh in its territorial waters, India's maritime security challenges need focused attention.

January, 2021

- Maritime Domain Awareness (MDA) is one of the areas to enhance India's coastal security which is extremely challenging as India is located in one of the busiest traffic regions in the world.
- Major threats such as maritime terrorism, piracy, trafficking, illegal fishing etc. are required to be kept subdued at all times.

Maritime Domain Awareness:

- It is defined by the International Maritime Organization (IMO) as the effective understanding of anything associated with the maritime domain that could impact the security, safety, economy, or environment.
- It includes all areas relating to sea, ocean, or other navigable waterways.
- In 2018, the Information Fusion Centre – Indian Ocean region (IFC-IOR) was set up within the premises of the IMAC to coordinate with regional countries on maritime security and act as a regional repository of maritime data.

Information Management and Analysis Centre (IMAC):

- It is the nodal agency for maritime data fusion set up after the 26/11 Mumbai terror attacks and located at Gurugram
- It is a joint initiative of Indian Navy, Coast Guard and Bharat Electronics Ltd. and functions under the National Security Adviser (NSA).
- It is the nodal centre of the National Command Control Communications and Intelligence Network (NC3I Network).
- The NC3I network is for monitoring maritime traffic in India's area of interest.
- **Function:** IMAC tracks only non-military or commercial ships, known as white shipping.
- Its functions in line with the principles listed under 'Security and Growth of All in the Region (SAGAR)'.

National Maritime Domain Awareness (NDMA) Centre:

- National Maritime Domain Awareness Centre (NMDAC) will be Multi-Agency Centre (MAC) under the Ministry of Home Affairs.
- It is proposed that the body will have representation and get real-time inputs from Intelligence Bureau (IB), Research and Analysis Wing (R&AW), National Technical Research Organisation (NTRO), Indian Coast Guard, Customs, ministry of shipping, department of fisheries and over 300 marine police stations while focusing on maritime intelligence.

Scope and benefits of integration:

- NMDAC will collate information and data from multiple sources for swifter action.

- This leads to pooling of manpower, better coordination and improved situational awareness.
- Avoid duplication of work and expenditure of national agencies.
- All ships passing through the Indian Ocean Region can be tracked easily.
- IMAC can also check if a vessel has changed its identity, or if it has been involved in law-enforcement issues in other countries.
- It also alerts relevant authorities if anything is found suspicious.

White Shipping Agreement

- The white shipping information refers to the exchange of prior information on the movement and identity of commercial non-military merchant vessels.
- Recently, India and the U.S had signed the White Shipping Agreement (WSA) as it allows the navies of both countries to exchange information about ships in their oceanic territories. Ships would be classified into white (commercial ships), grey (military vessels), and black (illegal vessels).

SAGAR (Security and Growth for all in the Region):

- Security and Growth for All in the Region (SAGAR) is India's policy or doctrine of maritime cooperation in the Indian Ocean region. The policy was first announced by Prime Minister Narendra Modi on March 12, 2015.

Way Forward:

- India has a coastline of about 7500 km and an Exclusive Economic Zone (EEZ) of over 2 million sq km.
- Also, we are endowed with abundant oceanic wealth comprising a large number of island territories and vast sea bed area, over 97% of our national trade is carried by sea routes.
- There is also an increase in Chinese fishing vessels in the high seas in IOR, from approximately 300 four years ago to around 450 now.
- It is, therefore, imperative that we modernize the Navy which always has to be in a high state of preparedness.

SAKSHAM

The fifth and final Offshore Patrol Vessel ICGS (Indian Coast Guard Ship) Saksham was launched recently.

About:

- It is an offshore patrol vehicle of the Indian Coast Guard.
- The ICGS Saksham was constructed under the Indigenous Offshore Patrol Project.

- **Design:** It has been designed and developed indigenously under the Indigenous Offshore Patrol Project.
- **Structure:** It weighs 2,350 tonnes and is armed with 30-mm guns.
- **Features:** It is also equipped with “quick response boats” to handle emergencies along the coast, piracy, and anti-terrorism missions.
- The hull of these vessels is designed to provide high fuel efficiency, sea-keeping qualities, and crew comfort.
- They are equipped to handle emergencies.
- ICGS Saksham will be commissioned by October 2021.
- **Specification:** The offshore patrol vessels are equipped with computerized control systems, making them the most advanced patrol vessels in service with the Coast Guard.
- **Role:** These ICGS will be deployed in protecting the Exclusive Economic Zone of India.
- The OPVs are to be equipped with Quick Response Boats for anti-piracy and rescue operations.

About Indigenous offshore patrol projects:

- The Project was launched by PM Narendra Modi in 2016. Under the project, five Indian Coast Guard Ships are to be launched.
- Two Offshore Patrol Vessels have already been commissioned namely ICGS Sachet and ICGS Sujeet.
- The third in the series called ICGS Sajag was launched in November 2019.
- In August 2020, the Indian Coast Guard Ship Sarthak was launched and it was the fourth in the series.
- All these five OPVs are of Samarth class. The other Samarth class OPVs are ICGS Shoor, ICGS Sarathi, ICGS Shaurya, ICGS Sujay, ICGS Shaunak, and ICGS Samarth.

Indian Coast Guard

- **Established:** 18 August 1978 by the Coast Guard Act, 1978 as an independent Armed force of India.
- **Headquarters:** New Delhi
- **Nodal Ministry:** The Ministry of Defence.
- **Roles:** It has jurisdiction over the territorial waters of India including the contiguous zone and exclusive economic zone (EEZ) and is tasked with the protection of India's maritime interests and enforcement of maritime law.
- **Responsibility:** It is responsible for marine environment protection in maritime zones of India and is a coordinating authority for response to oil spills in Indian waters.
- **Association:** It works in close cooperation with the Indian Navy, the Department of Fisheries, the Department of Revenue (Customs), and the Central and State police forces.

MARCOS

The Marine Commandos (MARCOS) of the Indian Navy have been deployed in eastern Ladakh.

About:

- MARCOS are being deployed in the Eastern Ladakh alongside the Indian Army against the Chinese military.
- **Integration of 3 services:-** The idea behind the deployment of the MARCOS in Eastern Ladakh along with Indian Air Force's Garud operatives and Indian Army's Para Special Forces is to enhance the integration of the three services and provide the naval commandos exposure to extreme conditions.

Who are Marine Commandos (MARCOS)?

- **Services:** The Marine Commandos or MARCOS, called Marine Commando Force (MCF) belongs to the Special Forces team of the Indian Navy.
- **Established:** MARCOS was founded in February 1987.
- **Operating field:** MARCOS are capable of operating in all types of environments; at sea, in air and on land.
- **Past operations:** They have undertaken several covert operations including **operation Cactus** in 1988.
 - They were also deployed in **Somalia in 1993** and they were deployed along with the Indian Army during the **Kargil war in 1999**.

The army clashes happened at following locations:

- **Galwan Valley:** The valley is strategically located between Ladakh in the west and Aksai Chin in the east, which is currently controlled by China as part of its Xinjiang Uyghur Autonomous Region.
 - At its western end are the Shyok River and the Darbuk-Shyok-Daulet Beg Oldie (DSDBO) road.
- **Naku La:** It is a pass at a height of more than 5,000 metres above Mean Sea Level (MSL) in the state of Sikkim.
 - **Location:** It is located ahead of Muguthang or Cho Lhamu (source of River Teesta).
 - **Other Passes in Sikkim:** Nathu La Pass and Jelep La Pass.
- **Pangong Tso:** It is a 135-km long salt water lake, located in the Himalayas at the height of approximately 4,350 m.
 - One-third of water body is in Indian control while the rest is under Chinese control.
 - **Formation:** It is formed from Tethys geosyncline.
 - **Significance:** It lies in the path of the Chushul approach, one of the main approaches that China can use for an offensive into Indian-held territory.

4

POLITY & GOVERNANCE

THE ARBITRATION AND CONCILIATION (AMENDMENT) ORDINANCE, 2020

Recently, the President promulgated the Arbitration and Conciliation (Amendment) Ordinance, 2020 which seeks to amend the Arbitration and Conciliation Act, 1996.

About:

- The Arbitration and Conciliation Act, 1996 has provisions to deal with domestic and international arbitration.
- It also defines the law for conducting conciliation proceedings.



Provisions under the Arbitration and Conciliation (Amendment) Ordinance, 2020:

Stay on Arbitral awards:

- As per current provisions, final Arbitral awards could have been stayed as soon as either of the parties moves an application to the court for this purpose.
- The Amendment has specified that an arbitral award would not be automatically stayed unless the court is satisfied on the grounds of:
 - ♦ The relevant arbitration agreement or contract mentions it.
 - ♦ Fraud or Corruption influenced the making of award.

Minimum benchmark qualifications of arbitrators:

- **The present act specifies following qualifications for arbitrator.**
 - ♦ He must be an advocate under the Advocates Act, 1961 with 10 years of experience, or
 - ♦ He must be an officer of the Indian Legal Service.
 - ♦ The arbitrator must be conversant with the Constitution of India

WHAT IS DIFFERENCE BETWEEN MEDIATION, ARBITRATION AND CONCILIATION?

- **ADR:** Mediation, conciliation and arbitration are all the methods of Alternate Dispute Resolution (ADR) which seeks to resolve disputes out of court to save time, energy and capital of parties involved in it.
- **Examples of ADR in India:** Lok Adalats, Sharia Courts.

Arbitration

- When dispute between two parties arises, a third party called 'arbitrator' is appointed by them to resolve the dispute.
- **The decision of arbitrator is binding** on both parties and neither of them can withdraw after settlement.
- However, in other methods of ADR, the parties have option to withdraw.
- Arbitration may be with mutual consents of two parties, under contractual agreement or by order of court.

Mediation

- Mediation is a mode of ADR where a 'mediator' is appointed to resolve dispute between two parties without course of litigation.
- Parties may opt to adhere to final settlement or may withdraw from it.
- It is a win-win pact where parties have complete control over results and final decision is taken with mutual consent.

Conciliation

- It is a method of ADR where conciliator is appointed to resolve dispute.
- He meets the parties separately to enter into an amicable agreement.
- It is a flexible system which lets the party to define the content and purpose of the proceeding.
- **Final decision is not binding** on parties and they have option to not accept settlement.

- The ordinance has omitted this Schedule for arbitrators and states that the qualifications, experience, and norms for accreditation of arbitrations will be specified by regulations.

Conclusion:

- In India, long and expensive process of course of law makes its delivery unsustainable, causing parties to move away to international arbitrators such as Singapore International Arbitration Centre (SIAC) for dispute resolution.

- Recent example is Reliance-Amazon dispute over acquisition of future group. As shareholders of corporate houses are Indian citizens, it becomes duty of the government to provide an effective and sustainable justice delivery system.

PARDONING POWERS

The Tamil Nadu Governor has withheld decision on an application seeking pardon for one of the seven convicts in the Rajiv Gandhi assassination case.

About:

- In 2000, the Tamil Nadu Governor had commuted the death sentence of a prime accused in Rajiv Gandhi assassination case on the basis of the state government's recommendation.
- In 2014, the judiciary had commuted the death sentence of another accused to life imprisonment on grounds of a delay of 11 years in deciding their mercy pleas by the Centre.
- The same accused had now appealed to the Governor of Tamil Nadu for pardon to his life sentence.

Pardoning Power:

- **Article 72** of the Constitution states that the President shall have the power to grant pardons, reprieves, respites or remissions of punishment or to suspend, remit or commute the sentence of any person convicted of any offence.
- **Under Article 161**, the Governor too has the same powers. He cannot pardon a death sentence, but can commute or reprieve it. Also, the power of Governor in case of any of the above must be related to a matter to which the executive power of the state extends.

What are the Justification for pardon?

- **Precedence of Other countries:** Most of the Democratic countries like United States, France, South Africa and Israel, allow for their Presidents to pardon people convicted of any crime.
- **Nobody is infallible:** Another reason is that the judiciary, like any other institution, is not infallible. Judges can make mistakes and the Constitution has to have a safety valve that allows for injustice to be remedied.
- **Moving on:** There always comes a time in society when crimes and convictions have to be ignored to heal wounds in society. E.g. after the American Civil War in the 19th century, President Abraham Lincoln and his successor President Andrew Johnson pardoned most of the soldiers who fought for the Confederacy. Pardons are sometimes necessary to end separatist movements.
- **Inalienable right:** Article 21 Guarantees the Right to life which even Legislation cannot take away, thus there is a need

to follow specific guidelines for pardoning powers of the President/ Governor to avoid delay in justice of the accused.

Various Powers of President and Governor

- **Pardon:** Completely absolving the person of the crime and letting him go free.
- **Commutation:** Means changing the type of punishment given to the guilty into a less harsh one, for example, a death penalty commuted to a life sentence.
- **Reprieve:** It is a delay allowed in the execution of a sentence for a guilty person to allow him some time for some other legal remedy to prove his innocence.
- **Respite:** It means reducing the quantum or degree of the punishment to a criminal in view of some special circumstances, like pregnancy, mental condition etc.
- **Remission:** It means changing the quantum of the punishment without changing its nature, for example reducing Ten-year rigorous imprisonment to Five years.

Judgements regarding pardon by Heads of states:

In furtherance to various judgements of Supreme Court, the President is bound by the Cabinet's advice to act on a mercy petition but, Article 74(1) empowers him to return it for reconsideration once. If the Council of Ministers decides against any change, the President has to accept it.

- **Maru Ram v. Union of India (1981)** held that the pardoning power under Articles 72 and 161 of the Constitution can be exercised by the President or Governor on behalf of the Central and the State Governments and not by the on their own.
- **Shatrugan Chouhan v. Union of India:** Taking cognisance of undue delay in the cases of the petitioners, the Supreme Court confirmed that the due process guaranteed under Article 21 was available to each and every prisoner and setup the principle of presumption of dehumanising effect of such delay.
- **In Kehar Singh v Union of India** the Supreme Court asserted that President's power under Article 72 falls within the judicial domain and can be examined by the court by way of judicial review.

Clemency powers of US President

- The President of the US has the constitutional right to pardon or commute sentences related to federal crimes. The US Supreme Court has held that this power is "granted without limit" and cannot be restricted by Congress.
- Clemency in the USA is a broad executive power, and is discretionary, that means the President is not answerable for his pardons, and does not have to provide a reason for issuing one.

MAHARASHTRA BILL AGAINST SEXUAL CRIMES

Maharashtra government introduced a bill to curb increasing crimes against women and children.

About:

- Maharashtra state cabinet approved a draft bill called Shakti Act 2020 for making changes to existing laws on violence against women and children.
- It is framed in line with the Andhra Pradesh Disha Act that was passed in 2019 which envisages the completion of trial of offenses against women and girls in 21 days and provides for the death penalty in rarest of rare cases.
- The Indian Penal Code had made several stringent provisions after the Nirbhaya case in 2013 based on the recommendations of the Justice Verma Committee.
- Two bills were tabled in the legislature –
 - ♦ The Maharashtra Shakti Criminal Law (Maharashtra Amendment) Act, 2020.
 - ♦ The Special Court & Machinery for Implementation of Maharashtra Shakti Criminal Law, 2020.
- The Shakti Bill was sent to the joint select committee of the House for review after criticism from the opposition parties and women's rights groups.

Key Provisions of the Bill:

- **Amend existing laws:** The draft bill seeks to amend the Indian Penal Code (IPC), the Code of Criminal Procedure (CrPC), and the Protection of Children from Sexual Offences (POCSO) Act, such as sections on rape, sexual harassment, acid attack and child sexual abuse.
- **The time frame for investigation and trial:** It provides for completing the probe within 15 days and trial within 30 days. The investigating officer will have to explain the reasons in a written report to the commissioner of police or special inspector general in case of not adhering to the time frame.
- **Appeal:** An appeal can be filed before the higher court that has to be disposed of within 45 days.
- **Nature of punishment**
 - ♦ Punishment with imprisonment for life for not less than ten years, extendable to the remainder of natural life or with death in cases characterized as 'heinous'.
 - ♦ The Bill provides for the death penalty in case of rape, gangrape, rape by persons in authority, aggravated sexual assault of minors, and in cases of acid attack when the grievous injury is caused.
 - ♦ Fine up to Rs. 10 lakh against perpetrators.
- **Special courts:** Special police teams and separate courts (36 in number, with the special public prosecutor) to be set up for investigation and trial of cases.

- **Acid Attack victims:** Sum of Rs 10 lakh will be given to the victim for plastic surgery and facial reconstruction and the amount will be collected as a fine from the accused.
- **Provision for in-camera trial** for the recording of evidence of vulnerable victims and witnesses.
- **Provisions related to social media-**
 - ♦ **Section 354E** is added to include intentional acts creating "a sense of danger, intimidation, and fear to a woman" apart from insulting her modesty by any act, deed or words including offensive communication will be an offense with a maximum punishment of two years and a Rs 1 lakh fine.
 - ♦ Threatening and intimidating women on social media will be an offense with a maximum punishment of two years and a Rs 1 lakh fine.
 - ♦ This also includes uploading morphed videos of women or threatening them with uploading of photos, videos which could defame, cause disrepute to them, or violate their privacy.
 - ♦ The Bill also makes it mandatory for Internet, telephone providers, and social media platforms to share electronic records, data for probes in cases of sexual violence within 7 days or punishment of simple imprisonment for one month and a fine up to Rs 5 lakh can be imposed.
- **False complaints:** The Bill provides imprisonment for a term up to one year or fine or both in case of a false complaint or for providing false information in respect of offense solely to humiliate, extort or threaten or defame or harass.
- **Matter of consent:** With a proposal to add an explanation to Sec 375 of IPC dealing with rape, the Bill provides for the presumption of valid consent.
- **Women and Children Offenders Registry:** It will be linked to the National Registry of Sexual Offenders with details of persons convicted of specified offenses of sexual violence against women and children, and made available to enforcement agencies with a separate police team will be set up in each district to probe such cases.
- **Institutions to be set up:** One Stop Centre for providing rehabilitation to victims, legal aid, counseling, medical support.

Need for the Law:

- **Crime against women in India:** According to the National Crime Record Bureau, crimes against women had increased by 7.3% in 2019 as compared to 2018. Around 88 cases of crimes against women are being registered in the country according to NCRB.
- There is an increasing number of cases of sexual violence against women and children especially in the age of social media.
- **With a lack of digital awareness** common amongst rural and marginalized women, privacy has become an issue.

- The existing laws are inadequate ineffective in controlling such crimes, with no timeline for completing investigations and trials. Eg. Existing laws have provisions for fines but do not specify the amount in most sections.

Significance:

- **Prevention of crimes:** The Bill seeks to prevent sexual and other violent crimes against women and children by deterring perpetrators from committing the acts through the imposition of heavy fines, stringent punishment, etc.
- **An improvement upon existing laws:** The Bill also improves upon the existing laws to deal with such crimes against women and children. Eg: The Bill proposes to increase punishment in some sections from five years to seven and from seven to ten years in aggravated cases of sexual violence.
- **Special courts** are present in the POCSO Act, but the disproportionate ratio between cases filed and the existing inadequate infrastructure including in forensics, judiciary leads to higher pendency. The additional special court will help address this.
- **Example from other states:** The Bill is modeled along with Andhra Pradesh's Criminal Law (A.P. Amendment) Act, 2019 or Disha Act.

Issues in the Bill:

- **No prior discussion:** The activists opine that the proposed laws should have been discussed with relevant stakeholders before passage by the state Cabinet.
- **Consent:** The 'presumption of consent' explanation feeds into the patriarchal construct of women, their conduct and makes it difficult to prove rape.
- **Provision against false complaints:** This will deter victims from reporting sexual offenses. It also perpetuates patriarchal notions of viewing women with suspicion, as unworthy of being believed.
- **Time frame:** The proposed time frame for investigation, the trial is deemed to be insufficient for gathering evidence, etc., or may result in a hurried process, resulting in miscarriage of justice.
- **Death penalty:** Since many of the rape perpetrators are known to the victim or are their family members, the victim may not receive the requisite support from their families, with the offense going unreported.
 - ♦ With similar punishment for murder and rape, the victim's life may be endangered.
 - ♦ Scholars and activists have repeatedly stated that the death penalty reduces both the reporting of sexual offenses and conviction rates.

Way Forward:

- The Bills propose some very important and necessary provisions over and above existing laws.
- However, requisite amendments must be made to avoid counter-productive outcomes of the proposed provisions as well as address the regressive nature of certain other provisions.

JUSTICE JAIN COMMITTEE

The Committee is tasked to look into the ISRO frame-up case of 1994.

About:

- A three-member committee under former Supreme Court judge DK Jain has been formed to work on the role of rogue officials responsible for the 'ISRO frame-up' case of 1994.
- The case had destroyed the career and reputation of ISRO space scientist Nambi Narayanan.

Background:

- **ISRO frame-up case:** In 1994, Nambi Narayanan was working on the cryogenic engine technology at ISRO, when he was arrested.
- The police investigation accused him of espionage by passing on documents and drawings of ISRO relating to Viking/Vikas engine technology, cryogenic engine technology, and PSLV flight data/drawings to Pakistan.
- **Outfall:** The Kerala Police prosecution destroyed Narayanan's career as well as gave a setback to India's technological advancement in space research.
- **Case dismissal:** The case was dismissed by SC in 2018 as a criminal frame-up based on "some kind of fancy notion." The CBI had also filed a closure report in 1996 but Narayanan sought to clear his name and bring the accusers to justice.
- Narayanan was awarded Rs. 50 lakh as compensation for "mental cruelty" meted out to him and for loss of his fundamental right to live with dignity and self-respect after his arrest.
- An inquiry was called to look into the 'frame-up'.

Justice Jain Committee:

- **Formation:** September 2018 by the Supreme Court.
- **Task:** To find "ways and means to take appropriate steps against the erring officials."
- **Constitution:** The three-member Committee has a Central Government and State Government official on it, apart from the former SC judge.
- The Centre would take care of its facilities and expenses.

Cryogenic Technology

- Cryogenics is the study of the production and behavior of materials at extremely low temperatures (below -150 degree Celsius) to lift and place the heavier objects in space.
- A Cryogenic rocket uses propellants such as Liquefied Natural Gas (LNG), Liquid Hydrogen, and Liquid Oxygen (LOX) which liquefy at low temperatures.
- These are pumped into the thrust chamber for combustion.
- The technology provides more thrust for every kilogram of propellant it burns compared to solid and earth-storable liquid propellant rocket stages.
- India could launch heavy satellites (of weight more than 2500-3000kg) with the help of Cryogenic engines and it's critical for the success of the GSLV program ending India's reliance on Russia for the technology.
- The technology also holds importance in the context that India was denied this technology in the 1990s by the USA when India was making deal with a Russian agency to transfer technology.
- With this technology, India does not have to depend on other space agencies.
- It will not just help ISRO probe deeper into space but will also bring it extra revenue, enabling it to make commercial launches of heavier satellites. By providing cost-effective and reliable services India can tap the Asian and African space markets, which are looking towards India on this front.
- It is more efficient but also more complex than the solid and earth-storable liquid propellant rocket stages.
- This year, Hyderabad-based space-tech startup Skyroot Aerospace unveiled India's first privately developed indigenous cryogenic rocket engine.

Vikas Engine:

- Vikas Engine is the workhorse liquid rocket engine used to power the second stage of India's Polar Satellite Launch Vehicle (PSLV), second stage, and the four strap-on stages of Geosynchronous Launch Vehicle (GSLV) and the twin-engine core liquid stage (L110) of GSLV Mk-III.
- The engine improves the payload capability of PSLV, GSLV, and GSLV Mk-III launch vehicles.

KARNATAKA PREVENTION OF SLAUGHTER AND PRESERVATION OF CATTLE BILL, 2020

The Bill bans all forms of cattle slaughter by recommending stringent punishment for violators.

About:

- Karnataka Legislative Assembly adopted the Prevention of Slaughter and Preservation of Cattle Bill, 2020 to ban the slaughtering of all cattle.
- It is a revised version of an earlier Bill of 2010, which was shelved in 2013 on change of state government.
- A committee was constituted by the Minister for Animal Husbandry before the winter session of the Karnataka Legislative Assembly to study various aspects related to similar laws in place in the states of Gujarat and Uttar Pradesh.

Key Provisions of the Bill:

- **Purpose:** The Bill seeks to ban the slaughtering of all cattle, including cows, calves, and even bulls.
- Concerning he/she buffalo, it seeks to ban slaughter if the animals are below 13 years of age.
- **Definitions of 'cattle' and 'beef':** The Bill defines 'beef' as the flesh of cattle in any form and 'cattle' is defined as a cow, calf of a cow and bull, bullock, and he or she buffalo below the age of 13 years.
- **Violation provisions:** Imprisonment from 3 to 7 years with a minimum fine of ₹50,000 per cattle, extendable up to ₹7 lakh or both.
 - For a subsequent offense, the fine will not be less than ₹1 lakh up to ₹10 lakh along with imprisonment extended to 7 years.
- The Bill makes it an offense to sell/dispose of cattle for slaughtering or intentionally killing the cattle.
- **Competent Authority:** Government-appointed officials such as the tehsildar or officer not below the rank of veterinary officer of the Animal Husbandry and Fisheries Department is the competent authority to look into the issues related to slaughtering.
- Police officer not below the rank of sub-inspector or competent authority can visit the premises of suspicious slaughtering and seize the premises, cattle, and materials and make a report before the sub-divisional magistrate, who can order confiscation of property and its auction.
- **Special courts** to be set up for speedy disposal of disputes under the legislation.
- **Inter-state transport of cattle:** It is banned without prior permission from the competent authority.
- **Exemptions:** Cattle operated for vaccine lymph, serum, or any experimental or research purpose at any government or recognized institute.

- **Slaughter:** Allowed after certification by a veterinary officer in the interest of public health or if cattle have the contagious disease which is dangerous to other cattle or if it is a terminally-ill buffalo above the age of 13.
- The Bill also protects persons or competent authority acting in good faith or exercising powers to prevent cow slaughter.

Issues with the banning of cattle slaughter:

- **Excessive Punishment:** Punishments of between three to seven years is more than the punishment prescribed in Indian law for causing the death of a human being by negligence.
- **Search based on suspicion:** It also gives the police powers to conduct searches based on suspicion.
- **Hamper source of protein for poor:** The legislation, based on Hinduism's reverence for the cow, undermines the food practices of many Indians, for whom beef is a cheap source of protein.
- **Harmfully affects the leather industry:** The bill also penalizes people working in the meat and leather industries that depend on cattle slaughter, many of whom are Muslim.
- **Dairy Economics:** The problem with the bill is that slaughter is integral to the dairy industry's economic functioning. Dairy farming in India functions on small margins. As a result, the upkeep of unproductive animals would throw their bottom lines out of alignment.
- **Why Buffalo:** Since the buffalo is not seen as sacred in Hinduism it could be slaughtered legally, dairy farmers were preferring it over the holy cow. But the Karnataka bill even targets buffalos.

Significance:

- It helps protect the cattle population in the nation adding to the white revolution giving a boost to the increased milk production and export.
- It acts as a step in the protection of animals and PETA activism and may discourage meat consumption in general and reduce the inhuman practice of killing animals.
- It caters to the protection of religious sentiments of the Hindus as slaughtering a cow is considered to be a sin according to its mythologies.

Way Forward:

- In an era of individual liberty, the mere fact that something is imposed does and should make it an object of suspicion. Paradoxically, it is easier to discuss, even proselytize, these values when there is no threat of a ban. Similarly, there are issues with liquor bans. There are genuine social issues with drinking in India, and the violence and devastation it brings. But the minute the specter of massive state intrusion is raised by the prospect of a ban, it becomes harder to sensitively

confront these issues. The more you use state power to ban things, the more they will be contested. As our demands for bans on books, the intent is to assert community power and draw attention, not solve a real problem.

- A balance needs to be stroked between the White revolution, pink revolution, and leather revolution.

Animal Rights and the Constitution of India

- The Indian Constitution recognizes the sanctity of animal life and their treatment with dignity.
- The Constitutional Provision for animal protection:

Fundamental Rights:

- **Art 21- Right to Life:** The Supreme Court has brought animal rights under its ambit through an expansive reading in the case of Animal Welfare Board of India v. A. Nagaraja & Ors. (the Jallikattu case).

Directive Principles of State Policy:

- **Article 48:** It states that the State shall endeavor to organize agriculture and animal husbandry on modern and scientific lines and shall, in particular, take steps for preserving and improving the breeds, and prohibiting the slaughter, of cows and calves and other milch and draught cattle.
- **Article 48A:** The State shall endeavor to protect and improve the environment and to safeguard the forests and wildlife of the country.

Fundamental Duties:

- **Art 51A (g):** It shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers, and wildlife, and to have compassion for living creatures.

'ROSHNI ACT': 'U-TURN' OF JAMMU AND KASHMIR ADMINISTRATION

The J&K administration has sought modifications to the High Court judgment which declared the Roshni Act, 2001 as null and void in the Union Territory (UT) of J&K.

About:

- The Jammu and Kashmir High Court had ordered a Central Bureau of Investigation-led probe into alleged irregularities in the land scheme in October 2020.
- It had directed the agency to file a status report every eight weeks.
- Later, an order was issued by the J&K Department of Law, Justice, and Parliamentary Affairs to implement the judgment passed by the High Court on the matter.

January, 2021

- It declared the act 'Null and Void' and declared that occupied land will be reclaimed by the state within a month.
- In due process, the department had also released the list of beneficiaries which included politicians and retired bureaucrats.

The 'Roshni Act':

- The Jammu and Kashmir States Land (vesting of ownership to the occupants) Act is also called the 'Roshni Act'.
- Enacted in 2001, the law aimed to regulate unauthorized land by transferring the ownership rights of state land to its occupant.
- 1990 was set as the cut-off date for encroachment on state land.
- The land had to be transferred in place of the cost of the land which was to be paid by the occupants to the state.
- The revenue which was to be generated by the scheme was to be spent on commissioning hydroelectric power projects in the state.
- It derived its name 'Roshni' or 'Light', from the purpose of the scheme.
- At that time government had estimated that 1,04,458 hectares, of public land worth around Rs 25,448 crore are encroached upon.
- In 2005, the PDP-Congress coalition government changed the cut-off year to 2004 from 1990 by an amendment to the Act.
- In a later amendment, the Ghulam Nabi Azad government set the premium at 25% of the market rate and the cut-off date at 2007.
- In the case of agricultural land, the ownership was given for free and the occupants only had to pay a minor documentation fee.
- However, the government did not earn Rs.25000 crore as touted and the total area of land transferred was also much less than the targeted area.
- In the Kashmir area, most of the land transferred under the Roshni Act had been leased out for residential purposes and to business houses.
- **Repealed in 2018:** The Roshni Act was repealed by the governor of the former state of Jammu and Kashmir in 2018 when the state was under President Rule.

Land Occupation and corruption by the elite political class:

- The scheme was misused by ruling parties as well as opponents in the state by following corrupt practices.
- **Grant of land for agricultural purposes:** State government through an amendment granted the ownership of the land to farmers who had occupied this land for free of cost.
- It was against the motive of the scheme which aimed to generate revenue for the hydroelectricity power project.
- **Less Revenue Generation:** As estimated at 25000 cr, the revenue generated under this scheme was only Rs. 76 crore.

- **Corruption charges by state vigilance Commission:** In 2009, the state vigilance commission started to investigate corruption charges in granting land ownership to non-eligible beneficiaries.
- It concluded that there was tripartite collusion of government officials, ruling party politicians, and opponents.
- **Report by CAG:** In 2014, the CAG report highlighted irregularities in the scheme and called it a scam. The Act was alleged to fuel corruption and the unauthorized usurpation of public lands in J&K.

Earlier High Court Ruling

- The High Court, in October 2020, ruled the Act as unconstitutional, illegal and unsustainable.
- The HC held all allotments made under the Roshni Act as void ab initio.
- It also asked the CBI to probe into the irregularities committed under the Act and directed the government to publicise the names of the prominent people that benefited under the Act.
- As per this order, the J&K government decided to declare all the actions taken under the Act to be 'null and void' and to retrieve the land that was given by six months.
- It also made public the names of the influential people who were allotted land under the Act.

Why does the state administration want modification in High Court Order?

- The petition has been filed by the Special Secretary, Revenue Department of the J&K government.
- It has been argued that a large number of common people would suffer unintentionally due to eviction from the land.
- **Distinguish between the two classes:** The petition has argued to make a distinction between the two classes of people i.e. landless cultivators and individuals.
- The petition argued that these people should not be clubbed along with politicians who grabbed the land and should not be evicted.

Significance of the petition:

- **Corruption Vs Legal Occupation:** The petition has argued that there should be a distinction between the corrupts and the legal occupants of the land. As the act nullified all land occupations, poor landless farmers and dwellers were at the receiving end.
- **Poor Landless Vs Corrupt Land grabbers:** Although the amendment to grant farmers the land deed for free was against the purpose of the act, it was a mistake committed by the government not them. Hence, their eviction is not in the line of reasonable justice delivery system.

Limitations of the petition:

- **Rule of law:** The petition is not in line with the doctrine of 'Rule of Law' which provides that the constitution shall be the supreme authority of the land.
- The illegal land occupation was indeed a violation of the laws of the land and hence the authorities must evict illegal or corrupt occupation.
- **Equality before Law:** Article 14 of the constitution of India provides equality before law i.e. all citizens must be treated equally before the law, whether landless farmers or corrupt landholders.

Way Forward:

- The doctrine of 'Rule of law' clearly states that everyone, whether a state agency or any class of citizen must abide by the law of the land.
- However, the petition can be treated as a correct action in line with the ethical compassion of a welfare state like India.
- It fulfills the aim and ambitions enshrined in the preamble and Directive Principle of State Policy (DPSP).

LAND ACQUISITION FOR NATIONAL HIGHWAYS

The Supreme Court clears the move for land acquisition for Chennai-Salem Highway.

About:

- The Madras High Court had quashed notifications by the National Highways Authority of India (NHAI) for the construction of the Chennai-Krishnagiri-Salem National Highway.
- On Appeal by the Centre and NHAI, the Supreme Court upheld the notifications issued under the National Highways Authority of India (NHAI) Act, 1956, for the acquisition of land for construction of the Chennai-Krishnagiri-Salem national highway.

Issue:

- **Project:** The 277.30 km long, eight-lane Chennai-Krishnagiri-Salem national highway is to be built as part of the Bharatmala Pariyojna-Phase-I project.
 - ♦ 10 km of its stretch passes through a forested area.
 - ♦ It will significantly cut down travel time between Chennai and Salem.
- The Project has faced opposition from locals, including farmers, over fears of losing their land, besides environmentalists, who are against felling of trees.
- **Environmental Clearance:** The project was challenged because the notification issued under Section 3(A) of the NHAI Act could only have been done after environmental clearance.

- **Power of Centre:** It was contended that the Centre could not acquire open green fields for the construction of a national highway and that only a preexisting state highway could be declared to be a national highway.
- **High Court stands:** Madras High Court ruled that prior environmental clearance was needed for issuing the notification under Section 3(A) for the project. An appeal against this was filed with the Supreme Court by NHAI and Centre.
- **Supreme Court's Ruling:** SC held that Constitution indicates legislative and executive power regarding all matters concerning and connected with a highway to be designated as a national highway, to be vested in the Parliament and the Union.
 - ♦ The Central Government is free to construct a new national highway in line with Directive Principles of State Policy for the promotion of the welfare of the people served in the region.
- The SC said the notification was only an expression of interest to acquire the designated land, and therefore no prior environmental clearance was needed before issuing it.
- As per the Environment (Protection) Act and Rules 1986, prior environmental clearance is needed only for the commencement of the actual construction/ building work by NHAI.
 - ♦ It also depends on the actual site of construction which has to be identified first to determine environmental clearance.

National Highways Authority of India (NHAI)

- National Highways Authority of India was set up by an act of the Parliament, NHAI Act, 1988 for the development, maintenance, and management of national highways.
- **Mandate:** To implement National Highway Development Program (NHDP) in a phased manner to serve as the arterial network of the country, with a focus on road safety, quality matching international standards, etc.
- **Network:** India has around 1,32,499 km total length of NH (including expressways) at present, with only 2% of the total roads share carrying about 40% of the road traffic.

Bharatmala Pariyojana:

- **What is it?** It is an umbrella program for the highways sector that seeks to develop 24800 km in Phase I (till 2022) of connecting corridors across India.
- 50 National Corridors will connect 550 districts through national highway linkages, optimizing the efficiency of freight and passenger movement and bridging critical infrastructure gaps.
- **Development:** Economic Corridors, Inter Corridors, and Feeder Routes, National Corridor Efficiency Improvement, Border and International connectivity roads, Coastal and Port connectivity roads, and Green-field expressways.

5

SOCIAL ISSUES

UNNAT BHARAT ABHIYAN

A review meeting regarding the progress of the Unnat Bharat Abhiyan (UBA) was held virtually.

About:

The Education Minister of India emphasized the following in the meeting:

- Identify three to five core issues common amongst all the villages and few issues based on local conditions and work on these.
- Need to maximize the number of Higher Educational Institutions (HEIs) under the scheme.
- UBA should be used in sensitizing the school teachers regarding National Education Policy, 2020.
- The need for a portal to serve as an interactive platform for different institutions wherein they can share success stories and motivate each other.
- Carry out a state-wise study and set targets regarding the parameters under UBA.

Unnat Bharat Abhiyan:

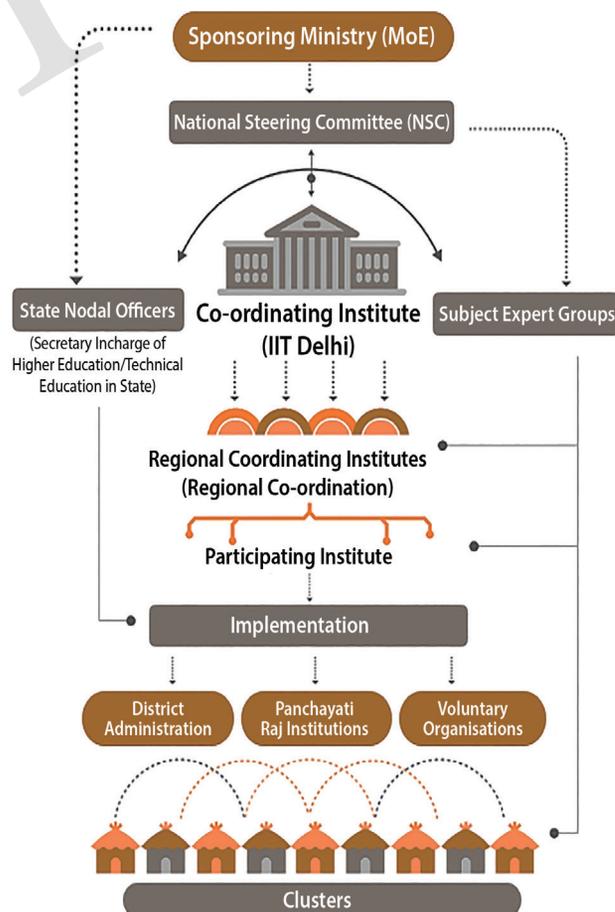
- Unnat Bharat Abhiyan scheme enables higher education institutions to work with rural people to identify development challenges and evolve appropriate solutions for accelerating sustainable growth.
- The Unnat Bharat Abhiyan Scheme was launched in 2014 and over the years has accrued 4650 village level and 4,75,702 household-level survey data, which is available on its website.
- Unnat Bharat Abhiyan 2.0 (UBA 2.0) is the upgraded version of Unnat Bharat Abhiyan 1.0. UBA 2.0 was launched in 2018.
- The scheme is extended to all educational institutes; however, under Unnat Bharat Abhiyan 2.0 participating institutes are selected based on the fulfillment of certain criteria.
- The scheme aims to identify innovative technologies, devise implementation methods, and enable customization of technologies for the betterment of people.
- Ministry of Human Resource Development is the sponsoring ministry, and IIT Delhi is the coordinating institute.
- The Participating institutes will be adopting 5 villages in consultation with District Collector, carry out field studies, study and facilitate the implementation of Government schemes, engage interested faculties and students, and work

with the authorities, NGOs to improve the socio-economic well-being of the rural communities.

- **Themes:** Organic Farming, Water Management, Renewable Energy, Artisans, Industries and Livelihood, Basic Amenities, and Convergence.

Significance:

- The Scheme caters to the holistic development of villages in line with Gandhian vision of rural development having self-sufficient 'village republics' which are-
 - ♦ Based on local resources
 - ♦ Using local, decentralized, eco-friendly technologies to meet basic needs.
 - ♦ Addressing inequity brought on account of rampant urbanization, climate change, etc.
- It channelizes efforts of HEIs into rural development, which were earlier directed towards catering to the industrial sector.
- It helps students and faculty to gain practical knowledge and traditional wisdom.



VISION 2035: PUBLIC HEALTH SURVEILLANCE IN INDIA

The Vision document lays the foundation for integrated surveillance of both communicable and non-communicable diseases.

About:

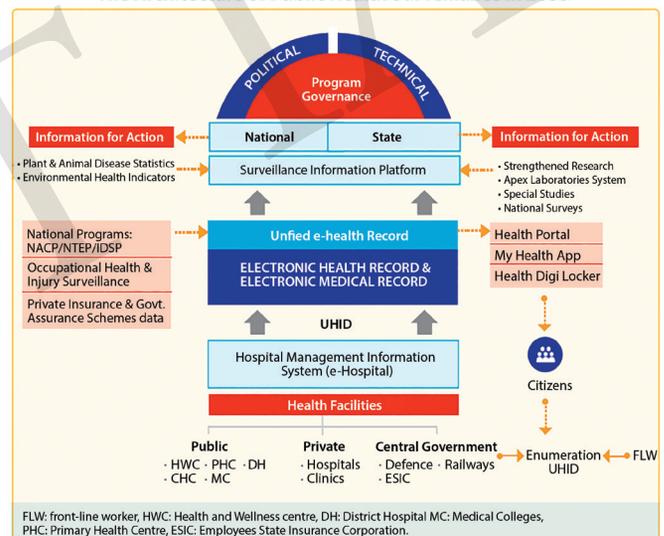
- The NITI Aayog released a 76-page “India’s Public Health Surveillance by 2035” white paper outlining the vision for what public health surveillance could be for India in 2035.

Vision 2035: Public Health Surveillance in India

- The NITI Aayog document takes forward the work of strengthening public health system in India and suggests mainstreaming of surveillance on the basis of individual electronic health records.
- **Vision-**
 - ♦ To make India’s public health surveillance system more responsive and predictive to enhance preparedness for action at all levels.
 - ♦ **Citizen-friendly** public health surveillance system will ensure individual privacy and confidentiality, enabled with a client feedback mechanism.
 - ♦ **Improved data-sharing mechanism** between Centre and states for better disease detection, prevention, and control.
 - ♦ To provide regional and global leadership in managing events that constitute a public health emergency of international concern.
- **The Vision builds upon Ayushman Bharat**, Integrated Health Information Platform of the Integrated Disease Surveillance Program, aligns with citizen-centricity highlighted in the National Health Policy 2017 and the National Digital Health Blueprint.
- **The paper outlines interdependent governance** system between the Centre and states, a new data-sharing mechanism involving health analytics, health informatics, and data science, artificial intelligence and machine learning.
- **The document does not provide funding and budget** requirements, but suggests creation of a road-map or blueprint for action.
- **To documents suggests seven next steps** towards achieving the Vision-
 - ♦ Establish a governance framework that is inclusive of political, policy, technical, and managerial leadership at the national and state level.
 - ♦ Identify broad disease categories that will be included under Public Health Surveillance.
 - ♦ Enhance surveillance of non-communicable diseases and conditions in a step-wise manner.

- ♦ Prioritise diseases that can be targeted for elimination as a public health problem.
 - ♦ Improve core support functions, core functions, and system attributes for surveillance at national, state, district, and block level.
 - ♦ Establish mechanisms to streamline data sharing, capture, analysis, and dissemination for action by using real-time signals from social media, mobile sensor networks, and participatory surveillance systems for epidemic intelligence.
 - ♦ Encourage innovations at every step-in surveillance activity.
- The Vision document acknowledges India’s past experience and highlights global best practices.
 - The paper was jointly developed by Health Vertical, NITI Aayog, and Institute for Global Public Health, University of Manitoba, Canada with contributions from technical experts from the Government of India, states, and international agencies.

The Architecture of Public Health Surveillance in 2035



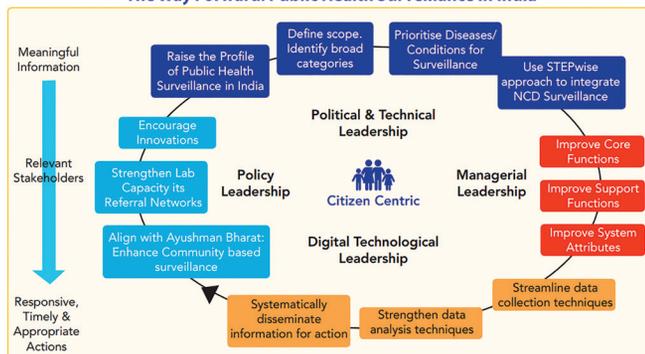
Significance:

- Surveillance is an important public health function, essential for disease detection, prevention and control. In the past, surveillance has helped eradicate smallpox, polio and reduce incidence of TB, HIV etc.
- However, the traditional public health disease surveillance systems in India have remained fragmented, siloed, and limited to few diseases.
- The document highlights the gaps in India’s Public Health Surveillance system-
 - ♦ Need for a strong and dedicated health surveillance workforce.
 - ♦ Integration of Non-communicable disease, reproductive and child health, occupational and environmental health and injury into public health surveillance
 - ♦ Strengthening of lab capacities

January, 2021

- ◆ Amalgamation of plant, animal, and environmental surveillance in a One-Health approach, including anti-microbial resistance.
- Implementation of this vision can thrust India to be a global/regional leader in Public Health Surveillance.

The Way Forward: Public Health Surveillance in India



JHARKHAND BANS TOBACCO USE AMONG STATE GOVERNMENT EMPLOYEES

State government employees to submit an affidavit stating that they will abstain from tobacco use.

About:

- The state of Jharkhand at a meeting of the National Tobacco Control Programme's state chapter made it mandatory for all state government employees to submit an affidavit making it mandatory for them to abstain from using tobacco products.

Measures were taken by the Jharkhand government:

- **Tobacco products included:** Cigarettes, bidi, khaini, gutkha, pan masala, zarda or supari, hukka, e-hukka, e-cigarettes, and tobacco products being used by any name — smoking and smokeless.



NATIONAL TOBACCO CONTROL PROGRAMME

- It was launched by the Government of India in 2007-08 during the 11th Five-Year-Plan and currently covers 612 districts across the country.
- **Aim-**
 - ◆ Create awareness about the harmful effects of tobacco consumption
 - ◆ Reduce the production and supply of tobacco products
 - ◆ Ensure effective implementation of the provisions under "The Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply, and Distribution) Act, 2003" (COTPA)
 - ◆ Help people quit tobacco use
 - ◆ Facilitate implementation of strategies for prevention and control of tobacco advocated by the WHO Framework Convention of Tobacco Control.
- **Structure:** The NTCP is implemented through a 3-tiered structure, at the central, state, and district level.
- **The National Tobacco Control Cell (NTCC)** at the Ministry of Health and Family Welfare (MoHFW) is responsible for overall policy formulation, planning, implementation, monitoring, and evaluation under NTCP.
- **Work:** The Programme involved training of health and social workers, NGOs, etc, information, education and communication (IEC) activities, school programs, monitoring of tobacco control laws, co-ordinating with PRIs, Setting-up, and strengthening of cessation facilities including the provision of pharmacological treatment facilities at the district level.

WHO Framework Convention on Tobacco Control (WHO FCTC):

- It is an evidence-based treaty in response to the global tobacco epidemic that reaffirms the right of all people to the highest standard of health by developing regulatory and demand reduction strategies to address addictive substances.
- It has 168 signatories and entered into force in 2005.

Cigarettes and other Tobacco Products Act, 2003 (COTPA):

- It is an Act to prohibit the advertisement and regulate trade and commerce, production, supply, and distribution of cigarettes and other tobacco products.
- It has provisions related to the branding of logo, prohibition of smoking in public places, prohibition of the sale of cigarettes to or by persons less than 18 years, etc.

Measures to control Tobacco consumption in India:

- **mCessation Programme:** It is an initiative using mobile technology for tobacco cessation. India launched mCessation using text messages in 2016 as part of the government's Digital India initiative.
- **Prevention and Control of Pollution Act of 1981:** Recognized smoking as an air pollutant.
- **Cable Television Networks Amendment Act of 2000:** Prohibited the transmission of advertisements on tobacco and liquor in India.

- **Enforcement:** From April 1, 2021, after gazette notification.
- **Tobacco control discussion:** These are to be organized by Zila Parishad, panchayat samitis, gram panchayats in every gram sabha meeting.
- **COVID-19 precaution:** In April, Jharkhand had banned the sale and consumption of tobacco products in public places, including online sales, to curb the chances of Covid-19 infection.
- **Border vigilance:** The state police improved vigilance to control the entry of banned tobacco products in the state.
- **Licensing and trade restrictions:** The state government is seeking tighter curbs on the sale of tobacco products in urban settlements, requiring a separate tobacco trading license. Grocery stores selling tobacco products will face legal actions.
- The move is for implementing the Cigarettes and other Tobacco Products Act, 2003 (COTPA).
- **Monitoring:** It includes ongoing monitoring.
- **Fast-track process:** It provides innovator companies with a fast-track process to get their products approved for the last mile consumer.
- **List of products:** It provides a positive list of prequalified products and manufacturers.
- **Quality standards:** It gives assurance that international quality standards have been applied.

Issues:

- **Non-compliant:** Specific Contract Research Organizations (CROs) were found to be non-compliant with international guidance on Good Clinical Practice (GCP) and Good Laboratory Practice (GLP).
- **Reassessing previous de-listed products:** WHO and its partners agreed to reassess and inspect new submissions of previously de-listed of withdrawn products as a matter of urgency.

WHO PREQUALIFICATION PROJECT

A single-dose injectable Typhoid Conjugate Vaccine (TCV) of Biological E has been pre-qualified by the World Health Organisation.

About:

- This makes the vaccine maker one of two pre-qualified suppliers of TCV to UN agencies.
- **The prequalification process** consists of a transparent, scientifically sound assessment, which includes dossier review, consistency testing or performance evaluation, and site visits to manufacturers.
- The Prequalification project, set up in 2001, is a service provided by the World Health Organization (WHO) to facilitate access to medicines that meet unified standards of quality, safety, and efficacy for HIV/AIDS, malaria, and tuberculosis.
- The project was supported by UNAIDS, UNICEF, UNFPA, and the World Bank as a concrete contribution to the United Nations' priority goal for access to quality medicines.
- It offers equal opportunities for manufacturers from all countries to comply with international standards and participate in solving health emergencies.
- It vastly reduces the risk of sourcing sub-standard, counterfeit, and/or contaminated medicines.
- It maintains efficient, standardized evaluation process.
- It facilitates a fast contract award process through limited invitations for competitive bidding.

Significance:

- **Local capacity:** It builds local regulatory and production capacity.

ASSISTANCE TO THE DISABLED IN INDIA

Union Minister for Social Justice and Empowerment distributed assistive aids and appliances free of cost.

About:

- Union Minister for Social Justice and Empowerment virtually inaugurated a mega camp for free of cost distribution of assistive aids and appliances under the Assistance to Disabled Persons scheme in Bilaspur, Chhattisgarh.
- The Camp was organized by ALIMCO, under the Department of Empowerment of Persons with Disabilities (DEPwD), Ministry of Social Justice and Empowerment, Gol and District Administration, Social Justice Department Bilaspur.
- **Aids distribution:** 1785 pre-identified divyangjan and senior citizen beneficiaries were provided 3880 aids and assistive devices worth Rs. 204.17 lakhs by ALIMCO.
- **Purpose:** To provide the direct benefit of the government-run schemes transparently and generate awareness about the various other programs and initiatives for the Persons with Disabilities (Divyangjan) & senior citizens.

Status of Divyangjans in India:

- According to Census 2011, there are about 2.68 crore persons with disabilities in India, constituting 2.21% of the total population in the country.
- **Art 41 of DPSP:** Right to work, to education and public assistance in certain cases – The State shall, within the limits of its economic capacity and development, make effective provision for securing the right to work, to education and public assistance in cases of unemployment, old age, sickness and disablement, and in other cases of undeserved want.

6

ENVIRONMENT

WESTERN DISTURBANCE AND WINTER IN NORTH INDIA

North India including Jammu and Kashmir, Punjab, Haryana and National capital territory of Delhi braces cold wave like conditions during winter caused by Western Disturbance.

About:

- **Extra-tropical cyclone:** Western Disturbance (WD) is essentially an extra-tropical cyclone which is developed during the post-monsoon period i.e. October and November and during the winter season i.e. December to February.
- They are generally embedded in the subtropical westerly jetstream (STWJ).
- They are most prominent during the winter, when the STWJ is situated over south Asia and as westerlies are stronger in winter, but can occur at any time of year.

Western Disturbance: Formation and causes:

- **Western Disturbance is caused** due to shift of mid-latitude westerlies towards tropical area.
- **These westerlies contain low pressure systems** which originate over Mediterranean Sea and Caspian Sea.
 - ♦ They typically originate as perturbations (disturbances) in the subtropical jet over western Eurasia (Mediterranean Sea, Black sea and Caspian Sea) before propagating downstream across Pakistan and northern India.
- **Differential heating:** When these winds move towards high temperature regions of tropical area from low temperature regions of mid-latitude regions differential heating is caused.
 - ♦ This causes the disturbance in the flow of westerly winds which is referred as the disturbance in westerlies or the western disturbance.
- **Path of WD from Mediterranean Sea to India:** Clouds and rainfall pattern along with westerlies are seen to move from west to east across Turkey, Iran, Southern Russia and extreme northern India during winter season in northern hemisphere.

Western Disturbance in North-Western India:

- **Direction and frequency**
 - ♦ The western disturbance moves in easterly and north-easterly direction when it enters North-western India.
 - ♦ Frequency of the disturbance varies from year to year.
 - ♦ On an average 3-6 western disturbances can be observed

across India in every month of the winter season, having life-cycle of 2-4 days.

• Rainfall Pattern

- ♦ Primary Western Disturbance or the main western disturbance causes rainfall and snowfall in UT of Jammu and Kashmir.
- ♦ Secondary western disturbance causes rainfall in Punjab, Haryana and adjoining regions of Rajasthan. This belt is referred as second rainfall belt.
- ♦ If disturbance is intense, it may cause rainfall in Madhya Pradesh which further continues over Maharashtra, NCT of Delhi, Himachal Pradesh and western Uttar Pradesh depending upon intensity of the disturbance.

• Impact on Agriculture

- ♦ Precipitation received due to Western disturbance helps in growth of Rabi Crops across North-Western India.
- ♦ Sowing of wheat in states such as Punjab and Haryana is done after showers received from it.
- ♦ However, excessive precipitation due to western disturbances may cause crop damage, landslides, floods and avalanches in hilly states of Himachal Pradesh, UT of Jammu and Kashmir and Uttarakhand.

• Impact on weather

- ♦ Jammu and Kashmir along with Himachal Pradesh experiences snow due to western disturbance.
- ♦ The cold wind blowing from there lowers the temperature of adjoining states such as NCT of Delhi and Uttar Pradesh up to 10°C.

Significance of Western Disturbance:

- Western disturbance has played a vital role in ensuring food security of India by influencing crop productivity in two major agricultural states such as Punjab and Haryana.
- As per trends, despite canal irrigation, Rabi crops are adversely affected during the years of weak western disturbance because it provides cloudiness, influences diurnal temperature range and other parameters essential for better productivity of Rabi crops.
- **WDs are not usually associated with disasters**, since they are not high-intensity weather systems. These are advective (horizontal movement of a mass of fluid such as air or an ocean current), not convective systems, so they don't have a lot of energy and usually don't cause heavy precipitation.
- However, anomalies do exist. E.g. WDs had a role to play in the Leh cloudburst of 2010, **Uttarakhand rains of 2013**, and the **J&K floods of 2014**.

Way Forward:

- **The lack of data** and understanding of the mechanics of WDs has also led to debates about the impact of global warming and climate change on western disturbance formation and intensity.
- In an age where droughts, crop failure and melting glaciers are becoming all too common, studying these linkages more closely will allow scientists to get deeper insights into western disturbances, how they may have changed over the years, and most importantly, what we can do about it.

NCAER STUDY ON NATIONAL MONSOON MISSION

A new study has been conducted by NCAER to evaluate the impact of the National Monsoon Mission.

About:

- **NCAER study:** A study has revealed that investments of nearly Rs 1,000 crore over 5 years in the National Monsoon Mission and the High-Performance Computing programme have generated economic benefits worth Rs 50,000 crore for farmers, livestock rearers and fishermen.
- **IVRS system:** The NCAER survey used interactive voice response system (IVRS) to validate their survey data. IVRS allows computers to interact with humans through the use of voice and input via keyboard.
- **Highlights of the NCAER Study:** The report mentions the following impact of weather advisories on farmers:
 - ♦ **Change in the agricultural practises:** With the usage of weather advisories, 98 per cent of the farmers made changes to at least one of the nine critical practises.
 - ♦ **Increase in income:** 94 per cent of farmers who took to modifications in farm practises in the account of weather forecasts saw an increase in income.
 - ♦ **The drastic increase in the use of weather advisories:** 59 per cent of farmers are reported to make use of weather forecasts twice a week.
 - ♦ **Information on calamities:** 55 per cent of farmers received information on calamities almost every time whereas 36 per cent received correct information occasionally.
 - ♦ **Every day Ocean State Forecast (OSF)** and warnings to fishermen going out to the sea by the Indian National Centre for Ocean Information Services (INCOIS) helped fishermen to increase their productivity.
 - Almost 82% of fishermen reported using OSF advisories before venturing into the sea.

National Monsoon Mission:

- **The mission was launched in 2012 by Ministry of Earth Sciences,** it contains a state-of-the-art ocean-atmospheric model for
 - ♦ **Improved prediction of monsoon** rainfall on the extended range to seasonal time scale (16 days to one season) and
 - ♦ **Improved prediction of temperature, rainfall and extreme weather** events on short to medium range time scale (up to 15 days)
- **Objectives:**
 - ♦ To improve Seasonal and Intra-Seasonal Monsoon Forecast
 - ♦ To improve Medium-Range Forecast.
- **Participating Institutions:**
 - ♦ Indian Institute of Tropical Meteorology, Pune (IITM)
 - ♦ National Centre for Medium-Range Weather Forecast, Noida (NCMRWF),
 - ♦ India Meteorological Department, New Delhi (IMD)
 - ♦ A National Steering Group to review and monitor progress.
 - ♦ Indian National Centre for Ocean Information Services (INCOIS)
- **Models Used:**
 - ♦ **Climate Forecast System (CFS):** The American model called "Climate Forecast System" (CFS) developed by National Centres for Environmental Prediction (NCEP), NOAA, USA has been identified as the basic modelling system.
 - CFS is a coupled ocean-atmosphere modeling system that combine data from ocean, atmosphere and land for providing long range forecasting
 - ♦ The Unified Model (UM), developed by the United Kingdom Meteorological Office (UKMO), UK. This model will be utilized for short to medium range prediction.

Need for NMM:

- **Monsoons are the lifeline** of the Indian agricultural system which is majorly rainfed. Variability in rainfall influences agricultural yield, power generation, economy etc.
 - ♦ Indian Summer Monsoon Rainfall (ISMR) amounts to more than 80 per cent of the annual rainfall in the country playing a pivotal role in food production.
- **It is important to know the variability** in rainfall to reduce the adverse impacts by capturing prior information about droughts and floods.
- The CFS has a moderate skill for retrospective forecast (hindcast) of seasonal monsoon rainfall and this skill needs to be improved to make the forecasts more useful.
 - ♦ Thus, there is an urgent need to develop an Indian model based on CFS coupled model with an improved hindcast skill.

High-Performance Computing Programme (HPC):

- It is a high-level computing setup which integrates the complex weather models, weather data for climate research and development and forecasting.
- Various institutions are involved in it under the aegis of Ministry of Earth Sciences.

National Council of Applied Economic Research (NCAER)

Established in 1956, NCAER is India's oldest and largest independent, non-profit, economic policy research institute, based in New Delhi.

ITS RAINING FORECASTS THROUGH THE AGES

1877

A deficient monsoon causes famine and govt asks IMD chief reporter HF Blanford to develop forecasts

1924

IMD director general Gilbert Walker develops regression formulae to give predictions for three sub-regions

2003

IMD refines model by restricting the parameters to 10

2007

Statistical model refined further, reducing parameters to 5 for an early forecast and 6 for an update in June

1886

After a few tentative forecasts for the sub-continent based on thickness of Himalayan snow cover

1989

DST secretary V R Gowarikar takes a major step by developing a 16 parameter statistical model

2004

Experimental dynamical model forecasts start

2012

The Rs 400 cr National Monsoon Mission begins work to improve dynamical forecasting

Significance:

- Forecast information helps farmers with decision-making for sowing, harvesting, irrigation schedule, vaccination of livestock and better fodder management.
- Helps predict pollution levels in Delhi and flood forecasting
- Helped reduce the operational cost of fishermen with ocean forecasts and advisories, thereby improving their livelihood.
- The non-economic benefits include saving of human and animal lives on account of floods, drought, cyclones etc.

Way Forward:

- National Monsoon Mission augmentation with the HPC facilities has helped the country in achieving a paradigm shift in weather and climate modelling for operational weather forecasts.

BROWN TARBALLS IN HIMALAYAS

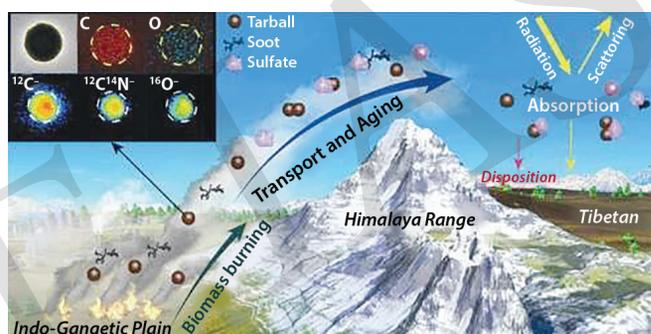
A study has highlighted that brown carbon 'tarballs' that fasten the glacial melting has been found in the Himalayan atmosphere.

About:

- Nearly **28 percent** of particles collected from the air samples

from a research station in the **Himalaya-Tibetan Plateau** were **tarballs**, a recent study has found.

- Until now, black carbon was found to be transported long distances by the wind to the Himalayan atmosphere.
- But much less is known about the presence of brown carbon, a particle that can form tarballs – small, viscous spheres consisting of carbon, oxygen, and small amounts of nitrogen, sulfur, and potassium.
- The study revealed that a dense array of active fire spots — corresponding to large-scale wheat-residue burning on the Indo-Gangetic Plain — occurred along the pathways of Himalaya. The percentage of tarballs increased on days of higher levels of pollution.



About Brown Tarballs:

- **Tarballs are small light-absorbing**, carbonaceous particles formed due to the burning of biomass or fossil fuels that deposit on snow and ice.
- **Tarballs are formed** from brown carbon, emitted during the burning of fossil fuels.
- **Black carbon can be transported to long distances** by the wind to the Himalayan atmosphere
- There was not sufficient direct evidence for primary brown carbon (BrC) in the Himalayan atmosphere.
- Primary brown carbon (BrC) is co-emitted with black carbon (BC) from biomass burning.

Different types of Carbon

Black Carbon	Brown Carbon
Incomplete combustion of fossil fuels	Combustion of Biomass
Inorganic	Organic
Absorb visible sunlight	Absorb the Ultraviolet part of sunlight
Contains soot so the jet black color	Brown Colour
Causes global warming	Causes global warming

INDO-GANGETIC PLAINS: GLOBAL HOTSPOTS FOR ATMOSPHERIC AMMONIA

Atmospheric ammonia over Indo-Gangetic plains has been rising as per a recent IIT study.

About:

- **According to the study** titled "Record high levels of atmospheric ammonia over India: Spatial and temporal analyses" by IIT Kharagpur researchers (published by Elsevier), the Indo-Gangetic Plain (IGP) is a global hot-spot of atmospheric ammonia (NH₃) due to intense agricultural activities and fertilizer production.

Atmospheric Ammonia in Indo-Gangetic Plains:

- **Atmospheric ammonia is generated** due to agricultural activities through use of nitrogenous fertilizers, manure management, soil and water management practices and animal husbandry.
- **Constant exchange:** The process is very dynamic and ammonia is constantly exchanged between the atmosphere and biosphere.
- **The IIT study analyzed satellite data** between 2008-16 for the seasonal and inter-annual variability of atmospheric ammonia emitted by the agricultural.
- **Causes:** The researchers showed the correlation between atmospheric ammonia and fertilizer consumption and temperature.
 - ♦ It was observed that atmospheric ammonia is growing rapidly at a rate of 0.08% annually during the summer-monsoon (Kharif crop period) season from June to August.
- **IGP is hotspot:** The findings cemented global environmentalists' apprehensions that IGP is global hotspot for atmospheric ammonia emissions.
- **Improvement in rest of India:** However, there is a decreasing trend in annual atmospheric NH₃ over India in accordance with the national missions and action plans.
- **International Scenario:** The study also mentions that there are positive trends in atmospheric NH₃ over the agricultural areas of the United States, China and Europe, about 1.8–2.61 per cent annually, depending on regions.

Significance:

- While gaseous ammonia is natural to Earth's nitrogen cycle, excessive ammonia is harmful to plants, cause algal blooms and dead zones in water bodies.
- Agro fertilizers containing high levels of ammonia are hazardous for human health, ecosystem and climate.
- Atmospheric ammonia contributes to atmospheric pollution by forming secondary aerosols.

- It deteriorates air quality of cities situated in Indo-Gangetic plains (such as Delhi).

Way Ahead:

- **Reform farming:** Wider adoption of precision farming should be encouraged, burning of agricultural wastes should be curbed and seasonal restrictions on the use of fertilizers should be made to reduce farm emissions of ammonia.
- **Nitrogen in animal diets must be reduced** and manure must be recycled and stored with minimum risk of run-off and seepage.

LA NINA IN 2020

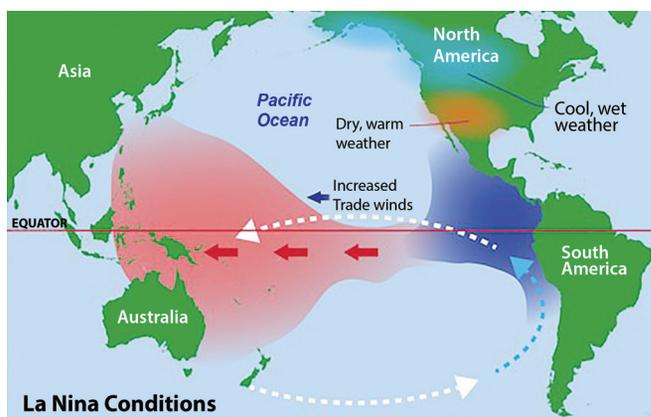
The IMD has predicted colder than normal temperatures in winter from December 2020 to February 2021.

About:

- **Lower Minimum Temperature:** The minimum temperatures in north, northwest, central and some areas in eastern India may be lower than the average, the maximum temperatures in some of the same regions such as north, northwest, eastern and some parts of central India may be higher than the average.
- **Higher diurnal range:** The gap between day and night temperatures in many parts of India will be wider, which could create erratic winter conditions.

La Nina:

- **Part of ENSO:** La Nina phenomenon as a part of El Nino-Southern Oscillation (ENSO) involves unusual cooling of the central and east-central equatorial Pacific Ocean.
- **Cooling of Eastern Pacific:** The winds blow the warm surface water of the Pacific Ocean westwards on the ocean's surface from South America to Indonesia. The warm water is replaced by the cold water rising to the surface, causing eastern Pacific to be colder than normal.



January, 2021

- **Stronger winter winds:** Climate-wise, in a La Niña year, winter winds are stronger and make the equatorial water a few degrees colder than normal.
- **It usually brings better monsoons and colder than normal winters in India,** droughts in Peru and Ecuador, heavy floods in Australia, and high temperatures in the Indian Ocean and the Pacific.
- **The Indian subcontinent** gets influenced by the cold air from Siberia and South China, which interacts with the tropical heating to produce a north-south low-pressure system.
- The cold air associated with this north-south trough extends to South India, occupying a larger area, except North East.
- However, this trough also reduces the impact of Western Disturbances.

Significance:

- In India, La Nina may create erratic winter conditions, affecting agriculture in Rabi season, especially wheat cultivation.
- It can affect productivity of cash crops such as coffee, which is extremely sensitive to temperature variations.
- La Nina conditions also favour cold wave conditions and elongates winter season.

MALAYAN GIANT SQUIRREL (RATUFA BICOLOR)

It is one of the three giant squirrel species found in India and its habitat is under threat.

About:

- A study by Zoological Survey of India (ZSI) has projected that numbers of the Malayan Giant Squirrel (*Ratufa bicolor*) could decline by 90 per cent in India by 2050.



Malayan Giant Squirrel (*Ratufa bicolor*):

- **IUCN Status:** Near Threatened (2016)
- The Malayan Giant Squirrel, one of the world's largest squirrel species that has a dark upper body, pale under parts, and a long, bushy tail, native to Northeast India.
- It is diurnal, arboreal and an herbivore.
- It is also an indicator species and helps in pollination and seed dispersal.
- **Habitat:** Evergreen and semi-evergreen forests, plains, hills between 50-1500 m elevation. In India, about 20% of the species population is found at elevations between 1,500 m and 2,700 m and the rest live in the plains and up to 1,500 m.

- **Distribution:** West Bengal, Sikkim, Assam, Arunachal Pradesh, Meghalaya, and Nagaland in India and Southern China, Thailand, Laos, Vietnam, Burma, the Malayan Peninsula, Sumatra, and Java. Of 1.84 lakh sq.km total area in Asia, about 15635 sq km (8.5%) is in India.

Malayan Giant Squirrel:

- Only 43.38% of the squirrel's original habitat in India is now favourable for its population, and by 2050, it could shrink to 2.94%.
- The other 2 giants squirrels found in India are the Indian Giant Squirrel and Grizzled Giant Squirrel, which are found in peninsular India.

Threats:

- The squirrel population in India declined by 30% over the last two decades.
- Deforestation, fragmentation of forests, crop cultivation and over-harvesting of food, illegal trade in wildlife, hunting for consumption and jhum cultivation in North East are the biggest threats.
- Trees act like arboreal highways for the giant squirrels and loss of canopy makes it difficult for the squirrels to move around, find food and mate.
- With habitat destruction, the species may be restricted to Sikkim and North Bengal by 2050.
- With no conservation plan, the species may see further loss and likely go extinct.

SAGUNA RICE TECHNIQUE

The technique differs from conventional paddy cultivation and adopted widely in Maharashtra.

About:

- Conventional rice cultivation uses more water, results in loss of topsoil, is a labour intensive and sensitive to monsoonal variations. The Saguna Rice Technique developed indigenously in India overcomes these problems of traditional rice cultivation.

Saguna Rice Technique (SRT):

- It is a unique method of rice cultivation on permanent raised beds and involves crop rotation without ploughing, puddling and transplanting rice and hoeing.
- It has zero tillage and is a conservation agriculture type of cultivation.
- After the raised soil bed is prepared (and used again and again for next crop), a special SRT tool is used to dig holes

in the ground and the seed is sown. Fungicide, beneficial microorganisms, weedicide, irrigation is then applied as per need.

- After harvest, the roots of the crop are left behind to decay and decompose by earthworms. This also aerates the soil.
- The technique was developed by Chandrashekhar Bhadsavale at Saguna, Raigad (Maharashtra).

Advantages:

- Supplies ample oxygen to root zone
- Maintains optimum moisture conditions
- Reduces labour and production costs
- Prevents loss of soil fertility and erosion during puddling and tilling.
- Reduces GHG emissions
- Resilient to erratic rainfall
- Improves water-holding capacity of soil

Significance:

- Rice cultivation becomes remunerative on adoption of SRT.
- The dependence of rice cultivation on monsoons is reduced.
- The technique was piloted in Saguna, Satara district (Maharashtra) and since then has been successfully replicated in other places.
- The technique makes agriculture sustainable by enriching entire ecosystem through optimum use of all inputs – water, fertilizers, seeds, weedicides, etc.

GANGA UTSAV

Ganga Utsav concludes virtually amid COVID-19 precautions.

About:

- Ganga Utsav is a 3-day festival celebrating river Ganga.
- **The National Mission for Clean Ganga (NMCG)** had been celebrating the day of declaration of river Ganga as 'National River' on 4th November.
- Various events in this Utsav like Musical performances, Story-telling, Quiz, discussions with eminent personalities and food walk were conducted.
- **A special Ganga Film Festival** was showcased to use films as a medium to evoke critical thinking and empathy towards ecology and environment.
- **Ganga Task Force** has conducted afforestation drive with NCC cadets and educational tour for youth in project area.
- **Swachhata drive and plantation** on river banks, quiz and painting competitions, water body cleaning etc. were reported from various districts on bank of River Ganga.

River Ganga

- Ganga River is a trans-boundary River of Asia which flows through India and Bangladesh.
- The 2,525 km (1,569 mi) river rises in the western Himalayas in the Indian state of Uttarakhand, and flows south and east through the Gangetic Plain of North India into Bangladesh, where it empties into the Bay of Bengal.
- Ganga basin is the largest river basin in India in terms of catchment area, constituting 26% of the country's land mass (8,61,404 Sq. km) and supporting about 43% of its population (448.3 million as per 2001 census).
- About 79% area of Ganga basin is in India. The basin covers 11 states.
- The Ganges is threatened by severe pollution. This poses a danger not only to humans but also to animals.
- The Ganges is home to approximately 140 species of fish and 90 species of amphibians. The river also contains reptiles and mammals, including critically endangered species such as the Gharial and South Asian river dolphin.

Conservation Measures taken by the Government:

- **Ganga Action Plan**
 - ♦ The Ganga Action Plan (GAP) was launched by Rajiv Gandhi, the then Prime Minister of India, on June 1986 with covering 25 Class I towns.
 - ♦ Its main objective was to improve the water quality by the interception, diversion and treatment of domestic sewage and to prevent toxic and industrial chemical wastes from identified polluting units from entering the river.
 - ♦ Phase II covered 59 towns in five states; Rs 505.31 cr were spent. Rivers such as Yamuna, Gomti, Damodar, Mahananda had separate action plans.
- **National Ganga River Basin Authority:**
 - ♦ NRGABA was established by the Central Government of India, on 20 February 2009 under Section 3 of the Environment Protection Act, 1986.
 - ♦ It declared the Ganges as the "National River" of India.
 - ♦ The chair includes the Prime Minister of India and chief ministers of states through which the Ganges flows.
 - ♦ In 2011, the World Bank approved \$1 billion in funding for the National Ganges River Basin Authority.
- **Namami Gange Programme:**
 - ♦ Namami Gange Programme was launched in Union Budget of 2014
 - ♦ The objectives were effective abatement of pollution, conservation, and rejuvenation of the Ganges. Under the project, 8 states are covered.
 - ♦ Ministry of Drinking Water Supply and Sanitation proposes to make 1,674 gram panchayats by the Ganges open defecation-free by 2022.

- ♦ As a part of the program, government of India ordered the shutdown of 48 industrial units around the Ganges.
- ♦ The program has a budget outlay of Rs. 20,000 crore for the next five years. The centre will now take over 100% funding of various activities/ projects under this program.
- ♦ The program emphasises on improved co-ordination mechanisms between various ministries/agencies of central and state governments.

COMMISSION FOR AIR QUALITY MANAGEMENT (CAQM)

Former Chief Secretary of Delhi M.M. Kutty was appointed Chairperson of CAQM in NCR and Adjoining Areas.

About:

- **Commission for Air Quality Management (CAQM):** The Ministry of Environment, Forest and Climate Change through an ordinance has constituted the CAQM that will address air pollution in Delhi, Punjab, Rajasthan, Haryana and U.P.
- **Commission for Air Quality Management (CAQM):**
 - ♦ The Government of India promulgated the Air Quality Management in National Capital Region and Adjoining Areas Ordinance, 2020.
 - ♦ Adjoining areas refers to areas in the states of Haryana, Punjab, Rajasthan, and Uttar Pradesh where any source of pollution may cause adverse impact on air quality in the NCR.
- **Functions of the Commission:**
 - ♦ Functions of the Commission include:
 - Co-ordinating actions taken under the Ordinance by concerned state governments (Delhi, Haryana, Punjab, Rajasthan, and Uttar Pradesh),
 - Planning and executing plans to prevent and control air pollution in the region,
 - Providing a framework for identification of air pollutants,
 - Conducting research and development through networking with technical institutions,
 - Training and creating a special work force to deal with issues related to air pollution, and
 - Preparing various action plans such as increasing plantation and addressing stubble burning.
- **Powers of the Commission:**
 - ♦ Powers of the Commission include:
 - Restricting activities influencing air quality,
 - Investigating and conducting research related to environmental pollution impacting air quality,
 - Preparing codes and guidelines to prevent and control air pollution, and

- Issuing directions which will be binding on the concerned person or authority.
- ♦ The Commission will be the sole authority with jurisdiction over matters defined in the Ordinance (such as air quality management). In case of any conflict, the orders or directions of the Commission will prevail over the orders of the state governments (of Delhi, Haryana, Punjab, Rajasthan, and Uttar Pradesh), the Central Pollution Control Board (CPCB), state PCBs, and state-level statutory bodies.
- **Composition:**
 - ♦ The Commission will consist of:
 - A Chairperson,
 - Two Joint Secretaries from the central government,
 - Three persons with knowledge and expertise related to air pollution as independent technical members,
 - Three members from non-government organisations.
 - ♦ The Commission will also include ex-officio members:
 - From the central government and concerned state governments, and
 - As technical members from CPCB, Indian Space Research Organisation (ISRO), and NITI Aayog.
 - ♦ The Chairperson and members of the Commission will have tenure of three years or till the age of seventy years, whichever is earlier.
- **Penal Provisions:**
 - ♦ Any violation of the provisions of the Ordinance or orders and directions of the Commission is punishable with imprisonment of up to five years or fine of up to one crore rupees or both.
 - ♦ **The appeals against the Commission's orders** will be entertained by the National Green Tribunal.

Environment Pollution (Prevention and Control) Authority (EPCA):

- In 1998, on the orders of the Supreme Court of India in M C Mehta vs Union of India (1985) constituted EPCA for Delhi-NCR.
- **It is not a statutory body:** The EPCA was not, however, supported by a legal framework in the form of a law.
- EPCA has derived its powers from section 5 of the Environment (Protection) Act, 1986.
- It did have the power to enforce penal provisions.
- Its mandate was limited as it has no participations from the concerning state.

LUHRI STAGE-I HYDRO ELECTRIC PROJECT

The Cabinet Committee on Economic Affairs has approved the investment for 210 MW Luhri Stage-I Hydro Electric Project located on river Satluj.

About:

- **The Cabinet Committee on Economic Affairs chaired by Prime Minister** has approved the investment of Rs.1810.56 crore for 210 MW Luhri Stage-I Hydro Electric Project located on river Satluj which is situated in Shimla & Kullu districts of Himachal Pradesh.
- **The run-of-river project** involves the construction of an 80m high concrete gravity dam on Satluj River and surface toe powerhouse on its right bank near Nirath village.
- **This project is being implemented by Satluj Jal Vidyut Nigam Limited (SJVNL)** on Build-Own-Operate-Maintain (BOOM) basis with active support from Government of India and State Government. By 2030, SJVN aims to have 5 GW of total installed capacity from all sources and increase that capacity to 12 GW by 2030 and 25 GW by 2040.

Build-Own-Operate-Maintain (BOOM)

Build Own Operate Maintain is a project financing system used in the construction services where a single contractor is given the responsibility for design, construction, operation and maintenance of a facility for a specified period prior to handing it over to the client.

- **Reduce carbon emission:** Besides adding valuable renewable energy to the Grid, the project would also lead to reduction of 6.1 lakh Tons of carbon dioxide from environment annually, thus contributing to improvement in air quality.
- **Employment:** The construction activities of the project will result in direct & indirect employment to around 2000 persons and will contribute to overall socio-economic development of the State.
- **Clean Power:** This project will generate 758.20 million units of electricity annually. Himachal Pradesh will benefit with free power worth around Rs. 1140 crore from Luhri Stage-I Hydro Electric Project, during Project Life Cycle of 40 years.
- **The Project Affected Families** will be provided with 100 units of free electricity per month for ten years.

DO YOU KNOW?

In 2019 Cabinet approved a decision to Large Hydropower Projects to be declared as Renewable Energy source (as per earlier practice, only hydropower projects less than 25 MW are categorized as Renewable Energy).

Run-of-River Project:

- Run-of-river hydroelectricity (ROR) or run-of-the-river hydroelectricity is a type of hydroelectric generation plant whereby little or no water storage is provided.
- Run-of-the-river power plants may have no water storage at all or a limited amount of storage.

- A plant without storage depends upon seasonal river flows, thus the plant will operate as an intermittent energy source.
- Conventional hydro uses reservoirs, which regulate water for flood control, dispatchable electrical power, and the provision of fresh water for agriculture.

Satluj Jal Vidyut Nigam Limited (SJVNL)

- SJVN Limited, a Mini Ratna, CPSE under administrative control of Ministry of Power, Govt. of India, was incorporated on May 24, 1988 as a joint venture of the Government of India (GOI) and the Government of Himachal Pradesh (GOHP).
- The Company has commissioned seven projects totaling 2016.51 MW of installed capacity and 86 km 400 KV Transmission Line.
- SJVN is presently implementing or operating power projects in Himachal Pradesh, Uttarakhand, Bihar, Maharashtra and Gujarat in India besides neighbouring countries of Nepal and Bhutan.

Hydro-Electricity in India:

- India is 5th globally for installed hydroelectric power capacity.
- India's installed utility-scale hydroelectric capacity was 46,000 MW against the power potential of 148,700 MW at 60% load factor.
- The hydro-electric power plants at Darjeeling and Shivanasamudram were established in 1898 and 1902, respectively.
- Small hydropower, defined to be generated at facilities with nameplate capacities up to 25 MW, comes under the ambit of the Ministry of New and Renewable energy (MNRE); whilst large hydro, defined as above 25 MW, comes under the ambit of Ministry of Power.

RESCUE OF EXOTIC SPECIES

Several Non-Asian exotic animals were rescued and relocated to Assam State Zoo.

About:

- Six Blue Macaws and two Capuchin Monkeys from South America, three Aldabra Tortoises from Seychelles and a Kangaroo from Australia were being smuggled in from Myanmar.
 - These Non-Asian exotic animals were rescued and released in the Assam State Zoo-cum-Botanical Garden in Guwahati.
- The birds and monkeys are native to Central and South America.

Blue or Hyacinth Macaw:

- The **hyacinth macaw, or Blue macaw**, is a parrot native to central and eastern South America.
- It is the largest macaw and the largest flying parrot species.
- Habitat loss and the trapping of wild birds for the pet trade have taken a heavy toll on their population in the wild.
- **IUCN status:** Vulnerable.
- **CITES Status:** Appendix I



Aldabra Tortoise:

- The Aldabra giant tortoise, from the islands of the Aldabra Atoll in the Seychelles, is one of the largest tortoises in the world.



Capuchin Monkey:

- The Capuchin Monkeys are New World monkeys of the subfamily Cebinae. The range of capuchin monkeys includes some tropical forests in Central America and South America as far south as northern Argentina.



Kangaroo:

- The kangaroo is a marsupial from the family Macropodidae
- The kangaroo is a symbol of Australia, appears on the Australian coat of arms.
- Wild kangaroos are shot for meat, leather hides, and to protect grazing land.



Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

- It is an international agreement between governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival.
 - ♦ CITES was drafted as a result of a resolution adopted in 1963 at a meeting of members of IUCN.
- **Appendix I** contain species that are threatened with extinction and are or may be affected by trade. Commercial trade in wild-caught specimens of these species is illegal (permitted only in exceptional licensed circumstances).
- **Appendix II** contain species, that are not necessarily threatened with extinction, but may become so unless trade in specimens of such species is subject to strict regulation in order to avoid utilization incompatible with the survival of the species in the wild.

- ♦ In addition, Appendix II can include species similar in appearance to species already listed in the Appendices.
- **Appendix III** contain species, are species that are listed after one member country has asked other CITES Parties for assistance in controlling trade in a species. The species are not necessarily threatened with extinction globally.
 - ♦ In all member countries, trade in these species is only permitted with an appropriate export permit and a certificate of origin from the state of the member country who has listed the species.

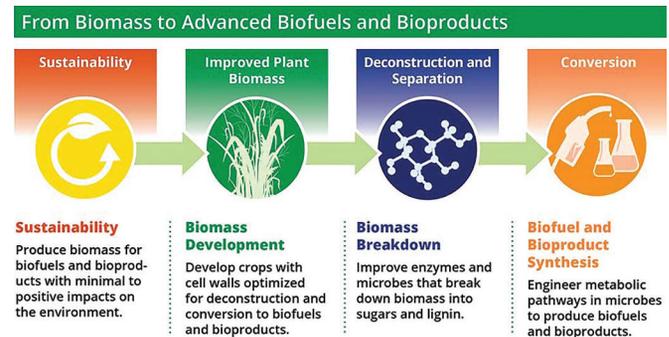
SATAT INITIATIVE

Rs. 2 lakh crore to be invested for setting up 5000 Compressed Bio-Gas (CBG) in the country.

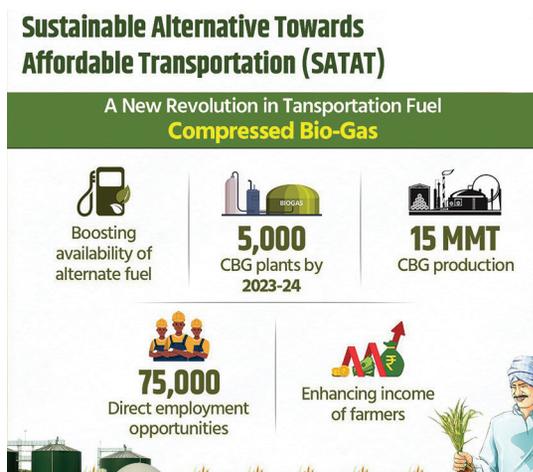
About:

- **MoU:** To boost availability of affordable and clean transport fuels, a MoU was signed between Ministry of Petroleum and Natural Gas and leading oil & gas marketing companies & technology providers to establish Compressed Bio-Gas (CBG) plants across India under the Sustainable Alternative Towards Affordable Transportation (SATAT) initiative.

Compressed Bio-Gas:



- **CBG can be produced through organic decomposition** of waste, including municipal solid waste, sludge from wastewater treatment plants, market residues, agricultural residues, cattle dung, sugarcane press mud, sago waste, etc.
- **Mostly Methane:** After purification, it is compressed and called CBG, which has a pure methane content of over 95%.
- **Biogas can be compressed after removal of Carbon dioxide**, the same way as natural gas is compressed to CNG, and used to power motor vehicles.
- **Compressed Biogas is considered to be a renewable resource** because its production-and-use cycle is continuous, and it generates no net carbon dioxide.

SATAT Initiative:

- It was launched in October 2018 by the Ministry of Petroleum & Natural Gas in association with Public Sector Undertaking (PSU) and Oil Marketing Companies (OMC).
- **Aim:** Government of India, under the SATAT initiatives envisages setting up of 5000 CBG plants by 2023-24 with production target of 15 MMT.
- **Mainly through independent entrepreneurs:** Under this initiative, a Compressed Biogas production plant has been set up and made available in the market to use in automotive fuels by inviting potential entrepreneurs.
- The entrepreneurs would be able to separately market the other by-products from these plants, including bio-manure, carbon-dioxide, etc., to enhance returns on investment.
- **CBG plants will provide an additional revenue source to farmers,** and 75,000 direct job opportunities and lakhs of indirect jobs.
- CBG produced at these plants will be transported through cylinders to the fuel station networks of OMCs for marketing as a green transport fuel alternative.
 - ♦ **Included in PSL:** Reserve Bank of India has included CBG in priority sector lending framework.

SKINKS OF INDIA REPORT

Skinks of India Report was published by, Zoological Survey of India (ZSI).

About:

- **Skinks** are harmless, insectivorous lizards are found across the country in every bio-geographic zone.
- **They have long bodies,** relatively small or no legs, no pronounced neck and glossy scales, skinks are common reptiles around homes, garages, and open spaces such as parks and school playgrounds, and around lakes.



- **They are common reptiles** and have a prominent role in maintaining ecosystems, not much is known about their breeding habits, and ecology because identification of the species can be confusing.
- **Skinks are highly alert, agile and fast moving** and actively forage for a variety of insects and small invertebrates.
- **The reduced limbs of certain skink** species or the complete lack of them make their slithering movements resemble those of snakes, leading people to have incorrect notion that they are venomous. This results in several of these harmless creatures being killed.

Skink Diversity in India:

- **The Western Ghats** are home to 24 species of skink which 18 are endemic to the region.
- **The Deccan Peninsular region** is home to 19 species of which 13 are endemic. There are records of 14 skink species from the northeast of which two species are endemic.
- **A recent publication by the Zoological Survey of India (ZSI)** reveals that India is home to 62 species of skinks and says about 57% of all the skinks found in India (33 species) are endemic.
 - ♦ **Barkudia insularis** believed to be found only in the Barkud Island in Chilka Lake in Odisha.
 - ♦ **Barkudia melanosticta** is endemic to Visakhapatnam.
 - ♦ **Sepsophis punctatus** is endemic to the northern part of Eastern Ghats.
 - ♦ **Five species of Kaestlea (blue-tailed ground skinks)** are endemic to the Western Ghats and four species of Ristella (Cat skinks) also endemic to the southern part of Western Ghats.
- The book also gives a phylogenetic and bio-geographical analysis of distribution of these species in all the 11 bio-geographic zones of India.

Zoological Survey of India

- The Zoological Survey of India (ZSI) was established on 1st July, 1916 to promote survey, exploration and research leading to the advancement in our knowledge of various aspects of exceptionally rich life of the erstwhile 'British Indian Empire'.
- ZSI is engaged in exploring, naming, describing, classifying and documenting animals from all over India.
- With reference to Articles 5, 6, 7, 8, 10, 13, 14, 17 and 18 of the Biodiversity Convention, the role of ZSI has been broadened with respect to its primary and secondary objectives.
- It comes under the Ministry of Environment, Forest and Climate Change.

VULTURE ACTION PLAN 2020-2025

The National Board for Wildlife has recently approved the National Action Plan for Vulture Conservation, 2020-25.

About:

- The National Board for Wildlife (NBWL) has cleared an Action Plan for Vulture Conservation 2020-2025 (APVC) for conserving vultures.
- Ministry of Environment, Forest and Climate Change (MoEFCC), with the coordination of State Forest Departments and Bombay Natural History Society (BNHS) took several important measures to implement the Action Plan.
- The plan will adopt both ex-situ and in-situ method of conservation.

Vulture Population in India:

- **Nine species of vultures** are recorded from India.
- **Reducing Population:** The populations of most common vultures - Oriental white-backed, Longbilled, and Slender-billed - declined by more than 96 percent in just a single decade (1993-2003).
- **Diclofenac:** The cattle analgesic Diclofenac was identified as the probable cause and was quickly banned in India.
- **IUNC status:** Eight out of 16 species were Critically Endangered, 3 were Endangered and 4 Near Threatened and only one was of Least Concern.
- The populations are precariously small and vulnerable period will be lengthy because of the low natural reproductive capacity.

National Action Plan for Vulture Conservation, 2020-25:

- The Action Plan for Vulture Conservation 2020 will benefit from the International plans like The Multi-Species Action Plan to Conserve African-Eurasian Vultures (Vulture MsAP) of the Convention of Migratory Species (CMS).
- **First Plan in 2006:** The MoEFCC released the Action Plan for Vulture Conservation (APVC) in 2006 for the first time to save the vultures from possible extinction.

Objectives of APVC 2020-25:

- **Prevent the poisoning** of the principal food of vultures, by ensuring that sale of veterinary drugs is regulated.
- **Carry out safety testing** of drugs.
- **Breeding centres:** It is proposed to set up one Conservation Breeding Centres each in Uttar Pradesh, Tripura, Maharashtra, Karnataka and Tamil Nadu.
- **Four rescue centres** have been proposed at Pinjore in the north, Bhopal in Central India, Guwahati in Northeast India and Hyderabad in South India.

- **Safe Zones:** Plan for Vulture Conservation proposed to have at least one vulture safe zone in each State.
- **Create database on emerging threats** to vulture conservation such as collision and electrocution and unintentional poisoning, etc.
- Vultures are not only important for environmental health, but also have considerable cultural and religious significance in India and elsewhere.

STATUS OF LEOPARDS REPORT

Union Minister for Environment has recently released the Status of Leopards in India Report 2018.

About:

- The counting of leopards was undertaken along with the Tiger population assessment of 2018 using the camera trapping method.

Key Findings of the Report:

- **Leopards in India:** There has been a 60% increase in the population count of leopards in India from 2014 estimates.
- **Highest Number of Leopards:** The largest number of leopards have been estimated in Madhya Pradesh (3,421) followed by Karnataka (1,783) and Maharashtra (1,690).
- **Region-wise distribution:** Central India and the Eastern Ghats have the highest number of leopards at 8,071.
 - ♦ **Western Ghats:** 3,387 leopards
 - ♦ **Shivalik and Gangetic Plains:** 1,253 leopards
 - ♦ **Northeast hills:** 141 leopards
- **Habitat:** The leopards are currently found in forested habitats in tiger range areas of the country. Apart from these regions, leopards are also found in arid landscapes, higher elevations of the Himalayas, and the majority of the North East landscapes.
- **Conservation Status of Leopards:** IUCN Red List: Vulnerable
 - ♦ Wildlife (Protection) Act, 1972: Schedule I
 - ♦ CITES Appendix I
 - ♦ It lists species that are the most endangered among CITES-listed animals and plants.
- **Concerns:** Fragmentation of forests as well as the decline in quality of forests leading to habitat loss, Human-Leopard conflict, Poaching, and Depletion of natural prey base.

Indian Leopard

- The Indian leopard (*Panthera pardus fusca*) is a leopard subspecies widely distributed on the Indian subcontinent.
- **Melanism** is a common occurrence in leopards, wherein the entire skin of the animal is black, including its spots.

7

SCIENCE & TECHNOLOGY

IPBES REPORT ON FUTURE PANDEMICS

Recently, IPBES released a report titled #PandemicsReport addressing the various issues with Pandemics

About:

- The IPBES report studies the links between pandemic risk and nature since the COVID-19 pandemic began.
- The IPBES #PandemicReport also identifies frameworks that can play a significant role in building the needed resilience for the post-2020 global biodiversity against the growing environmental, health and development challenges.

What are the major highlights?

IPBES report provides policymakers with objective scientific assessments about the state of knowledge regarding the planet's biodiversity, ecosystems and the benefits they provide to people, as well as the tools and methods to protect and sustainably use these vital natural assets.

- The estimated cost of the COVID-19 pandemic ranges between \$8 trillion to \$16 trillion.
- The annual global economic damages due to pandemics is likely to be more than 1 trillion dollars.
- Total annual financial allocation for global biodiversity conservation will range between \$78 billion to \$91 billion.
- More than 70% of emerging diseases (e.g., Ebola, Zika, Nipah encephalitis) caused by microbes found in animals (zoonotic pathogens).
- Almost all of pandemics (e.g., influenza, SARS, COVID-19) have been caused by zoonoses.
- An estimated 631,000 to 827,000 number of viruses have the ability to infect humans.
- Nearly one-fourth of the wild terrestrial vertebrate species are traded globally.
- Annual value of the world's illegal wildlife trade is \$7 billion to \$23 billion.
- Almost half of the Pandemics since the Great Influenza pandemic of 1918 has been caused by influenza viruses (HIV/AIDS, SARS, and COVID-19).
- An anticipated 1 billion ha area of land will be cleared globally by 2050.
- More than 30% of emerging infectious diseases are attributed to land use change, agricultural expansion and urbanization.

THE PATHWAY OF EPIDEMICS



What can be done?

The report offers a number of policy options that would help to reduce and address pandemic risk. Among these are:

- **Launching a high-level intergovernmental council** on pandemic prevention solutions.
- **Setting up of mutually-agreed goals** or targets within the framework of an international accord or agreement among countries.
- **Institutionalizing the 'One Health' approach** in national governments to build pandemic preparedness, enhance pandemic prevention programs, and to investigate and control outbreaks across sectors.
- **Developing and incorporating pandemic and emerging disease risk** health impact assessments in major development and land-use projects.
- Reforming financial aid for land-use to recognize and explicitly target benefits and risks to biodiversity and health.
- To ensure that the economic cost of pandemics is factored into consumption, production, and government policies and budgets.
- Enabling changes to reduce the types of consumption, globalized agricultural expansion and trade that have led to pandemics.

January, 2021

- Reducing zoonotic disease risks in the international wildlife trade.
- **Valuing Indigenous Peoples** and local communities' engagement and knowledge in pandemic prevention programs, achieving greater food security, and reducing consumption of wildlife.
- **Besides, there is need for closing the critical knowledge gaps** such as those about key risk behaviors, the relative importance of illegal, unregulated, and the legal and regulated wildlife trade in disease risk, and improving understanding of the relationship between ecosystem degradation and restoration, landscape structure and the risk of disease emergence.

IPBES

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) is an independent intergovernmental body, established to strengthen the science-policy interface for biodiversity and ecosystem services.

- Its secretariat is hosted by the German government.
- It is located on the UN campus, in Bonn, Germany.
- It has currently 137 member States.

It aims to strengthen the science-policy interface for biodiversity and ecosystem services for the conservation and sustainable use of biodiversity.

Way Ahead:

- Pandemics represent an existential threat to the health and welfare of people across our planet. In the face of COVID-19, with more than one million human deaths, and huge economic impacts, there is need for transformative change and use of scientific evidence to identify policy options to prevent pandemics.
- The report provides a powerful incentive to adopt these policy options and create the transformative change needed to prevent future pandemics.

EDINBURGH MEDAL 2020

CSE Director General Sunita Narain was awarded the prestigious Edinburgh Medal this year.

About:

- Centre for Science and Environment Director-General Ms Sunita Narain, an environmentalist and political activist, was awarded the Edinburgh Medal 2020 at the Indian High Commission Office, New Delhi.
- She is the second Indian after Amartya Sen (1997) to be awarded this medal.

Edinburgh Medal:

- The medal is awarded to women and men who have made significant contributions to science and technology, and the understanding and well-being of humanity.
- It was started in 1988 and is awarded annually by the City of Edinburgh Council.
- The medal recognizes Ms. Narain's role in formulating climate policies and showing strong leadership in championing the cause of climate justice for the poor.

Centre for Science and Environment

- CSE is a think-tank based in Delhi that lobbies for sustainable and equitable development through knowledge-based activism.
- Their work covers diverse areas for issues related to air, water, habitat, renewable energy, climate change, food and toxins, waste.
- They also publish the fortnightly **Down to Earth magazine** and many other educational books.

Contributions of Ms Narain:

- Ms Narain was also awarded the 'national climate leader' from India for 2019 in the first National Climate Leader Awards published in the Global Spotlight Report #22 by Climate Scorecard.
- She was a member of the Prime Minister's Council for Climate Change (2007-14) and played a major role in Indian and global environment and development policy formulation.
- She has authored many books such as *'Why I Should Be Tolerant'*, *'Conflicts Of Interest- My Journey through India's Green Movement'*, *'The Politics of Environment' (Hindi)*.

AUGMENTED REALITY

Google partnered with Disney and Lucasfilm to bring the Star Wars series film, The Mandalorian, to augmented reality.

About:

- It is available at the newly developed app named "The Mandalorian" AR Experience.
- Augmented Reality (AR) is the real-time use of information in the form of text, graphics, audio, or other virtual enhancements integrated with real-world objects.
- It is an enhancement in quality and aspects of real-world objects with the help of computer-generated perceptual information across multiple sensory modalities.
- The changes which are induced by augmented reality programs include:

- ♦ Visual effects
- ♦ Audio effects,
- ♦ **Haptic perception:** Effects that makes virtual objects touchable to users and
- ♦ **Olfaction:** Effects that induces the perception of smell
- AR combines real and virtual world and showcases real-time interaction with accurate 3D registration of virtual and real objects.

Applications of Augmented Reality:

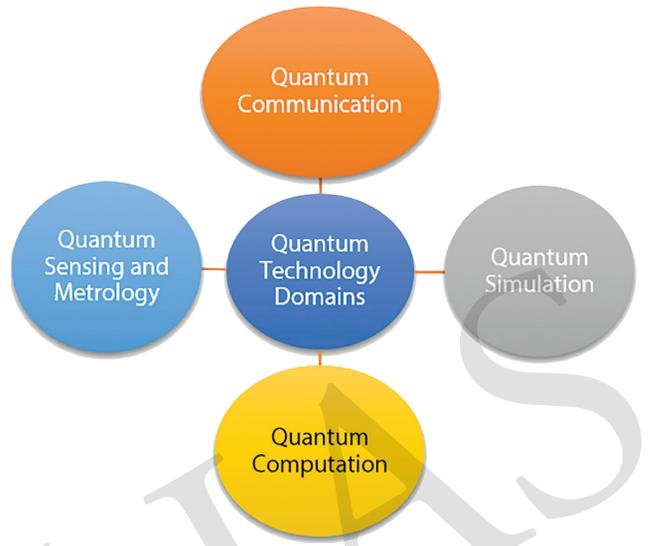
- **Entertainment:** Popular games like 'Pokemon Go' and "Jurassic Park", have used this technology to provide an augmented atmosphere to users.
- **Training doctors and performing surgeries:** It has currently been used in MRI applications and performing highly delicate surgeries. It is also used to make invasive surgeries with precision.
- **Maintenance of machinery:** Augmented reality is being used for the maintenance of machinery and servicing. For example, Automobile manufacturing company Porsche has been trying out AR as a new method to help mechanics during servicing and maintenance of its customers.
- **Live Broadcast:** Augmented Reality is used for broadcasting news showcasing real-time footage. It is also being used in educational documentaries, live sporting events, or other live news reporting.
- **Architectural design and construction:** AR helps professionals to visualize their final designs with ease during the planning phase.

Augmented Reality	Virtual Reality
Integrates text, graphics, audio, and adds value to the users' interaction with the real world.	Simulation of Reality
Transparent screen	Opaque screen
AR does not replace the actual world environment with 3D digital elements.	VR replaces the actual world environment with 3D digital elements
AR combines both the real-world and the virtual. Users of AR are still able to sense the real world around them.	VR is a completely computer-generated three-dimensional environment that is displayed either on a computer screen or through special displays.

Way Forward:

- Integration of the real and virtual world with augmented reality has provided an edge to different field experts to form a real-world model and analyze its possible limitations and advantages.

- Augmented reality has overall given a boost to the Fourth Industrial Revolution.



CHANGE'S 5 PROBE

China's Chang'e-5 probe lands back on Earth carrying moon rocks.

About:

- Chang'e-5 probe, which is named after the Chinese Moon goddess who is traditionally accompanied by a white or jade rabbit, is the Chinese National Space Administration's (CNSA) lunar sample return mission.
- The goal of the mission is to land in the Mons Rumker region of the moon.
- It aims to return with a 2 kg sample of the lunar rock possibly by digging about 2 meters deep into the surface of the Moon
- The entire mission is scheduled to take around 23 days.
- The mission comprises a lunar orbiter, a lander, and an ascent probe that will lift the lunar samples back into orbit and return them to Earth.
- It comprises a robotic arm, a coring drill, a sample chamber and is also equipped with a camera, penetrating radar, and a spectrometer.
- If successful, China will be only the third country to have retrieved samples from the moon, following the U.S. and the Soviet Union in the 1960s and 1970s.

Significance:

- Lunar samples can help to unravel some important questions in lunar science and astronomy, including the Moon's age, the formation of the Moon, the similarities and differences between the Earth and the Moon's geologic features.

MOON MISSIONS

Previous Moon Missions:

- In 1959, the Soviet Union's uncrewed Luna 1 and 2 became the first rover to visit the Moon.
- In 1969, Neil Armstrong became the first human to step on the Moon as part of NASA's Apollo 11 mission.
- In the Apollo program (which first put men on the moon), the United States landed 12 astronauts over six flights from 1969 to 1972, bringing back 382 kg of rocks and soil.
- The Soviet Union Lead Luna: Deployed three successful robotic sample return missions in the 1970s. The last, the Luna 24, retrieved samples in 1976 from Mare Crisium, or "Sea of Crises" - a lunar basin.
- The Apollo-Luna sample zone of the moon, while critical to our understanding, was undertaken in an area that comprises far less than half the lunar surface.
- Subsequent data from orbital remote sensing missions have shown a wider diversity of rock types, mineralogies, and ages than represented in the Apollo-Luna sample collections.

- In 2008, India's first lunar program Chandrayaan 1 was launched.
- In 2009, the USA began a new series of robotic lunar missions with the launch of the Lunar Reconnaissance Orbiter (LRO) and the Lunar Crater Observation and Sensing Satellite (LCROSS).

India's Moon Missions:

Chandrayaan-1

- It was the first Indian lunar probe under the Chandrayaan program.
- The mission included a lunar orbiter and an impactor.

Chandrayaan-2

- It is the second lunar exploration mission developed by ISRO.
- It consists of a lunar orbiter, and also included the Vikram lander, and the Pragyan lunar rover, all of which were developed in India.
- The main scientific objective is to map and study the variations in lunar surface composition, as well as the location and abundance of lunar water.

- For instance, the shape, size, arrangement, and composition of individual grains and crystals in a rock can tell scientists about its history, while the radioactive clock can tell them the rock's age. Further, tiny cracks in rocks can tell them about the radiation history of the Sun in the last 100,000 years.
- Rocks found on the Moon are older than any that have been found on Earth and therefore they are valuable in providing information about the Earth and the Moon's shared history.
- The first samples of rocks from the Moon were collected during the Apollo 11 mission.

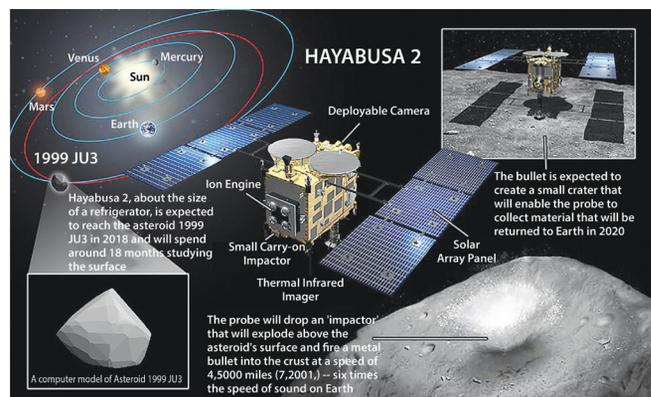
- This is the first time that underground samples are collected from an asteroid.
- The spacecraft took three and a half years to reach the asteroid to go. However, the return journey was much shorter due to its location relative to the earth.

HAYABUSA 2

Japan's Hayabusa 2 spacecraft is nearing the earth after a yearlong journey from the asteroid Ryugu.

About:

- The spacecraft is to reach the earth in Southern Australia on December 6, 2020, carrying precious samples from the asteroid.
- The entire operation is being held by JAXA, the Japanese Aerospace exploration agency (Japan's Space Agency).
- In February 2019, the spacecraft collected surface dust samples from the asteroid Ryugu. Later it collected underground samples from the asteroid also.



Hayabusa 2:

- This mission follows the Hayabusa mission that returned asteroid samples in 2010.
- Hayabusa2 was launched in 2014. It surveyed the asteroid Ryugu for a year and a half. Later it collected the samples from the asteroid and for the earth in November 2019.
- It aims to analyze the composition of the asteroid 1999 JU3 (Ryugu).

- The samples from asteroid Ryugu could give important insights into the early evolution of planets, and help to explain the origins of water on Earth.
- It carried multiple science payloads and four small rovers that will investigate the asteroid surface.
- Hayabusa2 has now begun its 11-year journey to its next destination: an asteroid known as 1998 KY26. To reach it, the spacecraft will fly by another asteroid 2001 CC21, and swing past Earth another two times.

Ryugu

- It is a small asteroid that is made up of carbonaceous material, which scientists think contains organic and hydrated minerals preserved since 4.6 billion years ago.
- The samples could help to explain how Earth became covered with water.
- Scientists think it came from the outer regions of the Solar System.

INDIAN MEDICINE CENTRAL COUNCIL (POST GRADUATE AYURVEDA EDUCATION) AMENDMENT REGULATIONS, 2020

Recently, the government has brought out a notification which has allowed Ayurveda doctors to be trained and to perform a variety of general surgical, ENT, ophthalmology, ortho and dental procedures.

About:

- **The Central Council of Indian Medicine** which regulates traditional system medicines in India brought this notification.
- **Allowed to perform surgery:** The notification is related to Shalya and Shalakya streams of Post Graduate Education in Ayurveda.
 - ♦ It has allowed to PG scholars of these streams to perform **58 surgical procedures.**
- **Practical training:** These PG scholars will be practically trained which will enable them to independently perform these surgeries.

The Central Council of Indian Medicine

- It is a statutory body which has been established under the Indian Medicine Central Council Act, 1970.
- It regulates the traditional Indian medicine systems such as Ayurveda, Siddha, Sowa-Rigpa, and Unani.
- It maintains Central Register of Indian Medicine and sets guidelines for practitioner.

- **MS degree in Ayurveda:** After the course, Post graduate students will be awarded the titles of MS (Ayurveda) Shalya Tantra general surgery and MS (Ayurveda) Shalakya Tantra which include diseases of the eye, ear, nose, throat, head or dentistry.

Criticism of the regulation:

- **Indian Medical Association (IMA)** has termed it as an act to corrupt the healthcare system of the country.
- It has been termed as mixing up of traditional and modern disciplines in medicine.
- According to IMA, it will also lead to end of pure Ayurvedic system of medicine.

Government stand on criticism:

- Ayurveda postgraduates will only be able to operate in specified 58 surgical procedures after getting training.
- Shalya and Shalakya are independent Departments in Ayurveda colleges which already exist and perform such surgical procedures in Ayurveda colleges.
- The government has clearly stated that this is a clarification for existing regulations of 2016.
- It has clarified that surgery by trained Ayurvedic practitioners having requisite degree is legal.

Significance:

- As per 2017, **only 1.34 doctors** are available for per 1,000 patients in India. The number of **trained surgeons** is even lesser.
- Further, there is **huge shortage of doctors in rural areas** due to their refusal to work in backward regions owing to **lack of facilities, security and other issues.**
- There is huge network of trained and untrained Ayurvedic doctors across the country.
- There are more than **8 lakhs registered Ayurveda doctors** in India who can complement the existing medical system.
- In rural India, outreach and acceptance of Ayurveda doctors is significant due to their affordability.
- The move to notify legal surgery by trained doctors can fill the gaps existing healthcare system.

Way Forward:

- Ayurveda has been globally recognized as an **alternative and sustainable medication system.**
- If trained Ayurveda surgeons are able to perform surgery which had been in practice for thousands of years, they must be amalgamated into mainstream healthcare system.
- It will help India to achieve sustainable development goals pertaining to **Good Health (SDG 3)** by creating a world class diverse healthcare system.



ETHICS

ETHICS OF VACCINATION: CHALLENGES AND ISSUES

Recently, the Government of India has announced to vaccinate its 3 crore health workers with COVID-19 Vaccine for free.

About:

- However, experts from across the spectrum have called for various types of ethical issues related to the production and vaccination process
- India being the world's current capital of vaccine production has a lot of liability and responsibility to deliver vaccines globally.
- Currently, more than 190 countries have asked the Government of India to supply vaccines to it.
- India will start to vaccinate its population from 16th January 2020. However, several ethical issues have led to controversy.

Ethical issues raised on COVID-19 vaccine:

- **Vaccine Nationalism around the globe:**
 - ♦ 'Vaccine Nationalism' is essentially a protectionist policy that is being adopted by developed countries across the world to procure more and more vaccines for their citizens first.
 - ♦ **Pre-purchase agreements:** This can be signified by the fact that even before the end of the final stage of human trials or regulatory approval, several wealthier countries like Britain, France, Germany, and the US have entered into pre-purchase agreements with Covid-19 vaccine manufacturers.
 - ♦ **Reserved more than 51% of vaccines:** Wealthy nations which represent just 13 percent of the world's population have already cornered more than half (51 percent) of the promised doses of the leading COVID-19 vaccine.
 - ♦ **No vaccines for 2/3rd of world population by 2022:** According to Oxfam, this wave of vaccine nationalism will exclude 66% of the world's population away from the vaccination process.
This parity based on economic status is against the concept of 'international brotherhood' and principles of the United Nation organization.
- **Vaccine Nationalism in India:** India has not officially intimated its vaccine manufacturers to provide vaccines to its citizen first.
 - ♦ However, there is unofficial pressure on them to do so.

- ♦ Further, companies like Serum Institute of India have been selling COVID-19 vaccine at Rs. 200 per dose to the government while the market price is at Rs. 1000 per dose.
- ♦ **Global Disaster:** If aggravated further from this level, Vaccine nationalism in India can be a global disaster as most of the developing nations of the world rely on India for vaccines.
- **Inadequate Trials**
 - ♦ Serious discrepancies have been found during the trials of the COVID-19 vaccine.
 - ♦ Some of the vaccine manufacturers have not tested the vaccine on other organisms which is contrary to international best practices.
 - ♦ COVAXIN manufacturer, Bharat Biotech has been alleged to bypass few trial procedures, which is against corporate ethics.
- **Lack of transparency**
 - ♦ Some of the vaccine manufacturers have not published their trial reports in the public domain.
 - ♦ This has caused serious problems with their reliability and accessibility of information regarding vaccines.
 - ♦ It is against the fundamental right of 'Right to Know' provided by Article 19(1) (a) of the constitution of India.
- **Questions raised on 'Rapid Development'**
 - ♦ All major COVID-19 vaccines across the globe have been rolled out within one year period.
 - ♦ Normally, a vaccine needs a 4-5 year period for its manufacture and trial.
 - ♦ The rapid development of vaccines has been touted as a serious concern over post-vaccination health issues and the invitation of a larger pandemic.
- **Fear Mongering causing dilemma**
 - ♦ Amid a humanitarian crisis that has seriously impacted mankind, fear-mongering for personal benefits has impacted the vaccination process.
 - ♦ Political and religious leaders globally have linked the vaccination process with religious beliefs, impotency, and other imaginary complexities.
 - ♦ It has created ethical dilemmas and fear among the recipients.

Ethical Dilemmas amid COVID-19 vaccination drive:

- **Compassion Vs Profit:** During the initial stage of vaccination trials across the globe, companies such as Moderna had clearly stated that vaccines would be sold with non-profit intentions.

- ◆ After the development of vaccines, these companies have sold vaccines to developed countries.
- ◆ It has shown their non-compassionate approach towards dealing with a global pandemic.
- **Humanity Vs Nationalism:** Developed countries such as the USA and the United Kingdom who have been torchbearers of human rights and equity have lowered their dignity by degrading the ethics of international brotherhood.
 - ◆ These countries have purchased a large number of vaccines which is more than double their population.
 - ◆ It is against humanitarian ethics practiced across the globe.
- **Professionalism Vs Profit:** Rapid development of vaccines ignoring trials and bypassing transparency procedures has raised a serious question on the professional ethics of developers.

Way Forward:

- **India being the vaccine capital of the world** has behaved with responsibility in this case.
- It has neither posed any restrictions on vaccine exports nor pressurized its vaccine manufacturers for domestic supplies.
- Serum Institute of India has openly stated that it is committed to reserving half the company's stock of its vaccine for India and supply half of it to the world.
- With its commitment to international brotherhood, India will be the first country to do so.
- It will make its cultural and traditional beliefs stronger by inculcating its ethical traditional heritage in its action.
- It has shown the world a path by realizing the hymn "**Om Sarve Bhavantu Sukhinah**" (May all be Happy).
- By letting the export of the vaccines to other countries despite its domestic needs, India has realized the hymn "**Vasudhaiva Kutumbakam**" (The world is one family).

VACCINE MANUFACTURING IN INDIA

About:

- India is a hub of biotech and pharma companies. Currently, India is the world's largest vaccine producing country.
- Secondly, India is the second worst-affected country by coronavirus after the US recording 58 lakh COVID cases.
- Due to the facilities available, the country is currently producing three different types of vaccines.
- **COVAXIN:** It is being produced by Bharat Biotech and termed as India's first indigenously developed COVID-19 vaccine.
 - ◆ This vaccine has been approved by the Drugs Controller General of India (DGCI) after going through three mandatory trials.
- **Covishield:** It is being produced by the Serum Institute of India in India.
 - ◆ It was Co-developed by the University of Oxford and British-Swedish company AstraZeneca
 - ◆ It has also been approved by the Drugs Controller General of India (DGCI).
 - ◆ It is the first vaccine on which a scientific study was published based on Phase 3 clinical trials.
- **ZyCov-D:** It is being developed by Zydus Cadila.
 - ◆ It is a plasmid DNA vaccine that has successfully passed its two trials and still is tested for the last trial.

- ◆ It will complete its all trials by March 2021.
- **Other Vaccines:** Sputnik V, Biological E, and Gennova are other vaccines that are being developed with foreign collaborations.

India's priority in vaccine distribution:

- India is committed to vaccinating its health care and frontline workers in its first phase of the vaccination process.
- In the first two rounds, the government has prioritized 3 crore frontline workers who will be administered the COVID-19 vaccine free of cost.
 - ◆ These recipients have been categorized as healthcare providers and frontline workers.
- **Health Care providers:** The government has included healthcare providers and workers in healthcare settings both government & private sectors in this category.
 - ◆ Their total number has been estimated at one crore.
- **Frontline Workers:** These workers include personnel from state and central police departments, armed forces, home guards, and civil defense organizations, besides municipal workers.
 - ◆ Their numbers have been estimated at 2 crores.
- **No priority to Elected Representative:** The government has clearly stated that elected representatives will not be on the priority list, although they have been termed as frontline workers.

NEW RELIGIOUS CODE ON SARNA TRIBALS

Jharkhand has passed a resolution to recognize the Sarna religion as a separate code in the Census of 2021.

About:

- The Jharkhand State Assembly has sent a resolution to the Union government asking for a separate religious code for the tribal population in the upcoming Census 2021 exercise. The resolution named it 'Sarna Adivasi Dharam'.
- It is believed that 50 lakhs tribal in the entire country put their religion as 'Sarna' in the 2011 census, although it was not a code.
- Jharkhand has 32 tribal groups of which eight are from Particularly Vulnerable Tribal Groups.
- While many follow the Hindu religion, many of the tribals who follow this faith have later converted to Christianity—the state has more than 4% Christians most of whom are tribals.
- The issue now is that the converted tribals are taking the benefits of reservation as a minority as well as the benefits that are given to Schedule Tribes.
- So, those who are still following only Sarna faith say that benefits should be given specifically to them and not those who have converted.

Sarna Religion:

- The followers of the Sarna faith believe in praying to nature.
- The holy grail of the faith is "Jal, Jungle, Zameen" and its followers pray to the trees and hills while believing in protecting the forest areas.

Need for a Sarna Code:

- The population of tribals in the state had declined from 38.3 percent in 1931 to 26.02 percent in 2011.
- One of the reasons for this was tribals who go for work in different states are not being recorded in the Census.
- The separate code will ensure the recording of their population.
- The declining numbers affect the constitutional rights given to them.

Status of Tribals in Census:

- In census surveys during 1871-1951, there was a separate category for the tribal population but later, this was dropped around 1961-62.

- In independent India, the tribal identity has been all about constitutional provisions promised to protect their rights and central laws promising to protect their land.
- Experts say that when today the entire world is focusing on reducing pollution and protecting the environment, it is prudent that Sarna becomes a religious code as the soul of this religion is to protect nature and the environment.
- The protection of their language and history is an important aspect of tribals.
- If the Centre approves the new Sarna code, Census 2021 would have to make space for a new religion.
- Currently, citizens can choose from only six religions: Hinduism, Islam, Christianity, Sikhism, Buddhism, and Jainism.

Census of India

- The Indian Census is the largest single source of a variety of statistical information on different characteristics of the people of India.
- While it has been undertaken every 10 years, beginning in 1872 under British Viceroy Lord Mayo, the first complete census was taken in 1881.
- It has been conducted 15 times, as of 2011.
- The responsibility of conducting the decennial Census rests with the Office of the Registrar General and Census Commissioner, India under the Ministry of Home Affairs.
- Later, this office was also entrusted with the responsibility of implementation of the Registration of Births and Deaths Act, 1969 in the country.
- All the censuses since 1951 were conducted under the 1948 Census of India Act.

AADI MAHOTSAV

The 10-day long virtual edition of Aadi Mahotsav was launched to showcase the tribal craft and culture of Madhya Pradesh.

About:

- Aadi Mahotsav is a national tribal festival and a joint initiative of the Ministry of Tribal Affairs, Government of India & Tribal Cooperative Marketing Development Federation of India (TRIFED).
- The Aadi Mahotsav was first commenced in 2017. under the aegis of the Ministry of Tribal affairs.

- The festival attempts to familiarise the people with the rich and diverse craft, the culture of the tribal communities across the country, in one place.
- This year Madhya Pradesh state has been showcased through a virtual tour of the artisans' workplace.
- Tribes India e-marketplace is a noteworthy initiative that showcases the produce and handicrafts of tribal enterprises from across the country and helps them market their produce/products directly.
- The Adivasi way of life is guided by primal truths, eternal values, and natural simplicity. The greatness of the tribes lies in the that they have managed to retain the primal skills.

TRIFED:

- TRIFED was established in August 1987 under the Multi-State Cooperative Societies Act, 1984 by the Government of India as a National Level Cooperative body under the administrative control of the Ministry of Tribal Affairs.
- TRIFED is mandated to bring about socio-economic development of tribal of the country by institutionalizing the trade of Minor Forest Produce (MFP) & Surplus Agricultural Produce (SAP) collected/ cultivated by them.
- TRIFED plays the dual role of both a market developer and a service provider, empowering them with knowledge and tools.
- TRIFED is involved actively in the capacity building of the tribal people through the formation of Self Help Groups (SHGs).
- It also assists them in marketing the products in international markets on a sustainable basis.
- TRIBES India is the brand under which the sourced handcrafted products from the tribal people are sold. There is 120 brick-and-mortar TRIBES India outlets across the country, making it a sustainable and reliable brand.

HIMACHAL PRADESH FOR GI TAGS

The Himachal Pradesh government is trying to obtain GIs (Geographical Indication) for five products from the state.

About:

- The Himachal Pradesh government is trying to obtain GIs (Geographical Indication) for five products from the state i.e. Karsog Kulth, Thangi of Pangi, Chamba Metal Crafts, Chamba Chukh, and Rajmah of Bharmour. The salient features of these five products are:
 - ♦ **Karsog Kulth:** Kulthi or Kulth (horse gram) is a legume grown as a Kharif crop in Himachal Pradesh. Kulth grown in the Karsog area of Mandi district is believed to be particularly rich in amino acids.

- ♦ **Pangi ki Thangi:** It is a type of hazelnut which grows in Pangi valley located on the northwestern edge of Himachal. It is known for its unique flavor and sweetness.
- ♦ **Chamba metal crafts:** These include items such as metal idols and brass utensils which, historically, were made by skilled artisans in the courts of kings of Chamba. There are efforts to revive the trade, and a plate made from a brass-like alloy and having carvings of gods and goddesses is still popular.
- ♦ **Chamba Chukh:** It is a chutney made from green and red chillies grown in Chamba, and prepared in traditional and unique ways. The practice has largely declined in rural households of Chamba but survives to some extent at the small-scale industrial level.
- ♦ **Bharmouri Rajmah:** It's more specifically called the Kugtalu Rajmah since it grows in the area around Kugti Pass in the Bharmour region of Chamba district. It is rich in proteins and has a unique flavor.

Geographical Indication

- 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. Darjeeling tea, Kullu shawl, Mysore agarbathi, champagne (France), Swiss watches, etc are some of its examples.
- Internationally, GIs are covered as an element of intellectual property rights under the Paris Convention for the Protection of Industrial Property.
- They are also covered under the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement.

Registered GIs from Himachal Pradesh:

- Currently, eight GI tags have been granted from the state of Himachal Pradesh.
- These include four handicrafts (Kullu Shawl, Chamba Rupal, Kinnauri Shawl, and Kangra Paintings),
- Three agricultural products (Kangra Tea, Basmati, and Himachali Kala Zeera) and one manufactured product (Himachali Chulli Oil).
- Kullu Shawl and Kangra Tea were the first to be registered in 2005-06.
- Basmati has been registered jointly from seven states of North India, including Himachal Pradesh.
- Chulli (apricot) oil and kala jeera (cumin), mainly associated with Kinnaur and known for their medicinal properties, was the last to be registered in 2018-19.
- There are 370 registered GIs in India.

Benefits of a GI Tag:

- A GI tag provides a better market for these products and prevents misuse of the name.
- GI registration is given to an area, not a trader, but once a product gets the registration, traders dealing in the product can apply for selling it with the GI logo.
- Authorized traders are each assigned a unique GI number.
- Any other product cannot be sold as a GI tag product. If any unauthorized trader tries to sell a product under the name of GI tag, he or she can be prosecuted under The Geographical Indications of Goods (Registration and Protection) Act, 1999.
- GIs are also expected to boost or revive the items whose production has declined, as is being aimed in the case of Chamba Chukh and metal crafts.

HORNBILL FESTIVAL

Nagaland celebrated its 21st edition of the Hornbill Festival on a virtual platform amid pandemic.

About:

- The Hornbill Festival is a 10-day annual cultural and tourism event organized by the State Tourism and Art & Culture Departments.
- It showcases the rich and diverse Naga ethnicity through folk dances, traditional music, local cuisine, handicrafts, art, craft workshops highlighting indigenous textiles and designs.

Hornbill Festival:

- The Festival is named after the Indian Hornbill, the large and colourful forest bird which is displayed in folklore in most of the state's tribes.
- Also known as the 'Festival of Festivals' was first celebrated in the year 2000 to promote the cultural heritage of the state and for encouraging inter-tribal interaction.
- The festival is held every year in the first week of December. 1st December also marks the Statehood Day of Nagaland. On 1st December 1963, Nagaland became the 16th state of India.
- It is held at Naga Heritage Village, Kisama which is about 12 km from Kohima.
- All the tribes of Nagaland take part in this festival. The festival aims to revive and protect the rich culture of Nagaland.

Indian Hornbill

- The great hornbill also known as the concave-casqued hornbill, great Indian hornbill or great pied hornbill is one of the larger members of the hornbill family.
 - ♦ It is common in tropical and subtropical Asia, Africa and Melanesia.

- ♦ The great hornbill is the state bird of Arunachal Pradesh and Kerala
- Its impressive size and colour have made it important in many tribal cultures and rituals.
- It is an opportunist and will prey on small mammals, reptiles and birds.
- The great hornbill is evaluated as vulnerable on the IUCN Red List of Threatened Species.
- They come under Schedule I of the Wildlife Protection Act 1972 and Appendix I of CITES.



THARU TRIBES

The Uttar Pradesh government has formulated a scheme to promote the culture of the Tharu tribe.

About:

- The Uttar Pradesh government is working to connect Tharu villages in the districts of Balrampur, Bahraich, Lakhimpur, and Pilibhit bordering Nepal, with the homestay scheme of the UP Forest Department.
- The idea is to offer tourists an experience of living in the natural Tharu habitat, in traditional huts made of grass collected mainly from the forests.
- The Uttar Pradesh Forest Corporation will train the Tharu people to communicate effectively with visitors and encourage villagers to acquaint them with aspects of safety and cleanliness, and with the rules of the forest.
- Tharu homeowners will be able to charge tourists directly for the accommodation and home-cooked meals.
- The UP government expects both domestic and international tourists to avail this opportunity of the special Tharu culture.

Tharu Tribe:

- The community belongs to the Terai lowlands, amid the Shivaliks of the lower Himalayas.
- The Tharus live in both India and Nepal. In the Indian Terai, they live mostly in Uttarakhand, Uttar Pradesh, and Bihar.
- Most of them are forest dwellers and some practiced agriculture.
- The word Tharu is believed to be derived from sthavir, meaning followers of Theravada Buddhism.
- According to the 2011 census, the Scheduled Tribe population in Uttar Pradesh was more than 11 lakh; this number is estimated to have crossed 20 lakh now.
- The biggest chunk of this tribal population is made up of Tharus. A majority still lives off the forest.

- ♦ **Article 366 (25) of the Constitution** refers to Scheduled Tribes as those communities, who are scheduled under Article 342 of the Constitution.
- ♦ **Article 342** says that only those communities who have been declared as such by the President through an initial public notification or a subsequent amending Act of Parliament will be considered to be Scheduled Tribes.
- ♦ **State Specific:** The list of Scheduled Tribes is State/UT specific and a community declared as a Scheduled Tribe in a State need not be so in another State.
- They speak various dialects of Tharu, a language of the Indo-Aryan subgroup, and variants of Hindi, Urdu, and Awadhi. In central Nepal, they speak a variant of Bhojpuri, while in eastern Nepal; they speak a variant of Maithili.
- Tharus worship Lord Shiva as Mahadev and call their supreme being "Narayan", who they believe is the provider of sunshine, rain, and harvests.
- Tharu women have stronger property rights than is allowed to women in mainstream North Indian Hindu custom.
- Most Tharu tribals consume alcoholic beverages, and some eat beef. Standard items on the Tharu plate are bagiya or dhikri – which is a steamed dish of rice flour that is eaten with chutney or curry – and ghonghi, an edible snail that is cooked in a curry made of coriander, chili, garlic, and onion.

Theravad Buddhism

- It is the most ancient branch of extant Buddhism today and remains closest to the original teachings of the Buddha.
- The name means 'the doctrine of the elders' - the elders being the senior Buddhist monks.
- Thus school does not over-emphasise the status of these teachings in a fundamentalist way - they are seen as tools to help people understand the truth, and not as having merit of their own.
- Theravada Buddhism developed in Sri Lanka and subsequently spread to the rest of Southeast Asia. It is the dominant form of religion in Cambodia, Laos, Myanmar, Sri Lanka, and Thailand.

ALL INDIA TRADE UNION CONGRESS

Recently, All India Trade Union Congress (AITUC) turned 100

About:

- It is the first Central Trade Union of India and the second largest trade union federation in India after the Indian National Trade union Congress.
- AITUC was formed in 1920 by leaders like Bal Gangadhar Tilak, Lala Lajpat Rai, Narayan Malhar Joshi, Joseph Baptista,

Diwan Chaman Lall, etc. to provide labor representation for India at the International Labor Organization (ILO).

- Lala Lajpat Rai was elected as the first president of AITUC and Dewan Chaman Lal was the first general secretary.
- C.R. Das, Jawaharlal Nehru, Subhash Chandra Bose also served as AITUC presidents.
- Gaya session of the Congress (1922) welcomed the formation of the AITUC and a committee was formed to assist it.
- Later, AITUC was split to form the National Trade Union Federation (NTUF) in 1929 and Red Trade Union Congress (RTUC) in 1931.

Factors that led to the formation of Trade Unions in India:

- The beginning of the labor upsurge against oppression and exploitation dates back to the second half of the nineteenth century, during the British Raj in India, with the emergence of a class of casual general labor
- **The widespread famines in India** through the period from 1850 to 1890 resulting in deaths of several lakhs and also reducing millions as beggars.
- **Shattering of the self-sufficient village economy** with no new structures in place and the dumping of cheap industrial goods that turned millions into landless laborers like artisans, spinners, weavers, craftsmen, smelters, smiths, potters, etc., who could no longer live on agriculture. All these led to a Poverty-stricken peasantry and landless labor forces.
- **Influenced by world labor movements:** Russian Revolution in 1917 was a great impetus for the Indian labor movement as the working class along with peasantry captured power first time in the history of mankind.
- **Industrial unrest:** Strikes in Bombay against the extension of working hours and protest against the imprisonment of Tilak etc. led to working class to wage a mass struggle. It was in this heroic background that the preparations began on July 16, 1920, when a convention was held in Bombay which decided to hold "All India Trade Union Congress in Bombay".
- **National freedom movement:** In the beginning of 20th century, the participation of laborers in the freedom movement increased and formation of unions also increased. Mahatma Gandhi linked the freedom movement directly with labor welfare.

Trade Unions

- Trade unions are organised associations of workers in a trade or profession. These are interested in the economic and social welfare of the workers and are formed to further their rights and interests.
- In India, Trade Unions in India are registered under the Trade Union Act (1926).

10

MISCELLANEOUS

HUMAN RIGHTS

Human Rights Day is observed every year on 10th December to commemorate the Universal Declaration of Human Rights (UDHR).

About:

- In 1948 the United Nations General Assembly adopted the Declaration that proclaims the inalienable rights of all people.
- **Inalienable rights:** A milestone document proclaiming the inalienable rights which everyone is inherently entitled to as a human being regardless of race, colour, religion, sex, language, political or other opinion, national or social origin, property, birth or other status.
- **December 10th** is observed as Human Rights Day every year to reaffirm the importance of human rights in re-building the world.
- **IInd World War:** The atrocities of the Second World War made the importance of human rights an 'international priority'.
- **Theme:** This year's Human Rights Day theme is "Recover Better - Stand Up for Human Rights".
 - ♦ It is linked to the Covid-19 pandemic with the focus on the need to building a back better by ensuring human rights are the centre of the recovery efforts.

What are Human Rights?

- **Reasonable Claims:** Human rights are reasonable claims of citizens that are recognized by the society but may or may not be sanctioned by law. However, a sanction by law makes them enforceable, otherwise they remain simply as moral claims.
- UNHRC recognises life, liberty, equality and dignity as human rights.
- NHRC of India is an independent statutory body established for the protection of these rights. It was established under the Protection of Human Rights Act, 1993.

Significance of Human Rights:

- Human Rights Day 2020 is more important than other years as the Covid-19 crisis has been fuelled by deepening poverty, rising inequalities, structural and entrenched discrimination, and other gaps in human rights protection.
- It is only possible to close these gaps and advance human rights by ensuring to build a world that is better, more resilient, just, and sustainable.

- The celebration signifies the need for global solidarity as well as our interconnectedness and shared humanity.
- **India and Human Rights:** India was a signatory to the Universal Declaration of Human Rights
 - ♦ A number of fundamental rights guaranteed to the individuals in Part III of the Indian Constitution are similar to the provisions of the Universal Declaration of Human Rights and legal rights are significant to understand the nature and the application of human rights.

INDIGENOUS GAMES IN KHELO INDIA

The Sports Ministry has approved the inclusion of four indigenous Games to be a part of Khelo India Youth Games 2021.

About:

- The fourth edition of Khelo India Youth Games 2021 is scheduled to take place in Panchkula, Haryana after the 2021 Tokyo Olympics. Over 400 athletes from different states will participate in the competition.
- The four selected games representing different parts of the country are Gatka, Thang-Ta, Kalaripayattu, Mallakhamba.
- India has a rich heritage of indigenous sports, and it is a priority for the Sports Ministry to preserve, promote and popularise these games.
- There is no better platform than the Khelo India Games where athletes of these games can compete.
- In the 2021 Khelo India Youth Games these four disciplines, along with Yogasana, will get their much-deserved attention among sports enthusiasts and youth of the country.

Khelo India Youth Games (KIYG) and Khelo India:

- **KIYG** is a part of the revamped national programme for the development of sports 'Khelo India' which was approved by the Union Cabinet in 2017. The 2020 edition of KIYG was held in Guwahati (Assam).
- **The Khelo India programme** has been introduced to revive the sports culture in India at the grass-root level by building a strong framework for all sports in India and establish India as a great sporting nation.
- Khelo India Programme is a national yojana/scheme for the development of sports in India and it was launched in the year 2018.

- It is a Central Sector Scheme (Scheme implemented by the Central Government machinery and 100% funding by the Union Government).
- It is a Pan India Sports Scholarship scheme covering the 1000 most deserving and talented athletes across the sports discipline, every year.
- Talented players identified in priority sports disciplines at various levels by the High-Powered Committee will be provided annual financial assistance of INR 5 lakh per annum for 8 years.
- **Earlier there were 16 disciplines such as:**
 - ♦ Archery, Athletics, Badminton, Basketball, Boxing, Football, Gymnastics, Hockey, Judo, Kabaddi, Kho-Kho, Shooting, Swimming, Volleyball, Weightlifting, and Wrestling.

Four Indigenous Games in 'Khelo India'

Kalaripayattu

Kalaripayattu has its origin from Kerala and has practitioners all over the world. It is held in high regard by martial artists due to its long-standing history within Indian martial arts. It is also considered to be among the oldest martial arts still in existence, with its origin in the martial arts timeline dating back to at least the 3rd century BCE.



Mallakhamba

- It has been well-known in India, Madhya Pradesh and Maharashtra have been the hotspots of this sport. It is a traditional sport, originating from the Indian subcontinent, in which a gymnast performs aerial yoga or gymnastic postures and wrestling grips with a vertical stationary or hanging wooden pole, cane, or rope.
- The name Mallakhamb derives from the terms malla, meaning wrestler, and khamb, which means a pole.
- Literally meaning "wrestling pole", the term refers to a traditional training implement used by wrestlers.



Gatka

It originates from the State of Punjab and this traditional fighting style of the Nihang Sikh Warriors is used both as self-defense as well as a sport. Gatka is believed to have originated when the 6th Sikh Guru Hargobind adopted 'Kirpan' for self-defence during the Mughal era.



Thang Ta

It is a Manipuri martial art that has passed into oblivion in the recent decades.



CCTV IN POLICE STATIONS

Supreme Court (SC) has asked the states and union territories to install CCTV cameras in each police station.

About:

- The ruling came on a plea by one Paramvir Singh Saini, who raised the issue of the audio-video recording of statements of witnesses and installation of CCTVs in police stations.
- To check human rights abuses, the SC in the D K Basu vs State of West Bengal case in 2015 has directed that CCTVs should be installed in every police station and prison.
- Then again in 2018 SC asked the Ministry of Home Affairs to set up a Central Oversight Body (COB) to implement the plan of action for videography in the crime scene during the investigation.
- The SC has found that the majority of the states and UTs lack the details of installing CCTVs in police stations.
- The present decision shows more care by listing out areas of police stations where cameras must be installed to ensure that there are no blind spots.

Key Highlights of the Judgment:

- **Installed at offices of investigating agencies:** It has been directed by the Supreme Court that the Centre should install CCTV cameras and recording equipment at the offices of investigating agencies, including the Central Bureau of Investigations (CBI), the Enforcement Directorate (ED), and National Investigation Agency (NIA), which conduct interrogations and have the power of arrest.
- **Night Vision and audio:** It is mandatory to have CCTV systems equipped with night vision and have audio as well as video footage.
- **One year data storage of recordings:** The recordings will have to be preserved for at least 12 months.
- **Furtherance of Article 21 of the Indian Constitution:** This direction has also expanded the meaning of fundamental right enshrined in Article 21 (Protection of life and personal liberty) of the Indian Constitution.
- Rights that come under the scope of Article 21 such as the right to social justice and economic empowerment, the right against solitary confinement, the right against handcuffing, the right against delayed execution, the right against custodial death, the right against public hanging.

Need for CCTVs:

- **Custodial deaths:** According to the National Crime Records Bureau (NCRB) data, between 2001 and 2018, only 26 policemen were convicted of custodial violence despite 1,727 such deaths being recorded in India.

- The Award also carries prize money of the USA \$1 Million (Rs 7.37 crores)
- The award was established by the London-based Varkey Foundation in 2013 and is given in partnership with UNESCO.
- The Global Teacher Award serves to highlight the importance of educators as well as acknowledges the impacts of the best teachers on their students and the communities around them.
- The Global Teacher Prize 2020 was a virtual ceremony broadcast from the Natural History Museum in London.

Contribution of Ranjitsinh Disale:

- Ranjitsinh Disale from Paritewadi village was awarded in recognition of his efforts to promote girls' education and initiating a quick-response (QR) coded textbook revolution in India.
- He changed a dilapidated school to a school that went on to become the first in Maharashtra to introduce Quick Response (QR) Codes.
 - ♦ A QR code is a type of barcode that contains a matrix of dots. It can be scanned using a QR scanner or a smartphone with a built-in camera.
- He translated the class textbooks into his pupils' mother tongue and embedded them with unique QR codes to give students access to audio poems, video lectures, stories, and assignments.
- He is passionate about building peace between young people across conflict zones. His 'Let's Cross the Borders' project connects young people from India and Pakistan, Palestine and Israel, Iraq and Iran, and the USA and North Korea.
- The central government had named Disale as Innovative Researcher of the Year 2016 and gave him the National Innovation Foundation's Innovator of the Year award in 2018.

YOGASANA AS A COMPETITIVE SPORT

The Sports Ministry has formally recognized Yogasana as a competitive sport.

About:

- After extensive consultation with stakeholders over the last three or four years, the Central government decided to promote yogasana as a competitive sport.
- The National Board of Promotion and Development of Yoga and Naturopathy in 2019 recommended that yogasana be recognized as a competitive sport.
- Yogasana competitions were used to be conducted for centuries in our Yoga Indian Tradition.

Key Highlights:

- **Government Funding:** This move will enable the ancient practice to avail Government funding
- **Awareness and Wellbeing:** It was done to spread awareness about Yoga and its benefits and help improve the physical and mental wellbeing of the people.
- Yogasana becomes eligible to enter several sports events as International Yogasana Sports Federation was formed under the leadership of Yoga Guru Baba Ramdev.
- Also, National Yogasana Sports Federation was established that will preserve and develop Yoga as a competitive sport.
- The federation was recognized by the sports ministry as a National Sports Federation in November 2020.
- Yogasana is to be inducted also with Khelo India Games Programme.
 - ♦ The Sports Ministry is to conduct four events and fifty-one medals have been proposed.
 - ♦ The Yogasana sport is to be conducted in seven categories. They are Rhythmic Yogasana, Traditional Yogasana, individual all-around championship, team championship, artistic Yogasana.
- Yogasana as an Olympic event would create a widespread opportunity for expanding awareness of Yoga and its myriad health benefits.
- A pilot national individual yogasana sports championship (virtual mode) is proposed for February 2021 to be held at district, state, national and international levels.

Yoga

- The word 'yoga' derives from Sanskrit and means to join or to unite, symbolizing the union of body and consciousness.
- Yoga cultivates the ways of maintaining a balanced attitude in day-to-day life and endows skill in the performance of one's actions.
- Yoga is a union of physical, mental as well as spiritual practices and disciplines that is said to have originated in India almost 5,000 years ago.

NATIONAL PORTAL FOR TRANSGENDER

Ministry for Social Justice & Empowerment e-launched a 'National Portal for Transgender Persons'.

About:

- This National Portal for Transgender Persons has been developed within 2 months of Notification of Transgender Persons (Protection of Rights) Rules, 2020 on 29 September 2020.

January, 2021

- This Portal would help a transgender person in applying for a Certificate and Identity card digitally from anywhere in the country without any physical interface or visit to any office.
- The Certificate and Identity will be based on self-perceived identity which is an important provision of The Transgender Persons (Protection of Rights) Act, 2019.
- **Monitor the status of application:** The status of their application can easily be accessed.
- **Strict Timelines:** The issuing authorities have to follow strict timelines to process the applications.
- **Grievance Redressal Mechanism:** In case of delay or rejection, the applicant has the option to submit grievances through the Portal.

GARIMA GREH

- A Shelter Home for Transgender Persons' was also e-inaugurated in Vadodara, Gujarat.
- The Scheme of 'Shelter Home for Transgender Persons' includes shelter facility, food, clothing, recreational facilities, skill development opportunities, physical fitness, etc.
- It will be run in association with Lakshya Trust, a community based organisation (CBOs) run by transgenders.
- 10 cities have been identified for setting up 13 Shelter Homes in association with selected CBOs in the country on pilot basis.
- The scheme will rehabilitate a minimum of 25 transgender persons in each homes identified by the Ministry.

Significance:

- It is the first concrete step towards ensuring the welfare of Transgender persons and help more members of the community to come forward into the mainstream of society.
- This will help in removing the social stigma associated with the community.
- It will act as a single point for the community to avail of various welfare measures and benefits.

INDIA'S FIRST DRIVERLESS TRAIN

The Prime Minister has inaugurated the country's first fully automated Metro, (Driverless Metro) on Delhi Metro's Magenta Line.

About:

- He also extended the fully operational National Common Mobility Card (NCMC) to the Airport Express Line of the Delhi Metro Rail Corporation (DMRC).
- The train had been laid out on a 38-kilometre long line named the Magenta Line.
- It is part of a 390- km network spread through the national capital and neighboring cities such as Gurugram, Noida, Ghaziabad, Faridabad and Bahadurgarh.
- The Magenta Line is to switch from ATP (Automatic Train Protection) and ATO (Automatic Train Operation) system to Driverless Train Operation mode.
 - ♦ The i-ATS will work with train control and signaling systems. It is suitable for national transporters to introduce Centralised Train Control.
- With this achievement, DMRC has entered the elite league of 7% of the world's Metro networks where such a facility is available.
- In 2014, only five cities had Metro rail and currently, it is present in 18 cities and the number of Metro users has also increased manifold.
- The driverless trains will be fully automated, eliminating the possibility of human error.

NATIONAL COMMON MOBILITY CARD

- It will give access to all modes of transportation and will do away with commuters having to wait in long queues for tokens.
- It allows users to pay for travel, toll charges and retail shopping, and permits them to withdraw money at the same time.
- It will enable anyone carrying a RuPay-Debit Card issued in any part of the country to travel on the route.
- This will not only help provide a common platform for people but will also allow better research data. Researchers will be able to better assess the travelling patterns of people and accordingly suggest the best plan for development.

Significance:

- **Save Energy and Cost:** It uses a braking system in which 50% of the energy goes back into the grid when the brakes are applied, which will save a considerable amount of energy making it an energy-efficient system.
- **Support Make in India:** In a boost to Make in India, various big companies are involved in the manufacturing of Metro coaches and dozens in the manufacture of Metro components.
- **Renewable Energy:** 130 MW of solar power is currently being used in the operations of Metro rail, which the government intends to increase to 600 MW.
- **Reduce Distance:** The Regional Rapid Transit System (RRTS) and Metro Lite models will reduce the distance between major cities and within them.

Multiple Choice Questions

- With reference to pardoning powers of the President and the Governor, consider the following statements:
 - The President can pardon the life sentence of a convict but the Governor of a state cannot.
 - The President derives the power to Pardon a convict from the Constitution, but the Governor does not.
 - The President has to act on the advice of the Council of Ministers, but the Governor may not.

Which of the statements given above is/are correct?

(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) None of the above
- With reference to Brown Tarballs, consider the following statements:
 - Brown Tarballs are produced naturally when black tarballs react with air.
 - The presence of tarball in the Himalayas can be attributed to heavily polluting industries in China.

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
- With reference to Municipal Bonds, consider the following statements:
 - Ahmadabad became the first municipality to issue these bonds.
 - These bonds can only be issued for particular infrastructure projects.

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
- With reference to Municipal Bonds issued by Urban Local Bodies (ULBs), consider the following statements:
 - Credit rating agencies like CRISIL provide ratings to Municipal bonds issued by different cities.
 - All Municipal bonds have been exempted from taxation.

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
- With reference to western disturbance, consider the following statements:
 - It lowers the temperature of north-western India and adjoining regions.
 - It adversely affects the productivity of Rabi crops in India.

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
- Which of the following agricultural practices is known to release Methane into the environment?
 - Livestock rearing
 - Rice cultivation
 - Vermicomposting

Select the correct answer using the code given below:

(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
- With reference to 'Right to Recall' in India, consider the following statements:
 - Haryana has become the first state to implement the process of the right to recall.
 - Only direct democracies around the world have implemented this system.

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
- With reference to the International Thermonuclear Experimental Reactor, consider the following statements:
 - It is an ambitious energy project to make fusion energy generation commercially viable.
 - It is based in France.
 - Its goal is to operate with a plasma thermal output of 500 MW (for at least 400 seconds continuously) with less than 50 MW of plasma heating power input.
 - India is a member of ITER.

Which of the statements given above is/are correct?

(a) 1, 2 and 3 only (b) 2, 3 and 4 only
(c) 1, 3, and 4 only (d) All of the above
- The word 'Tokamak' is associated with which of the following?
 - Nuclear Fusion Reactor technology
 - A spacecraft mission to Jupiter undertaken by Japan
 - Recently acquired submarine by India
 - A type of surface to air missile recently developed by Russia
- With reference to the Nuclear Fusion process, consider the following statements:
 - It involves combining lighter atomic nuclei resulting in a heavier one.
 - It is an uncontrollable atomic chain reaction in a fusion reactor.
 - Its commercial application has started to generate electricity.
 - It produces long-term radioactive waste.

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

(a) 1, 2 and 3 only (b) 2, 3 and 4 only
(c) 1, 3, and 4 only (d) All of the above
- With reference to Augmented Reality, consider the following statements:
 - It uses real-time information in form of text, graphics, and audio to enhance the real-world experience.
 - It can be used to perform complex surgeries with precision.

January, 2021

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

12. With reference to betting and gambling in India, consider the following statements:

1. Lottery and Horse Racing are regulated as gambling in India.
2. All the states in India have permitted gambling.

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

13. With reference to goods and Actionable Claims, consider the following statements:

1. Gambling and Betting have been mentioned as 'Goods' in the GST Act.
2. Lottery and Gambling activities have not been recognized as 'Goods' in the constitution.

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

14. With reference to IMD (India Meteorological Department), consider the following statements:

1. IMD is established in 1875 as the National Meteorological Service of India.
2. It functions as the Regional Specialized Meteorological Center (RSMC) for the World Meteorological Organisation (WMO)
3. It implements the Regional Cyclone Operational Plan of WMO.

Which of the statements given above is/are correct?

- (a) 1 only (b) 1 and 2 only
(c) All of the above (d) None of the above

15. With reference to the National Cyclone Risk Mitigation Project (NCRMP), consider the following statements:

1. The Project aims to undertake suitable structural and non-structural measures to mitigate the effects of cyclones in the coastal states and UTs of India
2. It is supported by the World Bank.
3. National Disaster Management Authority is the implementing body.
4. It categorizes vulnerable states/UT into 3 categories.

Which of the statements given above is/are correct?

- (a) 1 and 2 only (b) 2 and 3 only
(c) 1, 2 and 3 only (d) None of the above

16. Consider the following pairs:

Cyclone Name — **Country/ Region affected (2020)**

1. Marco — Gulf of Mexico
2. Nisarga — Arabian sea, Mumbai
3. Amphan — Bay of Bengal, Odisha
4. Burevi — Sri Lanka coast, Tamil Nadu

Which of the pairs given above is/are correctly matched?

- (a) 1 and 2 only (b) 1, 2 and 4 only
(c) All of the above (d) None of the above

17. With reference to the Fundamental rights enshrined in the Constitution, what are the rights that come under the scope of Article 21?

1. The right to go abroad
2. The right to privacy
3. The right to shelter
4. The right against solitary confinement

Select the correct answer from the options given below

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

18. Aadi Mahotsav event is organized by?

- (a) Ministry of Culture and Tourism
(b) Ministry of Tribal Affairs
(c) Ministry of Education
(d) Ministry of Food Processing Industries

19. Consider the following statements about the Geographical Indication Tag:

1. GI registration is given to an area, not a trader, but once a product gets the registration, traders dealing in the product can apply for selling it with the GI logo.
2. Chulli (apricot) oil and kala jeera (cumin), mainly associated with Kinnaur was the first to be registered in 2005-06.

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

20. Consider the following statements regarding the Hornbill Festival:

1. This festival is organized by the largest tribe of Nagaland, the Naga tribe.
2. The Indian Hornbill is evaluated as vulnerable on the IUCN Red List of Threatened Species.

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

21. Consider the following statements about Sarna Tribals:

1. The Sarna Tribals are followers of nature.
2. Jharkhand has 32 tribes out of which 16 are Particularly Vulnerable Tribal Groups.

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

22. Consider the following statements about the Tharu tribe:

1. Tharu tribe is found in the state of Uttar Pradesh only.
2. Members of the Tharu tribe survive on meat gathered through hunting.

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

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

23. With reference to development of ports in India, consider the following statements:

1. Vadnavan Port will be the first port in India to be developed under Landlord Model.
2. It is 13th major port of India and second in Maharashtra.

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

- 24.** Consider the following statements with reference to Assets under Management (AUM):
1. An increase in Assets Under Management signifies the better financial health of a financial institution.
 2. Better AUM growth prospects will increase investment in infrastructure and industry in India.
- 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
- 25.** Consider the following statements with reference to film industry in India:
1. Bollywood is largest film industry in the world in terms of total number movies made per year.
 2. Entertainment is a subject matter of state list in constitution of India.
- 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
- 26.** Consider the following statement(s) regarding the river Ganga:
1. National Ganga River Basin Authority is declared as National River under Section 3 of the Biological Diversity Act.
 2. The Namami Gange Programme is a centrally sponsored scheme.
- Which of the above statements is are correct?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
- 27.** Consider the following statements regarding the Luhri Hydro Power Project:
1. It is being built by Satluj Jal Vidyut Nigam Ltd., a joint venture of Government of India and State Government of Himachal Pradesh.
 2. It is based on the model of Build-Lease-Transfer.
- 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
- 28.** Consider the following statements about the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES):
1. Appendix I contain species that are threatened with extinction and are or may be affected by trade.
 2. Appendix II contain species, that are not necessarily threatened with extinction but may become so unless trade in specimens of such species is subject to strict regulation
- 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
- 29.** Consider the following statements about SATAT Initiative:
1. This initiative comes under the aegis of the Ministry of New and Renewable Energy (MNRE).
 2. SATAT Initiative envisages for setting up of 5000 Compressed Biogas (CBG) plants by 2023-24 with a production target of 15 MMT.
- 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
- 30.** Barkudia insularis is endemic to:
- (a) Chilka lake (b) Visakhapatnam
(c) Western Ghats (d) Northern part of Eastern Ghats
- 31.** Consider the following statements regarding the Action Plan for Vulture Conservation 2020-2025 (APVC):
1. The MoEFCC released the Action Plan for Vulture Conservation (APVC) in 2010 for the first time.
 2. The population of vultures will rise rapidly due to its high reproductive capacity.
- Which of the above statement(s) is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
- 32.** Consider the following statements with respect to Sri Lanka:
1. Sri Lanka has attracted investment from the Chinese tyre factory near port city of Kandy.
 2. Hambantota port was leased to China for 99 years due to non-payment of debts.
- Which of the above statement(s) is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
- 33.** With reference to None Of The Above (NOTA), consider the following statements:
1. If NOTA get maximum votes, re-election is held in that particular constituency.
 2. All candidates who lose to NOTA will be ineligible for contesting election during by-election.
- 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
- 34.** With reference to Right to Reject, consider the following statements:
1. NOTA has enabled voters to exercise 'Right to Reject' which is a fundamental right.
 2. NOTA has enabled voters to exercise 'Right to cast Negative votes' which is a statutory right.
- 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
- 35.** Consider the following statements about Left Wing Extremism:
1. Road Requirement Plan has been implemented in the Left-wing extremism affected districts of all the states.
 2. Ministry of Statistics and Programme Implementation is the monitoring agency for Aspirational district Scheme in Left Wing Extremism affected districts of India.
- 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
- 36.** Consider the following statements regarding Alternate Dispute Resolution Methods:
1. The decision of the arbitrator is binding on parties, unlike the mediator.
 2. The conciliator is appointed after litigation by a court of law.
- 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

January, 2021

37. Consider the following statements regarding the Indian-Myanmar-Thailand Trilateral Highway:
1. The highway is crucial for the connectivity with the northeast India.
 2. The cost of the Highway project will be entirely funded by India
- Which of the above statement(s) is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
38. Consider the following statements regarding the Indian Medicine Central Council (Post Graduate Ayurveda Education) Amendment Regulations, 2020:
1. It has clarified that surgery performed by Ayurveda doctors is legal.
 2. It has provided them to perform surgeries in all available disciplines.
- 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
39. Consider the following statements with reference to nationalization of banks in India:
1. The nationalization of banks in India was done to reduce corporate dominance.
 2. It ensured credit flow to the priority sector through priority sector lending.
- 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
40. Consider the following statements regarding cryogenic rocket technology:
1. It uses rocket propellants that liquefy at very low temperatures.
 2. It is more efficient than solid and earth-storable liquid-propellant systems but more complex.
 3. ISRO hasn't been able to develop this technology but the Indian private sector has already developed it.
- Which of the above statements are correct?
- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) All of the above
41. The Justice Jain Committee has been set up for which of the following?
- (a) To look into the circumstances leading up to the ISRO frame-up case.
(b) To reform India's prison system.
(c) To improve India's justice delivery.
(d) To look into measures for police reforms.
42. Consider the following statements regarding the National Highways Authority of India:
1. It was set up by an act of the Parliament.
 2. It is responsible for the development, maintenance, and management of national highways, state highways, and district roads.
 3. It is mandated to implement the National Highway Development Program (NHDP).
- Which of the statements given above is/are correct?
- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) All of the above
43. Consider the following statements about Unnat Bharat Abhiyan:
1. The scheme seeks to directly connect higher educational institutes with rural development.
 2. The scheme is in line with the Gandhian vision of village republics.
 3. The Scheme is sponsored by the Ministry of Panchayati Raj and Rural Development.
- Which of the statements given above is/are correct?
- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) All of the above
44. Consider the following statements about the National Tobacco Control Programme (NTCP):
1. It was launched by the Government of India in 2007-08 during the 11th Five-Year-Plan.
 2. It aims to curb tobacco use, control its supply, and facilitate implementation of strategies for prevention and control of tobacco advocated by WHO Framework Convention of Tobacco Control.
 3. The NTCP is implemented through a 3-tiered structure, at the central, state and district level.
 4. The National Tobacco Control Cell (NTCC) at the Ministry of Health and Family Welfare (MoHFW) is responsible for overall policy formulation, planning, implementation, monitoring and evaluation under NTCP.
- Which of the above statement(s) is/are **not** correct?
- (a) 1 only (b) 1 and 2 only
(c) All of the above (d) None of the above
45. Consider the following statements about Malayan Giant Squirrel (Ratufa Bicolor):
1. It is native to North East India
 2. Its habitat is severely under threat, causing its likely extinction in coming decades.
 3. It is arboreal and an herbivore.
 4. It is endangered as per IUCN Red List.
- Which of the above statement(s) is/are correct?
- (a) 1 and 2 only (b) 1, 2 and 3 only
(c) All of the above (d) None of the above
46. Consider the following statements about Saguna Rice Technique (SRT):
1. It is a form of zero tillage, conservation agriculture.
 2. It involves creating new bed for rice cultivation with every crop cycle.
 3. It does not use any fungicide, weedicide.
- Which of the above statement(s) is/are correct?
- (a) 1 only (b) 1 and 3 only
(c) All of the above (d) None of the above
47. Consider the following statements about Conference on Disarmament:
1. It was formed in 1979 as the single multinational disarmament negotiations forum.
 2. It has a special relationship with UN and reports to the General Assembly, while adopting its agenda and rules of procedure.

3. It works on consensus basis.
4. It has a permanent agenda known as the 'Decalogue'.
Which of the above statements are correct?
(a) 1, 2 and 4 only (b) 1 and 2 only
(c) All of the above (d) None of the above
48. Consider the following statements about Nuclear Command Authority:
1. It comprises of a civilian controlled Political Council, chaired by the National Security Advisor.
2. The Executive Council under the Nuclear Command Authority is led by the Prime Minister.
3. It is the sole body that can authorize use of nuclear weapons.
Which of the above statements are correct?
(a) 1 and 2 only (b) 3 only
(c) All of the above (d) None of the above
49. India is a Member of which of the following Treaties/Agreements?
1. Partial Test Ban Treaty (PTBT-1963)
2. Treaty on Non-proliferation of Nuclear Weapons (NPT-1970)
3. Comprehensive Nuclear-Test Ban Treaty (CTBT-1996)
4. Treaty on Prohibition of Nuclear Weapons (TPNW- 2017)
Which of the statements given above is/are correct?
(a) 1 only (b) 1 and 3 only
(c) All of the above (d) None of the above
50. Consider the following pairs:
Food stuff — Common Adulterant
1 Honey — Sugar syrup
2 Arhar — Metanil Yellow
3 Saffron — Brick dust
4 Red chilli power — Artificial colour
5 Khoya — Paper
6 Sugar — Tar Dye
Which of the pairs given above is/are correctly matched?
(a) 1, 2, 3, 4 only (b) 1, 2, 4, 5 and 6 only
(c) 1, 4, 5 and 6 only (d) All of the above
51. Consider the following statements about International Solar Alliance (ISA):
1. It is an intergovernmental body to promote solar energy among its members.
2. Its headquarter are in Gurugram
3. Only countries placed between the tropics can be member of the organization.
Which of the above given statements is/are correct?
(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
52. Consider the following statements regarding Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY):
1. It is the flagship public health insurance scheme of India providing access to healthcare services.
2. It provides one-time insurance cover of Rs. 5 lakh per family.
3. The beneficiaries in the age group of 15-65 years are eligible.
4. The benefits can be availed all across the country.
Which of the above statements are correct?
(a) 1 and 2 only (b) 1 and 4 only
(c) 1,2 and 4 only (d) All of the above.
53. Consider the following statements regarding National Health Authority (NHA):
1. It is the apex body responsible for implementing the 'Ayushman Bharat Pradhan Mantri Jan Arogya Yojana' (PM JAY).
2. It is governed by a Governing Board chaired by Union Minister for Health and Family Welfare.
3. It is headed by Chief Executive Officer (CEO), who is also the Ex-Officio Member Secretary of the Governing Board
Which of the statements given above is/are correct?
(a) 1 and 2 only (b) 1 and 3 only
(c) All of the above (d) None of the above
54. Consider the following statements regarding National Digital Health Mission:
1. It is a citizen-centric, holistic healthcare programme approach which leverages IT and associated technologies to support existing healthcare system.
2. The National Health Authority (NHA) provides administrative and technical leadership to NDHM.
3. It uses JAM Trinity as its building blocks with citizen as the owner of the data.
Which of the statements given above is/are correct?
(a) 1 and 2 only (b) 1 and 3 only
(c) All of the above (d) None of the above
55. Consider the following statements about Food Safety and Standards Authority of India (FSSAI):
(a) It has been established under Food Safety and Standards, 2006.
(b) It functions under the Ministry of Health & Family Welfare, Government of India.
(c) It is mandated to develop food safety standards, provide guidelines for accreditation to labs, promote food safety and standards awareness.
Which of the statements given above is/are correct?
(a) 1 only (b) 1 and 2 only
(c) All of the above (d) None of the above
56. Consider the following statements regarding the Partners in Population and Development (PPD):
1. The first International Conference on Population and Development (ICPD) was held at Doha in 1994.
2. The Secretariat of Partners in Population and Development Initiative is located in Dhaka.
Which of the following statement(s) is/are correct?
(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
57. Consider the following statements regarding the Currency Manipulator List:
1. India has been included for the first time in the watch list of US Department of the Treasury Office as a Currency Manipulator.

January, 2021

2. An economy has to meet all the three criteria in the Trade Facilitation and Trade Enforcement Act of 2015 to be placed on the Monitoring List.
- 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
58. Consider the following statements with reference to formation of cyclones:
1. Marco and Laura cyclones originated in the Gulf of Mexico while Amphan hit the east coast of India.
 2. 'Cyclone Alert' is issued 48 hr prior to the landfall while 'Cyclone Warning' is issued 24 hr in advance.
 3. Andhra Pradesh, Gujarat, Odisha, Tamil Nadu and West Bengal have been categorized under category II with respect to vulnerability to cyclones.
- Which of the statements given above is/are **not** correct?
- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
59. With reference to Parties to UNFCCC, Consider the following statements:
1. Annex II parties are those countries which are considered as 'Economies under Transition'.
 2. India is a Annex II party in accordance with United Nations Framework Convention on Climate Change
- 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
60. Consider the following statements:
1. Small Finance Bank should have 25% of their Branch in Rural areas while there is no such provisions for payment bank
 2. Small Finance Banks were recommended by Bimal Jalan Committee while Payments banks were recommended by Nachiket Mor Committee.
 3. Both types of Banks can issue credit as well debit card.
- Which of the statements given above is/are **not** correct?
- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
61. With reference to Municipal Bonds, consider the following statements:
1. Sujit Prasad Committee has recently been setup by SEBI to look into Municipal Bond Market.
 2. Municipal Bonds issued by different municipalities get credit rating by agencies such as CRISIL.
- Which of the statements given above is/are **not** correct?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
62. With reference to solar energy in India, consider the following statements:
1. India's total solar power generation currently stands at 36 GW.
 2. Solar Energy Corporation of India is nodal agency responsible for implementation of National Solar Mission.
- 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
63. With reference to 'Right to Recall' in India, consider the following statements:
1. Currently "Right to Recall" is available in Panchayati Raj System in Bihar.
 2. It requires consent of two-third of the registered voters of the Panchayat constituency to initiate the process.
- 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
64. With reference to Nuclear technologies being developed across the world, consider the following statements:
1. Nuclear Fission is the process wherein lighter atoms combine to form heavier atoms accompanied by release of energy.
 2. China has recently started its nuclear fission reactor HL-2M Tokamak.
- 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
65. Consider the following statements with reference to Betting and Gambling in India:
1. Betting and Gambling comes under List II of the Seventh Schedule of the Indian Constitution.
 2. It has vested the Central government with the power to legislate on matters concerning gambling and betting.
- 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
66. Consider the following statements regarding jetties
1. Jetties are permanently fixed structures stretches from the shore into the water.
 2. These are used for unloading of passengers and cargo at ports.
- 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
67. Consider the following statements with reference to different models of port development in India:
1. Under Service model of port development the port authority owns the land as well as all available assets.
 2. The regulatory framework also comes solely under the port authority.
 3. Under landlord port model, regulatory framework is transferred to third party.
- Which of the statements given above is/are correct?
- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
68. Consider the following statements with reference to Asset under management of NBFCs in India:
1. Higher Asset Under Management of NBFCs means higher investment in an economy.
 2. AUM of NBFCs in India have shown positive growth after COVID-19 pandemic.
- 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

69. Consider the following statements with respect to credit rating:
1. Credit Rating is the process of a quantified assessment of the creditworthiness of a creditor.
 2. It may be provided to an individual, a corporation, a state or provincial authority, or a sovereign government.
 3. Any private agency can provide credit rating in India.
- Which of the statements given above is/are correct?
- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
70. Consider the following statements with reference to NBFCs in India:
1. Asset Finance Company and Loan Company are covered under NBFCs.
 2. Housing Finance Companies are not covered under NBFCs.
- 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
71. Consider the following statements about United Nations Conference on Trade and Development
1. UNCTAD is a permanent body of the United Nations that deals with trade issues, investments and other matters concerning development.
 2. It is headquartered in New York, USA.
 3. The world Development Report is its flagship publication.
- Which of the above given statements is/are correct?
- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2, and 3
72. Consider the following statements with reference to regulation of media and cable in India:
1. Indian media and entertainment industries is regulated by Cable Networks Act, 1995 and Prasar Bharti Act, 1990.
 2. Recently, OTT platforms such as Netflix, Hotstar and Amazon's Prime Video have been put under the purview of the I&B Ministry.
 3. Certification, licensing and exhibition by means of cinematography is also regulated under Cable Networks Act.
- Which of the statements given above is/are correct?
- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
73. Consider the following statements about White Shipping Agreement:
1. It refers to exchange of prior information on movement of commercial non-military merchant vessels.
 2. India has not signed any such agreement with any of the countries in the world.
- Which of the above given statements is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
74. Consider the following statements about the Internet and Mobile Association of India (IAMAI):
1. IMAI is a not-for-profit industry body registered under the Societies Registration Act, 1860.
 2. Its mandate is to expand and enhance online and mobile value-added services.
- 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
75. Consider the following statements about the measures to reduce Agri pollution:
1. Adjust the intensity of tillage
 2. All the planting of trees or vegetation
 3. Changing consumption behavior
 4. Preventing excessive nutrients to reach the soil
- Which of the statements given above is/are correct?
- (a) 1, 2 and 3 only (b) 2, 3 and 4 only
(c) 1, 3 and 4 only (d) 1, 2,3 and 4
76. Consider the following statements about the International Financial Services Centre:
1. It is being set up under the Special economic Zone Act 2005 of India.
 2. It caters to customers outside the domestic economy
 3. GIFT City in Gandhinagar Gujarat is India's first IFSC.
- Which of the statements given above is/are correct?
- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
77. Consider the following statements about Invest India:
1. It was set up as a non-profit venture in 2009 under the Ministry of Trade and Commerce
 2. It is a national investment promotion and facilitation agency of India.
- 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
78. San Isidro Movement is related to which of the following?
- (a) It is an international movement for the protection of human rights in world
- (b) It is an movement to protect the local tribal population around the globe from climate related disasters.
- (c) It is a Cuban movement started by artists demanding greater freedom of expression.
- (d) It is movement started by Kailash Satyarthi for protection of Child Rights.
79. Consider the following statements about the Indian Coastal Guard:
1. It is an independent armed force of India with jurisdiction over territorial waters of India excluding Exclusive Economic Zone.
 2. It comes under administrative jurisdiction of Ministry of Home Affairs.
- 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
80. Vision 2035: Public Health Surveillance in India Report is recently released by which of the following organization?
- (a) World Health Organisation
- (b) NITI Aayog
- (c) Ministry of Health and Family Welfare
- (d) Ministry of Statistics and Program Implementation

January, 2021

- 81.** Consider the following statements about Commission For Air Quality Management (CAQM):
1. It is a non-statutory body created through a cabinet decision.
 2. The commission has not been provided with penal powers.
 3. In case of dispute against the orders of CAQM the appeal will be entertained by National Green Tribunal.
- Which of the statements given above is/are **not** correct?
- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) All of the above
- 82.** With reference to Environment Pollution (Prevention and Control) Authority, consider the following statements:
1. It is Supreme Court mandated body deriving its power from Air Pollution Act 1981.
 2. It has no power to order penalty for violations of its order
- 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
- 83.** Consider the following statement about the Zoological Survey of India:
1. It was established in 1916 under the Ministry of Environment, Forest, and Climate Change.
 2. ZSI is engaged in exploring, naming, describing, classifying, and documenting animals from all over India.
- 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
- 84.** Consider the following statements about Leopards in India:
1. Largest number of Leopards have been found in Karnataka
 2. They prefer only wet and humid climate to survive.
- 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
- 85.** Edinburg Medal is given under which of the following categories?
- (a) Science & Technology (b) Literature
(c) Mathematics (d) Peace initiatives
- 86.** Consider the following statements about Theravad Buddhism:
1. It is the most ancient branch of Buddhism and remain closest to the original teachings of Buddha.
 2. Theravad is a fundamentalist school.
- 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
- 87.** With reference to the Marine Commandos (MARCOS), consider the following statement.
1. MARCOS are trained for only operating in maritime operations.
 2. The commandos are trained to undertake anti-piracy operations also.
 3. Marcos were deployed along with the Indian Army during the Kargil war in 1999.
- Which of the statements given above is/are correct?
- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) None of the above
- 88.** Consider the following statements about the All India Trade Union Congress:
1. It is first Central Trade Union of India.
 2. It was formed in 1920 by Bal Gangadhar Tilak, N.M Joshi and Lala Lajpat Rai.
- 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
- 89.** Consider the following statements about Khelo India Program:
1. Khelo India Programme is a national scheme for the development of sports in India, launched in the year 2018.
 2. It is a Centrally Sponsored scheme under Ministry of Youth Affairs.
- 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
- 90.** Consider the following statements about Garima Greh:
1. It is a shelter home scheme for transgender in the country.
 2. It comes under administrative control of Ministry of Social Justice and Empowerment.
- 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
- 91.** With respect to National Common Mobility Card consider the following statements:
1. It enables people to pay multiple kinds of transport charges, including metro services and toll tax, across the country.
 2. It is brought out by Ministry of Housing and Urban Affairs.
- 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
- 92.** With reference to Global Teacher Prize 2020 consider the following statements:
1. The Global Teacher Prize award is presented annually to an exceptional teacher for his/her outstanding contribution to their profession.
 2. No Indian teacher till date has received this award.
- 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
- 93.** Consider the following statements about Ramanujan Prize:
1. It is awarded annually since 2005 for contributions towards mathematics.
 2. It was originally instituted by the International Centre for Theoretical Physics (ICTP), the Niels Henrik Abel Memorial Fund, and the International Mathematical Union (IMU).
- 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

January, 2021

Subjective Questions

GS Paper-I

- Climate Change has aggravated the erratic behavior of cyclones in the Northern Indian Ocean. Discuss. **(10 Marks)**
- India plays a crucial role in the cyclone warning and information dissemination system in the Indian Ocean. In this context, highlight the role of IMD. **(10 Marks)**
- What sense does a separate religious code make? Discuss in the context of demands by the Sarna community to recognize it as a separate religion and include it as a separate code in the Census of 2021. **(15 Marks)**

GS Paper-II

- In the light of relevant legal judgments; critically examine the government's decision to regulate the digital space? **(10 Marks)**
- "Although betting and gambling have been termed as inconsistent with the concept of a welfare state, these activities have not been completely banned." Critically Analyze **(15 Marks)**
- India's Nuclear Doctrine policy of no first use (NFU) and credible minimum deterrence needs revision in the changing neighborhood dynamics. Analyze. **(15 Marks)**
- The Indian judiciary has an under-representation of women, which affects the effectiveness of justice delivery. Identify other such issues related to women's representation in the Indian judicial system and suggest measures for reforms. **(15 Marks)**
- With special reference to Sri Lanka, Discuss China's debt trap strategy through Belt and Road Initiative in the Indian Ocean Region and its implications on India. **(10 Marks)**

GS Paper-III

- Elaborate the impact of Agricultural subsidies provided by the State towards rising air pollution. How can changing the procurement policies help in improving the air quality of Northern India during winters? **(10 Marks)**

- What is Nuclear Fusion? Discuss the possibilities and challenges in leveraging nuclear fusion technology for solving 21st century energy security concerns **(10 Marks)**
- Discuss different types of port development models in India. Which port development is ideal for an open decentralized economy and why? **(10 Marks)**
- Critically analyze the cause of the rise of Left-wing Extremism and steps taken by the government to tackle it? **(15 Marks)**
- India has always maintained a line of separation between the banking sector and corporates in the last seven decades." Critically analyze with respect to the recent recommendations of the Internal Working Group of RBI to give banking license to the corporate sector. **(15 Marks)**
- Discuss the evolution of India's Nuclear Programme since independence. **(10 Marks)**
- A recent investigation revealed the widespread thriving food adulteration business in India. Discuss its impact on the health of the population and the challenges of implementing food standards. **(10 Marks)**
- Paris Deal has completed its five years with countries submitting their plans for future climate actions. Discuss how far India has achieved its climate commitments and what are future challenges in its progress further. **(15 Marks)**
- Keeping in view the Act East Policy, discuss the importance of ASEAN countries in India's Foreign Policy and the role of the Act East Policy. **(15 Marks)**
- Prediction of increment in the growth rate of Assets under Management of NBFCs by credit rating agency CRISIL has signified India's post-pandemic recovery." Discuss. **(10 Marks)**

GS Paper-IV

- "The current pandemic has uncovered the ethical practices across the globe.". Comment. **(15 Marks)**
- 'India has shown its commitment to deliver vaccine across the globe without any disparity'. Discuss considering the current wave of 'Vaccine Nationalism.' **(15 Marks)**

■■■■