

## ABOUT CURRENT CONNECT

It gives us immense pleasure to present an innovative approach to master current affairs. Current is a passing wind and diverse issues happen at the same time. It is to an extent chaotic. Newspapers, magazines and various other sources report the chaos per se. With our experience of current affairs we have tried to give “the current” a medium to travel. It is the syllabus of the UPSC with their components that are the medium through which the "Current is Passed” to the readers. Ever since the new syllabus of the UPSC came into existence, current has been gaining significance both at prelims as well as mains examination. This book is meant to cover current affairs and related questions arising from those events. We have not only covered the current events for their factual contents but also presented it in such a way that any question asked from that topic gets covered. Moreover, topics are also "peppered" with the relevant facts/key concepts that are related to the theme. We have also given questions for practice both, subjective and objective, so that candidates are oriented to the examination mode. It is a collection covering myriad source yet in a manageable size. To use this book we recommend you to master the components of general studies (GS) syllabus as broken into rows and columns (provided in the beginning after preface). Each cell comprising of the portion of GS becomes the connect for the current and every news subsequently covered guides the reader to the address of the syllabus. It is logical to expect that same issue may be connected to more than one topic of the syllabus. Further, the news also has some additional vistas opened for the readers by adding a box with a title “PEPPER IT WITH” where we expect the students to build further around the theme.

We are also trying to reach the remotest part of the country with our spirit and zeal of “Mains Answer Writing”, which has been admired by students, CSE rankholders and other scholars. Continuing in line with the effort, we have started with programs like 7 Question (7Q) Challenge, Shell Points, Stock Points, Content Enrichment Booklet etc.

When it comes to evaluation, we are altogether at a different level. We are also reaching every nook and corner with this expertise for the aspirants of CSE. Now you can write a Mains Answer and get it evaluated from our Expert Team and can get Feedback. [Drop a mail at evaluation@ksgindia.com](mailto:evaluation@ksgindia.com) for registering yourself in our race to perfection. Don't wait, it's your golden chance to crack this exam and fulfill your passionate dream.

**Team KSG**

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GS- I	Culture-Art Forms, Literature and Architecture from ancient to modern times.	Indian history significant events, personalities, issues and the Freedom Struggle	Post independence issues, National boundary and disputes	Indian society features, issues, globalization and diversity	Women - issues and developments	Urbanization - problems and remedies	Distribution of industries and resources - India and world	Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc	Culture-Art Forms, Literature and Architecture from ancient to modern times.		
GS- II	Indian constitution- Amendments, acts and bills.	Legislative, executive and judicial processes.	Constitutional, non-constitutional, judicial, quasi-judicial, administrative and other types of bodies.	Federal structure and local bodies. Their powers and functions.	Government policies and various governance issues like transparency, accountability and - governance	Committees and schemes.	Non-government issues, self-help groups and role of civil society	Vulnerable sections of our society and social sector issues and initiatives.	International Relation-India and other countries, various Indian and international agreements, effects of other countries on India and international institutions.		
GS- III	Various measures to boost Indian economy- planning, policies, management.	Government budgeting and issues related to budget.	Agriculture, animal husbandry and transport	Food security- measures to boost food security and food processing, issues related to hand- hand reforms	Industries and infrastructure their growth and investment model	Space and technology, IT space, robotics and computer	Disease, biotechnology and human welfare	Innovations, intellectual property, Awards, POJ and other import and aspects of S&T	Environment and disaster: government initiatives, various judgment, pollution, degradation and conservation efforts	International agreements and works of various international bodies, awards, effort by individuals and misc.	Challenges to internal security, Various Security forces and agencies and their mandate. Cyber security: money laundering and its prevention.
GS- IV	Ethical issues related to family society, education, Corruption etc.	Ethics in public and private administration	Issues	Related laws and rules	Governance /- Governance	Ethics in international issues	Personalities and their teachings	Other important topics			
MIS.											

## **Water Crisis and Mitigation**

**“Water is a gift of nature. Human hand cannot be permitted to convert this bounty into a curse, an oppression.”**

**(Hon’ble Supreme Court of India)**

Water is considered as the world’s first and foremost medicine, if left in its pure state. Alas! The crisis in water today not just pertains to quantity but quality also. In June 2018, a report was published by NITI Aayog highlighting the grim scenario of water crisis in India. The ‘**Composite Water Management Index (CWMI)**,’ which was intended to serve as a tool for water management, stated that 60 crores of Indian people face water shortages, about 70 per cent of India’s water is contaminated. In the first ever United Nations system wide evaluation of global water resources, India is placed at 120<sup>th</sup> position amongst 122 countries.

It is now established beyond doubt that India’s water demand by 2030 would be twice, if not more, the available supply. Even today the water availability of many regions of India remains much below the national average, a condition that could be categorised as water stress or scarcity. A Niti Aayog report released last year predicts Day Zero for 21 Indian cities by next year. **Day Zero** refers to the day when a place is likely to have no drinking water of its own.

Albeit bestowed with an availability of 4000 BCM per annum precipitated water, the data on water availability per capita in India is not very encouraging. The average annual per capita water availability in India in the year 2011 was 1545 cubic meters, which is slated to reduce to 1367 cubic meters in the year 2031. It may be noted that the annual per capita water availability amounting to less than 1700 cubic meters is considered as ‘**water stressed**’, while below 1000 cubic meters is a condition called ‘**water scarcity**’.

India is the biggest user of groundwater. It extracts more groundwater than China and the US the next two biggest pullers of groundwater – combined. Central Ground Water Board, corroborating the fact, **reports a reduction in groundwater levels in India by 61 percent between 2007 and 2017**. About 80 per cent of the water reaching households in India is drained out as waste flow through sewage to pollute other water bodies including rivers.

Water stress is not merely a result of the demand-supply mismatch. It transcends through the environmental concerns of Global Warming and climate change, societal dimensions of women needs and through considerable federal strains. Nevertheless, such strains are expressed more often when the supply is shrinking, the glaring example of which is the Indian peninsular states that are currently facing the crisis much more severely than the rest of the country. According to the Indian Constitution, ‘water’ is a ‘state subject’ whose management lies primarily with the Indian states. Therefore, the central government has been working in cooperation with the affected states to mitigate this crisis. The government of India has also consolidated all water related issues under a newly created ministry which is named ‘**Jal Shakti**.’

In order to mitigate the water crisis, we must use effective water management tools including the basic management, watershed management and micro- watershed management. It should be remembered that water stress is not confined to one place; rather it is found in various geographic situations. For example, we have **phreatic water, juvenile water and connate water** and our focus should accordingly be at all these locations. This whole system of water needs to be organised in such a manner that judicious micro-cycles could evolve. This may cause the natural mobility of water through all these dimensions and restore it to their original form, one that the nature gave us. Initiatives like **Jalyukt-Shivar Abhiyan** of Maharashtra and **Mission Kakatiya** of Telangana have such regional perspectives.

It is also required to have greater focus on the **hydrological cycle**, which initially had a very efficient uninterrupted movement, but has seen lots of obstructions in recent time. In this regard, it is important to identify the negative loops of feedback and make judicious interventions to remove the inefficiencies from the system. However, this should be started at the level of **micro-watershed mobility**. It is equally important that **water resource planning and management** should evolve around the river basins which serve as hydrological units as against the current practice in India where it is mostly driven by the administrative boundaries. In the age when science and technology has permeated almost every field and boundary, its usage in developing an **efficient decision support system** seems indispensable.

It is imperative that we do a ‘fundamental reassessment’ of our approach to this prevailing problem, which the World Bank has chosen to term as a ‘**water management crisis**,’ instead of ‘water crisis.’ Although there seems to be no easy solution, but India can turn this crisis into an opportunity by an integrated approach of building artificial recharging structures, renovating the existing water harvesting systems, cleaning up water bodies, investing in water recycling, focusing on crops that are not water intensive, improving irrigation efficiency and reducing water leakage, among other things. We may not be the first generation that is facing water crisis, but we are probably the first one to have the technology and know-how to mitigate it.

**Team KSG**

**SCO SUMMIT-2019**

**News Excerpt**

Shanghai Cooperation Organization Summit 2019 was organized in Bishkek, capital of Kyrgyzstan.

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**Pre-connect**

Since its formation, the SCO has focused on regional non-traditional security, with counter-terrorism as a priority: The fight against the “three evils” of terrorism, separatism and extremism has become its mantra. Today, areas of cooperation include themes such as economics and culture.

**Key Highlights**

**On Terrorism**  
The declaration largely followed language from the Qingdao Summit declaration, reiterating SCO's condemnation of terrorism in all its forms and manifestations.

**On Trade**  

- There was support for WTO and the multilateral trading system.
- Called for increased cooperation between SCO member states in trade and services
- Signing of document regarding cooperation among members on Digitalization and Information and Communications Technology by head of states

**On Connectivity**  
India refused to join the clause in the declaration in support of the Belt and Road Initiative. India noted the principles of respect for sovereignty, regional integrity, good governance, transparency to be essential for connectivity, obliquely referring to New Delhi's reservations on CPEC in particular and BRI in general.

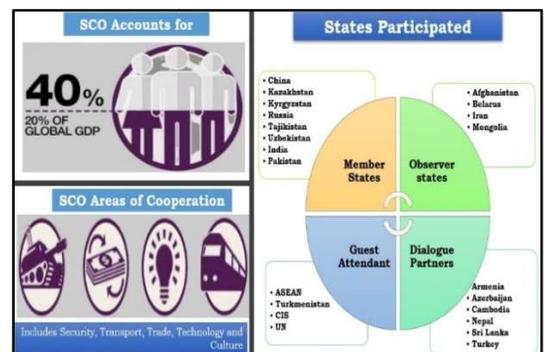
**On Afghanistan Iran and Syria**  

- **For Afghanistan**, It called for an 'inclusive peace process conducted and led by Afghans themselves' with UN playing the main role even as multilateral forums continue to interact on the issue.
- **On Iran**, the declaration called for 'consistent implementation' of the Joint Comprehensive Plan of Action and asked all participants for comprehensive and effective implementation of the plan.
- **On Syria**, the declaration noted the Astana format and the process of political settlement through the dialogue process. It also extended support to 'post-conflict restoration' by different states in Syria.

**Analytica**

For India, two important objectives are counter-terrorism and connectivity. These sit well with the SCO's main objective of working cooperatively against the “three evils”. India wants access to intelligence and information from SCO's counter-terrorism body, the Tashkent-based Regional Anti Terror Structure (RATS). A stable Afghanistan too is in India's interest, and RATS provides access to non-Pakistan-centred counter-terrorism information there.

Connectivity is important for India's Connect Central Asia policy. Energy cooperation dominates its interest – and it's in China's neighbourhood. But India will also have to deal with an assertive China, which will push its Belt and Road Initiative during the summit. SCO membership also bolsters India's status as a major pan-Asian player, which is boxed in the South Asian paradigm.



The US' power struggle with China, exit from the Iran nuclear deal JCPOA (affects India's oil imports from Iran), and adversarial attitude towards Russia (affects India's defence purchase like S-400) have forced India to choose sides. While Washington's stance against Islamabad after the Pulwama attack

was evidence of its support to New Delhi, India has had a strained relationship with China after the Doklam stand-off, followed by attempts to reset relations in Wuhan.

In the SCO, India's sitting down with less-than-free regimes, Russia and China has always had the West worried. India, however, has always been tactful in not aligning with these countries on governance issues. What draws India to SCO is the "Shanghai spirit", which emphasises harmony, non-interference in others' internal affairs, and non-alignment. The bottomline is that it helps India keep all options open in terms of international partnerships.

**PEPPER IT WITH**

EAEU, Central Asia Connect Policy, Ashgabat Agreement, Afghan Peace Process

**Way Forward**

SCO has become an important venue for the member states to interact but it is telling that bilateral meetings on the sidelines have garnered more attention than the multilateral summit itself. That is also because concrete, collective measures by the organization have been few and far in between. With the inclusion of India and Pakistan, it still remains to be seen if the bilateral frictions between member states would preclude more meaningful collaboration at the SCO or whether it would overcome the differences to play an active role in a changing international order.

### India at SCO-2019

**SECURE**

- 'S' for security for citizens, 'E' for economic development, 'C' for connectivity, 'U' for unity, 'R' for respect of sovereignty and integrity, and 'E' for environment protection.

From Qingdao to Bishkek

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**HEALTH**

- 'H' for healthcare cooperation, 'E' for economic cooperation, 'A' for alternate energy, 'L' for literature and culture, 'T' for terrorism-free society and 'H' for humanitarian cooperation

**Bilateral Understandings**



**India-China relations:** Both Countries agreed to have a fair boundary problem solution. Further a 2<sup>nd</sup> Informal summit between India and China was planned. China being engaged with US in a trade war certainly want to lower the temperature in the neighborhood which it is doing by wooing both India and Japan. India maintained its strategic autonomy by rejecting both talks with Pakistan until they create terror-free environment and China's BRI.



**India-Russia relations:** There was new impetus in the relationship with PM invited to Eastern Economic Forum in Vladivostok. This could open new avenues for energy cooperation between two countries. Russia had also invited India to participate in Arctic Exploration. Russia also values India's stand on S-400 deal despite looming US sanctions.



**India-Central Asia:** With other members of SCO, India has lot of others platform to engage such as BRICS, G-20. But SCO is the only platform where India can engage deeply with Central Asian country. India- Kyrgyzstan signed the Double Taxation Avoidance Agreement. India announced it would extend \$200 million line of credit to Bishkek. A five year roadmap has also been developed to promote trade and economic cooperation.

**Other Stand**

India reiterated its Afghan Policy, calling for Afghan Lead and Afghan Owned and Afghan-controlled peace process .

India supported a Syria-led political process and the current regime during the ongoing conflict, while agreeing to get further involved in the reconstruction process.

International North South Transport Corridor, Chabahar Port, Ashgabat Agreement and the air freight corridor between Kabul, Kandahar and New Delhi are India's focus on connectivity.

**UNSC SEAT FOR INDIA**

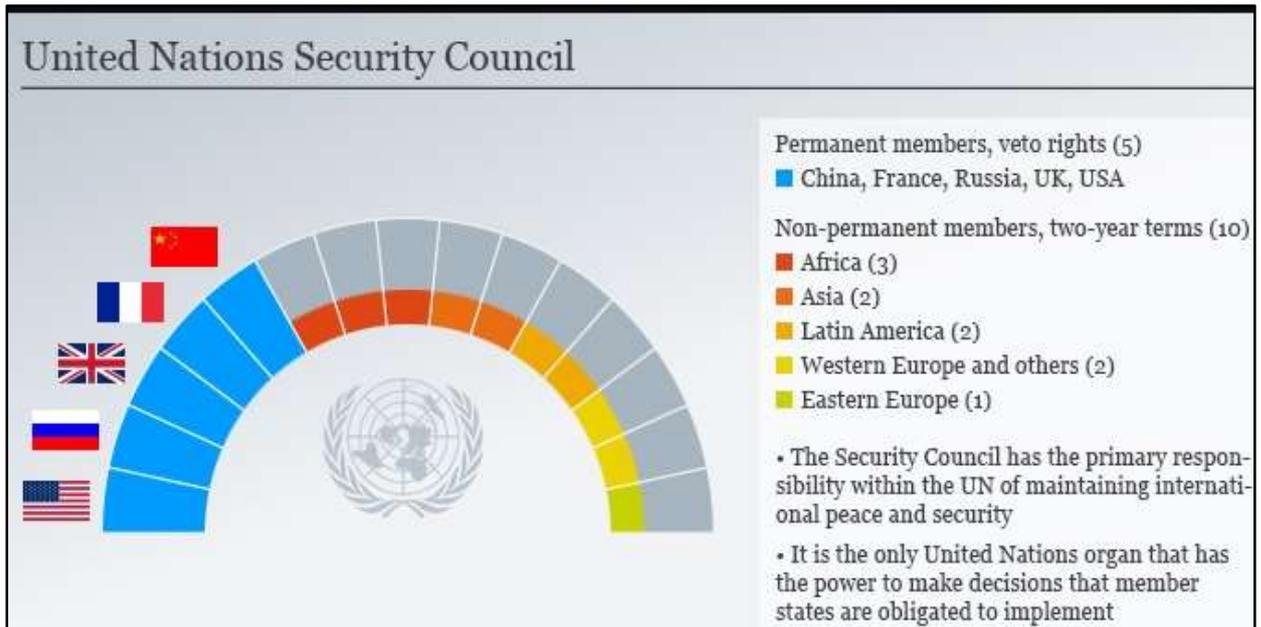
**News Excerpt**

India's candidature for **a non-permanent seat at the powerful UN Security Council** for a two-year term has been unanimously endorsed by the **55-member Asia-Pacific grouping, including China and Pakistan.**

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**Pre-Connect**

- India has been bidding for the permanent membership of the United Nations Security Council since 1994
- India **was among the original members of the United Nations** that signed the Declaration of the United Nations at Washington on **1st January 1942** and **participated in the historic UN Conference of International Organization at San Francisco.**



- The **country also stood at the forefront during the UN's tumultuous years of struggle against colonialism and apartheid**, its struggle towards global disarmament and the ending of the arms race, and towards the creation of a **more equitable international economic order**.

**Conclusion**

- It is a welcome step that **India's candidature for the non-permanent seat has got the support of 55 nations**. If elected, India will be able to push for greater reforms in the UN & the overall reform of the UNSC itself.
- This **diplomatic victory of India** must be seen in a broader context of how India is diversifying its foreign policy- e.g. engaging with BIMSTEC, BRICS, SCO, G20, etc.

## UNSC For India

Significance	Challenges
<div style="background-color: #fff9c4; padding: 5px; border: 1px solid #ccc;"> <p><b>Diplomatic Benefits</b></p> <ul style="list-style-type: none"> <li>• Getting Support even from rival national like Pakistan will surely boost <b>India's diplomatic depth</b></li> </ul> </div> <div style="background-color: #e8f5e9; padding: 5px; border: 1px solid #ccc; margin-top: 5px;"> <p><b>Increased bargaining power</b></p> <ul style="list-style-type: none"> <li>• Veto Power of permanent members is not applicable in the cases involving procedural decisions. This is where support of at <b>least 9 members is required</b>.</li> <li>• The Chair of UNSC is headed by one member for a month. This provides power to <b>shape monthly Programme and debate</b></li> </ul> </div> <div style="background-color: #e8f5e9; padding: 5px; border: 1px solid #ccc; margin-top: 5px;"> <p><b>Functional Benefits</b></p> <ul style="list-style-type: none"> <li>• <b>Leadership</b> for various sanctions committee and working groups</li> </ul> </div> <div style="background-color: #bbdefb; padding: 5px; border: 1px solid #ccc; margin-top: 5px;"> <p><b>Future benefits</b></p> <ul style="list-style-type: none"> <li>• It strengthens India's bid for <b>permanent membership</b> of the council</li> </ul> </div>	<div style="background-color: #bbdefb; padding: 5px; border: 1px solid #ccc; margin-bottom: 5px;"> <p><b>The Coffee Club Challenge:</b> Countries who united against changing any status quo in permanent membership of UNSC. Such as China</p> </div> <div style="background-color: #e8f5e9; padding: 5px; border: 1px solid #ccc; margin-bottom: 5px;"> <p><b>US-China hostilities:</b> Growing US China hostilities may hamper India's ability in bringing consensus (Once elected)</p> </div> <div style="background-color: #e8f5e9; padding: 5px; border: 1px solid #ccc;"> <p><b>Passive Responses:</b> India's silence on crucial global matters and crisis' such as Syrian crisis, Yemen Crisis hampers its global standing as a major global power.</p> </div>

- India **is taking cautious steps in maintaining** its strategic autonomy in the highly volatile international environment.

**PEPPER IT WITH**

1267 Sanctions Committee, UNSC reforms, P5+1 and JCPOA

**G20 Summit**

**News Excerpt**

G20 Summit was held in 2019 at Osaka, Japan.

**Pre-Connect**

- It is the premier forum of governments & central bank governors for international economic cooperation”, representing 85% of the global GDP. It aims to achieve robust global economic growth.
- Created by the G7 countries, G20 is formally known as the “Summit on Financial Markets and the World Economy”.
- Following the East Asian crisis, the first G20 meeting took place in Berlin in 1999. In 2008, the inaugural G20 Summit was held in Washington, D.C. in response to the global financial crisis. Since the Pittsburgh summit 2009, the summit meetings were held semi-annually until 2010 and annually from 2011 onwards.
- Focused areas in 2019 Summit were Sustainable & Inclusive Economic Growth, Trade & Investment, Innovation (e.g. Society 5.0), Environment & Energy, Inclusive Employment, Women Empowerment, Development, Health.
- The host cities for 2020, 2021, 2022 Summits are Riyadh, Bari & New Delhi respectively.

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**Kobe-Ahmedabad Sister City Agreement**  
**An MoU was signed b/w India & Japan on the sidelines of the G20 summit to make Kobe & Ahmedabad sister-cities.**

- ❖ A sister city, county, or state relationship is a long-term partnership between the two communities in two countries. It is officially recognized after the highest elected or appointed officials from both communities sign off an agreement.
- ❖ In addition to volunteers, sister city organizations can include representatives from nonprofits, municipal governments, the private sector, and other civic organizations.
- ❖ Each sister city organization is independent and pursues the activities and thematic areas that are important to them and their community including municipal, business, trade, educational, and cultural exchanges and projects with their sister city.



**Analytica:**

**Act East Policy got renewed:** Meeting of the Indian PM and South Korean President and discussion over ways to enhance trade, economic and people-to-people relations. The two leaders expressed mutual desire to synergise India’s Act East Policy with South Korea’s New Southern Policy. The main focus of India’s Act East Policy is to shift the country’s trading focus from the west and neighbours to the booming South East Asian countries. The Moon administration’s ‘New Southern Policy’ focuses on South Korea’s development of its relations with Southeast Asia and ASEAN.

**Data Localisation and 5G:** The initiative for free flow of data, announced by Japanese Prime Minister Shinzo Abe in January, came after the Reserve Bank of India’s guidelines mandating that the storage of all financial data, including by multinational companies, must be kept on **servers in India**. The move sparked protests from major companies such as Google, MasterCard, Visa and Amazon and the U.S. called it a major non-tariff barrier, adding to trade tensions between the countries. At G20 meet, **India placed itself alongside leaders of BRICS** and away from US and Japan. India demanded that the rules on data be made at WTO and not at the G20. Even on the matter of 5G, where the US demanded that countries ban China’s Huawei’s 5G network, India did not give any straight assurances, although it’s true that 5G is becoming a fault line in the technology cold war between world powers.

<b>KEY TAKEAWAYS</b>	Stress was given on dealing with Economic Offenders	Affirmed UNSC Resolution 2462 (Importance of FATF)	Except USA, all members reaffirmed their commitment to Paris Climate Agreement.	China & USA agreed to restart trade talks amid ongoing trade war	USA stood by its crucial ally Saudi Arabia in Khashoggi murder case	Emphasis was also placed on building Quality Infrastructure
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**Merits of G-20**

- **Address Crucial Issues:** G-20 is an important forum to discuss crucial issues such as environment, women empowerment etc.
- **Greater market access to Least Developed Countries:** Developing countries like India can negotiate for greater market access
- **A Tool for Global Crisis Management:** Its role after 2008 economic crisis is commendable.
- **Promote Multilateralism:** It can help in conserving multilateralism and can counter growing protectionism.
- **Promote resilient Global Economy:** Cooperation in G-20 can help in stabilizing global economy especially when World Economic Forum predicts a slowdown.

**Demerits of G-20**

- **Distorting focus due to expansion:** Unchecked expansion of forum may result in derailment from its economic agenda.
- **Structural Issues:** It is seen to be structurally biased towards western powers and large corporations at the cost of the poor and developing countries.
- **Challenges within:** There is a rise of protectionism within the G-20. Countries further, some of the G-20 member countries are also facing a legitimacy crisis domestically.
- **No outcomes:** Even after huge deliberations and discussions, and expenses, the forum is yet to produce tangible outcomes.
- **Functional Issues:** There is overlapping of functions which lead to delays. For eg, the Finance track of G-20 led by finance ministers and central bank representatives was overtaken by the prioritization of issues on the development track which is typically led by officials outside finance ministry.

**India at G-20**

**Vision**

- India presented a Vision to use technology for Social benefits
- It proposed 5Is which were- **Inclusiveness, Indigenization, Innovation, Investment in Infrastructure & International Cooperation**

**Strategic Partnerships**

- India participated in **RIC (Russia-India-China)** trilateral forum. The forum is critical for addressing the issue of American unilateralism.
- At the same time India also participated in **JAI (Japan-America-India)** trilateral forum, showing its intent of de-hyphenating US-China relation. It also preserved its strategic autonomy

**Challenges**

- India refused to take part in the digital economic summit of the forum due to its stand on **data localization**
- India’s concerns regarding terrorism was not taken up seriously at the forum. It’s bid to place Pakistan in the **FATF blacklist** didn’t yield results in the recent plenary of FATF.

**Challenges as observed: 1st: Recession and uncertainty in the world economy.**

**2nd: Unilateral decisions and Rivalries**

**x3rd: Lack of resources (there is a shortage of an estimated USD 1.3 trillion in investment for emerging market economies)**

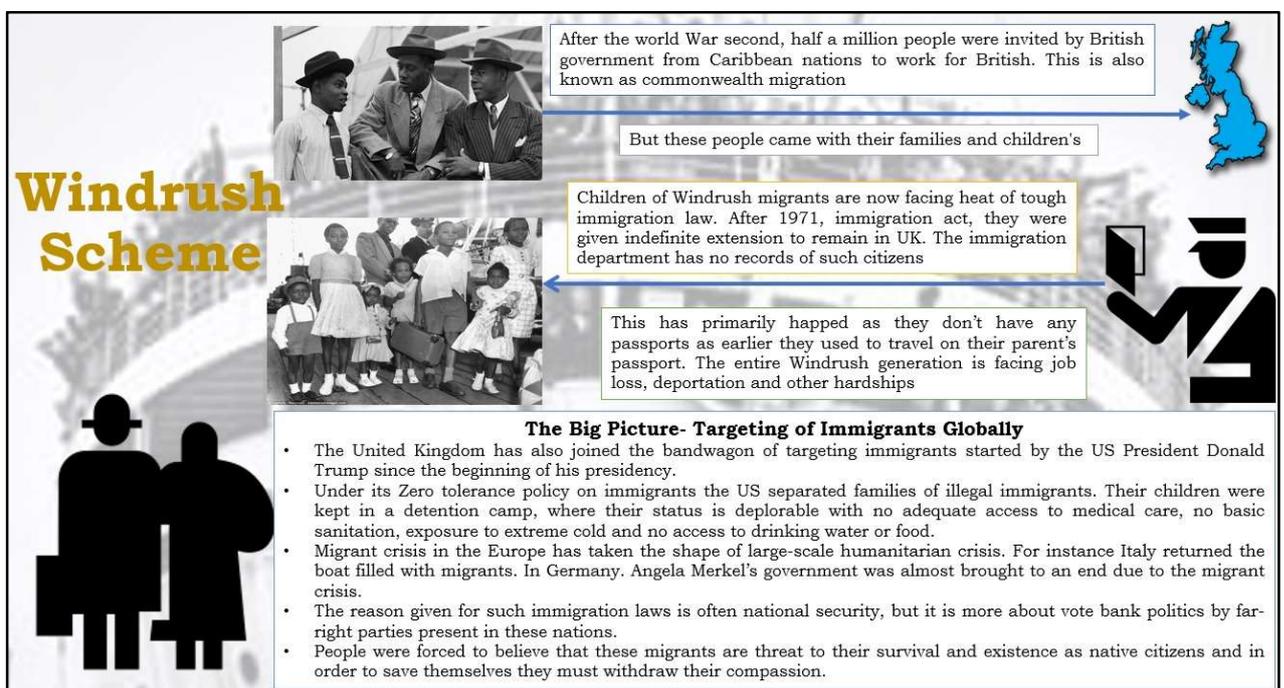
**4th: making development and progress inclusive and sustainable**

**5th: Rapidly changing technologies such as digitisation and climate change**

**Way Forward**

- G20 is an important institution especially because it is inter-twining different issues that were earlier segregated. E.g. women, environment, economy. A peaceful world as a goal can only be achieved when there is a wholesome approach towards issues like the G20 is doing.
- There's a need to develop stronger mechanisms to seek meaningful input and build consensus among the global public.
- Reform of the WTO can also be pushed for through the G20 platform.

## Windrush Scheme



The infographic features a central title 'Windrush Scheme' in yellow. It includes several text boxes and images:
 

- Top Left:** A black and white photograph of three men in suits and hats.
- Top Right:** A map of the United Kingdom.
- Middle Left:** A black and white photograph of a group of children.
- Middle Right:** A silhouette of a person with a suitcase.
- Bottom Left:** A silhouette of a man and a woman with suitcases.

**Text Boxes:**

- After the world War second, half a million people were invited by British government from Caribbean nations to work for British. This is also known as commonwealth migration
- But these people came with their families and children's
- Children of Windrush migrants are now facing heat of tough immigration law. After 1971, immigration act, they were given indefinite extension to remain in UK. The immigration department has no records of such citizens
- This has primarily happed as they don't have any passports as earlier they used to travel on their parent's passport. The entire Windrush generation is facing job loss, deportation and other hardships

**The Big Picture- Targeting of Immigrants Globally**

- The United Kingdom has also joined the bandwagon of targeting immigrants started by the US President Donald Trump since the beginning of his presidency.
- Under its Zero tolerance policy on immigrants the US separated families of illegal immigrants. Their children were kept in a detention camp, where their status is deplorable with no adequate access to medical care, no basic sanitation, exposure to extreme cold and no access to drinking water or food.
- Migrant crisis in the Europe has taken the shape of large-scale humanitarian crisis. For instance Italy returned the boat filled with migrants. In Germany. Angela Merkel's government was almost brought to an end due to the migrant crisis.
- The reason given for such immigration laws is often national security, but it is more about vote bank politics by far-right parties present in these nations.
- People were forced to believe that these migrants are threat to their survival and existence as native citizens and in order to save themselves they must withdraw their compassion.

**14th summit of Islamic cooperation council**

**News Excerpt**

The 14th summit of the Organization of Islamic Cooperation (OIC) was held in Mecca, Saudi Arabia.

**Key highlights:**

- ✓ The agenda of the meeting was to address the current issues in the Muslim world, and recent developments in the number of OIC member states.
- ✓ The OIC emphasized its support for the legitimate rights of the people of Jammu and Kashmir and appointed a special envoy for the state.

**Analytica**

- Considering the reference as unacceptable, the Indian government rejected the Organization of Islamic Cooperation's decision to appoint a special envoy for J&K.

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- The OIC has no locus-standi in matters relating to the state of Jammu and Kashmir, which is an integral part of India.
- The Kashmir issue is an internal matter of the country and that disputes with Pakistan are strictly bilateral in nature that does not allow scope for a third party intervention or mediation
- Sceptics have long argued that the OIC has the distinction of competing with the Non Aligned Movement and the League of Arab Nations for the unflattering tag of the world's most ineffective international organisation.
- India was invited to a meeting of the **OIC in the year 2019**, for the **first time as the GUEST OF HONOUR**, recasting India's relations with the Middle East.
- The economic and energy interdependence of OIC with India has become important in recent times.

**About OIC**

- ❖ It is an **international organization** established in **1969** consisting of **57 member states**, based at Jeddah, Saudi Arabia. It has **5 observer states** including Russia and Thailand.
- ❖ It is **the second largest inter-governmental organization after the United Nations**.
- ❖ It sends its **permanent** delegation to both the United Nations and European Union.
- ❖ It holds its meetings every 3 years for making its policy decisions concerning its member states.
- ❖ It works to **safeguard and protect the interests of the Muslim world in the spirit of promoting international peace and harmony**.

**PEPPER IT WITH**  
 India-Pakistan, India and UAE, India's middle east strategy, Kashmir issue, Oil crisis.

**SIPRI REPORT-2019**

**News Excerpt**

Recently, the **Stockholm International Peace Research Institute (SIPRI)** has released its 2019 yearbook. The Yearbook is a compendium of data and analysis in the areas of **armed conflict and conflict management, military spending and armaments, non-proliferation, arms control and disarmament.**

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**India and armament**

- India is one of the largest arms importers. In the last four years, India's imports were **far greater than those of its regional rivals China and Pakistan.**
- Despite being one of the world's largest arms importers, modernization of armed forces in

**KEY FINDINGS OF THE REPORT**

- 1. The 9 nuclear armed countries, ( USA, RUSSIA, UK, CHINA, INDIA, ISRAEL, and NORTH KOREA) have reduced their nuclear weapons from 14465 in 2018 to 13865 in 2019. Though these countries have reduced their nuclear warheads, but at the same time they are modernising arsenals.**
- 2. The decrease were mainly attributed to RUSSIA and USA, in pursuant of implementing NEW START treaty 2010, set to expire in 2021.**
- 3. The report separately counts deployed warheads (warheads on missile or located on bases with operational forces) and other warheads ( stored or reserve warheads and retire warheads awaiting dismantlement).**
- 4. In 2019, India stood at a figure of 130-140 other warheads with the number same as which it had in 2018.**
- 5. North Korea, continues to prioritize its military nuclear programme. Its figures were not added to the total due to uncertainty about the count.**

India is taking place at a snail pace. Indian arms industry has "largely failed" to produce competitive indigenously designed weapons.

- Though 'Make in India' vision allows greater participation of the country's defense industry, but a lot needs to be done. Making India self-reliant in the production of its military requirements **is the need of the hour**.
- Keeping in mind the fiscal constraints, India has the ballooning defense import bill which must be restricted. Money should be spent wisely as it can otherwise be easily **put to address the socio- economic problems prevailing in the country**.

### Stockholm International Peace Research Institute (SIPRI)

- ❖ Established in 1966 and based at Stockholm.
- ❖ It is **an independent international institute dedicated to research in conflict management, armaments, arms control and disarmament**.
- ❖ The Institute provides data, analysis and recommendations, based on open sources, to policymakers, researchers, media and the interested public.

## Quadrilateral Security Dialogue (QSD) countries meeting in Bangkok

### News Excerpt

The Quad countries met in Bangkok with the agenda to work **for free inclusive Indo-Pacific**

### Pre-Connect:

- The **grouping of four democracies –India, Australia, US and Japan–** known as the **quadrilateral security dialogue** or quad, was **first mooted by Japanese Prime Minister Shinzo Abe in 2007**. However, the idea couldn't move ahead with Australia pulling out of it, apparently due to Chinese pressure.
- The United States has been moving in all directions to make allies so as to contain China's rise. The attempts to engage more with the east through **earlier 'Pivot to Asia' and now 'Indo-Pacific' partnerships, all are strategic actions the US is taking**.
- All four nations find a common ground of being the **democratic nations and common interests of unhindered maritime trade and security**.
- With the aim **to counter China's aggressive behavior in the Indo-Pacific region**, India, Australia, US, and Japan, formed the "quadrilateral" coalition on November 12, 2017, and held a meeting a day before the ASEAN Summit.

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### Highlights

- The purpose of the meet was to hold consultations **about their collective efforts for a free, open and inclusive Indo-Pacific and reaffirm their shared commitment of preserving and promoting the rules-based order in the region, where China is flexing its muscles**.
- The group agreed to continue with close co-ordination and collaboration in support of **sustainable, private sector-led development, maritime security, and good governance**.
- The group also affirmed its **strong support for ASEAN centrality** and ASEAN-led regional architecture, as well as their support for other regional institutions, including **the Indian Ocean Rim Association and Pacific Islands Forum**.

### Analytica

#### The Chinese issue

China has been trying to expand its military presence in the Indo-Pacific, which is a bio-geographic region, comprising the **Indian Ocean and the western and central Pacific Ocean, including the South China Sea**.

- ✓ China claims its jurisdiction on the whole of South China Sea based on the **nine-dash line theory** and discarding the international maritime boundary laws made by UNO.

- ✓ **South China Sea carries more than 1/3<sup>rd</sup> of the total volume of global trade and it is home to natural resources like natural gas and oil.** And therefore, it's important that this place stays free from any influence.

**India's Interest**

- ✓ Curb Chinese expansion and domination in Asia
- ✓ **Energy Security: India has invested in Natural gas and oil in collaboration with Vietnam.**
- ✓ **Act East policy: Support and protect its neighbors**
- ✓ **Trade security:** Around 25 % of India's trade passes through south china sea

**PEPPER IT WITH** Regional Grouping, Act East Policy, India Foreign Trade Basket, Pivot to Asia, Significance of Indian Ocean

**New Delhi International arbitration bill 2019**

**News excerpts**

The New Delhi International Arbitration Centre Bill, 2019 was introduced in Lok Sabha by the Minister of Law and Justice. The main purpose of the bill is **to establish an autonomous and independent institution for better management of arbitration** in India.

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**Key features**

- **New Delhi International Arbitration Centre (NDIAC): this was declared as an institute of national importance and the goal of this centre is to** conduct arbitration, mediation, and conciliation proceedings.
- Transfer the existing **International Centre for Alternative Dispute Resolution (ICADR)** to the central government.
- **Composition:** Under the Bill, the NDIAC will consist of seven members including: (i) a Chairperson who may be a Judge of the Supreme Court or a High Court, or an eminent person with special knowledge and experience in the conduct or administration of arbitration; (ii) two eminent persons having substantial knowledge and experience in institutional arbitration; (iii) three ex-officio members, including a nominee from the Ministry of Finance and a Chief Executive Officer (responsible for the day-to-day administration of the NDIAC); and (iv) a representative from a recognized body of commerce and industry, appointed as a part-time member, on a rotational basis.
- **Objectives and functions of the NDIAC:** The key objectives of the NDIAC includes (i) promoting research, providing training and organizing conferences and seminars in alternative dispute resolution matters; (ii) providing facilities and administrative assistance for the conduct of arbitration, mediation and conciliation proceedings; (iii) maintaining a panel of accredited professionals to conduct arbitration, mediation and conciliation proceedings. Key functions of the NDIAC will include: (i) facilitating the conduct of arbitration and conciliation in a professional, timely and cost-effective manner; and (ii) promoting studies in the field of alternative dispute resolution.

**ICADR**

The **ICADR** is a registered society to promote the resolution of disputes through alternative dispute resolution methods (such as arbitration and mediation)

**PEPPER IT WITH**

Arbitration & Conciliation amendment bill 2019, Alternate Dispute Resolution Mechanism

**Significance**

- Speedy appointment of arbitrators
- NDIAC being an autonomous body will have **faster clearance of cases**
- Promote trade and make India **an arbitration hub globally**

## National strategy for wellbeing 2031

### News Excerpts

**UAE** Cabinet approves National Strategy for Wellbeing 2031

### AIM

- To make UAE a **world leader in quality of life** through several strategic objectives and initiatives
- To promote an **integrated concept of wellbeing**, thus supporting the vision of **UAE Vision 2021 and the UAE Centennial 2071**

### Strategy and framework:

- Strategy is based on a national framework at three main levels - **individuals, society and the country**.
- There are 90 initiatives to be implemented by various ministries
- It includes 14 components and 9 strategic objectives, which include enhancing people's wellbeing by promoting healthy and active lifestyles, promoting good mental health and adopting positive thinking

**PEPPER IT WITH**  
Sustainable Development Goals,  
Human Development Report

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### Significance

- ✓ Reorientation of policy formation approach by the policymakers to keep focus on well being
- ✓ Adoption of a government approach linking various sectors to enhance wellbeing with clear roles and responsibilities for government, private sector, and citizens in order to react to the various potential future changes that affect wellbeing.
- ✓ This approach can become a model for countries like India where the human development index and quality of life of most of the people is low.

## Kimberley Process inter-sessional meeting 2019

### News Excerpt

The Inter-sessional meeting of Kimberley Process (KP) was hosted **by India, in Mumbai**. India is the **Current Chair of Kimberley Process Certification Scheme**.

### Highlights

- The 4Cs (Cut, Clarity, Colour & Carat)** of diamond may soon be expanded to 5Cs with the **5th C** being 'Conflict-free'.
- Proposal to establish **special forums** on Diamond Terminology and '**Artisanal Mining – Small Steps to Larger Outcomes**'.
- The GemFair session showcased **transparency** to empower **local communities**.

### About Kimberley process

- The Kimberley Process is a joint initiative involving Government, international diamond industry and civil society to stem the flow of Conflict Diamonds.**
- KP members are responsible for stemming **99.8%** of the global production of conflict diamonds.
- It was established in 2003 and has 55 participants representing 82 countries, with the European Union and its Member States counting

**Conflict Diamonds**

They Are rough diamonds used by rebel movements or their allies to finance conflict aimed at undermining legitimate governments. It is also described in United Nations Security Council (UNSC) Resolutions.

**History:** In 1998, certain rebel movements in Africa (Sierra Leone, Angola, Democratic Republic of Congo, Liberia) were selling, among other things, illegally obtained diamonds – known as Conflict Diamonds – **to fund their wars against legitimate governments.**

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as a single participant.

- **Currently** India is the chair of Kimberley process. The duty of the chair is to oversee the entire regime of Kimberley process
- **Vice Chair** is Federation of Russia
- **Working:** The core of this regime is the Kimberley Process Certification Scheme (KPCS) under which States implement safeguards on shipments of rough diamonds and **certify** them as **“conflict free”**.

## Dispute Resolution Committee (DRC) for Solar and Wind Sector

### News Excerpt

The Ministry of New and Renewable Energy (MNRE) has decided to **set up a three-member dispute resolution committee** (DRC) to investigate disputes beyond contractual agreements between solar or wind power developers and Solar Energy Corporation of India (SECI) or state-run power giant NTPC.

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### Pre-Connect

There has been a long pending demand of the industry to resolve expeditiously, unforeseen disputes that may arise beyond the scope of Contractual Agreements. Issues that have come up earlier range from causes for delays in commissioning, issues around under production or over generation and the price for the same, besides increasing difficulties in power evacuation and land acquisition.

### Composition of DRC

- **Three-member DRC will be set up with the approval of the New and Renewable Energy Minister, consisting of eminent persons of impeccable integrity.**
- **The upper age for the DRC members shall be 70 years, and its members shall be chosen from the eminent persons located in Delhi-NCR to avoid expenditure on air travel and accommodation.**
- The selection of the DRC members would be such that there is no conflict of interest involved.

The selected members of the committee are former Heavy Industry Secretary M F Farooqui, former Coal Secretary Anil Swarup and former Sports Secretary, A K Dubey.

### Scope and Working of DRC

The mechanism of DRC will be applicable for all solar or wind schemes, programmes and projects being implemented through or by SECI and NTPC. To arrive at any decision, the Committee will be free to interact with the relevant parties of the case and shall record their views. No lawyer shall be permitted to present the case before the DRC.

**PEPPER IT WITH**

Intended Nationally Determined Contributions (INDCs), Wind-Solar Hybrid Systems, International Solar Alliance (ISA)

The DRC will consider the following kinds of cases:

- (a) All cases of appeal against decisions given by SECI on the extension of time requests based on terms of the contract
- (b) All requests of extension of time not covered under the terms of contract
- (c) All such cases referred to it including the cases where the developer is not satisfied with the decision of SECI or NTPC and it decides to appeal after paying the required fee in a time bound manner and submit its recommendations to MNRE not later than 21 days from the date of reference.

The recommendations of the DRC, along with the MNRE’s observations, will be placed before the new and renewable energy minister for **final decision**.

### Conclusion

The Indian solar market has grown from a 3 GW installed capacity in 2014 to 30 GW in 2019. Out of the projected goal of 175 GW of renewable energy capacity by 2022, India has already installed renewable energy capacity of about 80 GW. This goal was again ramped up to 225 GW. With the

rapid expansion of solar and wind sectors, domestic as well as international disputes involving the stakeholders have also increased.

Quicker dispute resolution becomes especially relevant at a time when there has been a distinct slowdown in new capacity additions which could probably hamper the target achievement. Various state discoms are severely crippling cash flows and forward planning with record of payment delays running between 18 months to 24 months. State regulators have clearly failed to step up here, and the DRC move is a welcome step in this scenario.

## Plastic Parks

### News Excerpt

The Central Government has decided to set up a Plastic Park in Jagatsinghpur district of Odisha during 2019-20. Three more Plastic Parks would be set up in *Tinsukia (Assam), Raisen (M.P.) and Thiruvallur (Tamil Nadu)*.

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### Plastic Park

A plastic park is an industrial zone devoted to plastic enterprises. It includes a whole range of companies required by the plastics processing community from material and machinery suppliers, plastic processing companies, plastic recycling companies etc.

### Objective

The objective of setting up the plastic parks is to increase the competitiveness, polymer absorption capacity and value addition in the domestic downstream plastic processing industry. They also serve the twin objective of investment attraction and employment generation.

### Plastic Menace and G20 resolve to tackle Marine Plastic Waste

Globally, around 12.7 million tonnes of mismanaged plastic waste enter the ocean every year. This is equivalent to each citizen of the world dumping almost 2 kg of plastic in the ocean annually.

**PEPPER IT WITH**  
Microplastic, Plastic Soup, Persistent Organic Pollutants (POPs), Marine Debris, Extended Producer Responsibility (EPR)

Recently G20 Environment Ministers agreed to adopt a new implementation framework for actions to tackle the issue of Marine Plastic Waste on a global scale. They agreed to promote a **Comprehensive Life-Cycle Approach** to prevent and reduce plastic litter discharge to the oceans through various measures through international cooperation. This was in continuation with **G20 Marine Litter Action Plan** adopted at 2017 Hamburg Summit.

### Conclusion

Even if governments are taking preventive measures to deal with Plastic-based pollution like single-use plastic ban or plastic bag taxes, plastic seems to be an invincible material which is used everywhere. Policymakers should focus on **circular economy measures** to keep plastics and their value in the economy, avoid wastage and reduce marine litter to promote **Sustainable Ocean Economy**.

Plastic Parks could serve as resource hub for constructive measures to deal with plastic related problems. With the research intervention of institutes like **Central Institute of Plastic Engineering and Technology (CIPET)**, these parks could switch from production of **Fossil Fuel Plastics** to affordable **Bioplastics**.

## Fortified Rice

### News Excerpt

A centrally sponsored pilot scheme on fortification of rice and its dispersal through Public Distribution System (PDS) has been approved by the government

### What is Fortified Rice?

Fortification is a complementary strategy to fight malnutrition under which the

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addition of key vitamins and minerals such as iron, iodine, zinc, vitamins A & D to staple foods such as rice, wheat, oil, milk and salt are done to improve their nutritional content.

Rice is fortified by adding a micronutrient powder to the rice that adheres to the grains or spraying of the surface of ordinary rice grains in several layers with a vitamin and mineral mix to form a protective coating.

**PEPPER IT WITH**

National Food Security Scheme, One Nation One Ration Card, GEAC, Herbicide-Tolerant (HT) Cotton, FSSAI, Golden Rice, Bio-fortification

**Significance**

Micronutrient deficiencies of public health significance are widespread in most countries consuming high levels of rice; thus, rice fortification has the potential to help aid vulnerable populations that are currently not reached by wheat or maize flour fortification programmes. A rising number of countries are implementing rice fortification as a strategy to fight malnutrition. The Philippines and Costa Rica are few of the countries that have adopted mandatory rice fortification.

**Analytica**

- In a world where a third of the population suffers from hidden hunger, better known as **micronutrient malnutrition**, food fortification seems like a promising solution.
- The practice of deliberately increasing the number of essential micronutrients in food has a profound impact on developing countries, where almost 50% of the populations' daily calorie intake is met with rice.
- However, rice production is often done domestically or locally which could make reaching all those in need with mass fortification programs challenging.
- Additionally, the preference should be equally for promoting dietary diversity as the means for dealing with micro-nutrient deficiency rather than emphasizing on fortification. Authorities should stop commercialization of malnutrition by inclusion of locally sourced natural food in place of artificially fortified commercial products.

**Dead Zone in Gulf of Mexico**

**News Excerpt**

The 'dead zone' in the Gulf of Mexico may grow to the size of Massachusetts this summer. The Gulf dead zone threatens seafood production, recreation and marine life.

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**What is a Dead Zone?**

**Dead Zone** or **Oxygen Minimum Zone (OMZ)** is an area of low-oxygen water in oceans and large lakes, where a little or no marine life can survive. Dead Zone area is almost entirely **anoxic** (no oxygen) or **suboxic** (very little oxygen). All fish, marine plants, and other animals need oxygen, so they can't survive there.

**How a Dead Zone is formed?**

The dead zones occur naturally, but human activity is making them much worse by allowing rivers to become overfilled with some nutrients while lacking other key nutrients. Typically caused by agricultural run-off, the situation is exacerbated by **Intensive Farming**.

**PEPPER IT WITH**

Harmful Algal Bloom (HABs), Red Tide, Golden Algae, Eutrophication, Ocean Farming

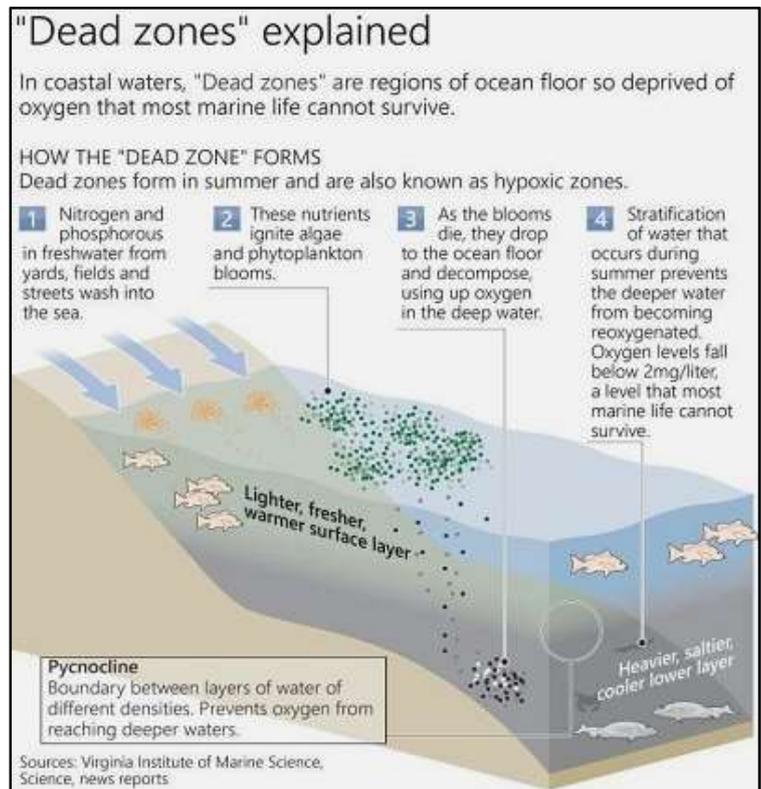
Agricultural run-off flows into a river or stream, picking up **Nutrient Pollution** mostly in form of nitrogen and phosphorus - which are abundant in fertilizers and used everywhere from farms to sewage plants - in the water. When river water flows into the ocean, those nutrients prompt algae to grow quickly and wildly. A **lack of silicon** in the water limits the growth of **diatoms**, a helpful type of algae, while **Nitrogen** (in saltwater) and **Phosphorus** (in freshwater) are the nutrients that contribute most to algal blooms. These algal blooms then die and sink to the bottom of the ocean, where they're eaten up by bacteria. The bacteria

use up oxygen while consuming the dead algae, which causes seafloor to choke degrading oxygen levels, creating **hypoxic** (oxygen- starved) waters.

Any sea creature that can evacuate, like larger fish or even crabs that can scuttle along the ocean floor, do. Other bottom-dwelling creatures don't have the option of leaving the sea floor, making them the top casualty of dead zones. Certain worms, large snails, starfish, sea anemones and other animals choke, and they are replaced by a smaller number of short-lived species.

### Causative Analysis

- **Intensive farming** is the practice most commonly linked to dead zones. Intensive farming uses a large investment of capital and some combination of fertilizer, pesticides, fungicides, heavy machinery, irrigation and other modern farming techniques to maximize output. But this results in an agricultural runoff, heavily loaded with nutrients, choking water bodies where they end up.
- Loss of **wetlands** has drastically reduced the ability of regional ecosystems to remove nitrogen from local waters.
- Rising **ocean temperature** leads to larger and larger dead zones as warmer water holds less oxygen.
- The use of biofuel crops especially corn and sugarcane requires a lot of fertilizer, which is full of nitrogen that seeps into groundwater.



### Thematic Connection

Dead zone occurrence is a global phenomenon. There are more than 400 dead zones in the world. A 63,700-square-mile dead zone in the Gulf of Oman is reportedly world's largest, while various dead zones have come up in all major oceans and water bodies including those around *Bay of Bengal and Arabian Sea*.

A **Cyclone** could play a key role in their balance as it could stir up waters, dispersing some of the algae and partially replenishing oxygen levels. Therefore, during a period of lesser storms and calmer water, dead zone formation strengthens as the oxygen- rich surface water doesn't mix as much with oxygen-depleted water below to replenish oxygen in the depths. This is due to water stratification where warm, fresh water settles on top of colder, saltier water. In addition, temperatures of the surface water are rising, which also contributes to the low rate of mixing (warmer, less dense water floats on the surface instead of sinking).

In areas where there's no oxygen, the **nitrogen cycle** is also altered. Basically, the region is naturally producing more *nitrous oxide*, which has a greenhouse effect roughly 300 times worse than carbon dioxide. Even worse, as the oceans grow warmer because of climate change, their capacity to hold oxygen slowly decreases.

The dead zone formation has long term ramifications on **fishing sector, food security** as well as **coastal and ocean economy**. This is because fishes swim away from the coast to escape the dead zone, which forces fishermen to travel farther out to sea. They end up spending more time, fuel, and

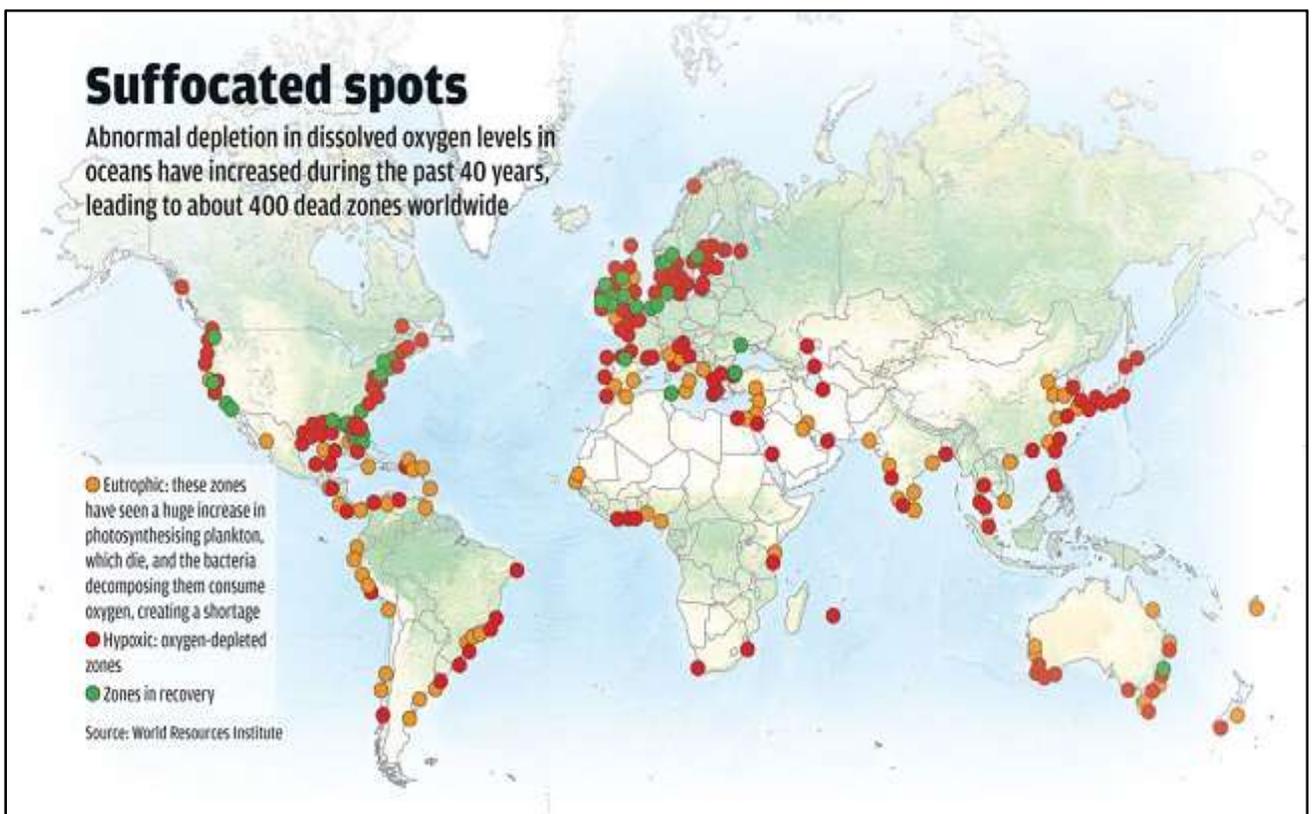
money to haul in a catch. The dead zone also reduces the overall catch size of commercial fisheries, leading to smaller harvests and more expensive seafood.

### Mitigation measures

- The reconnection of rivers to their **floodplains**, restoring wetlands and riparian systems, helping mitigate floods while filtering excess nutrients from the water
- Effective and efficient use of **fertilizers** which would result in better nutrient management leading to better soil management. This reduces surface runoff and flooding while maintaining or enhancing agricultural productivity.
- Raising **shellfish colonies** to absorb nutrients
- Affordable and efficient **Sewage Water Treatment**
- Legislative measures taken proactively can play critical role in protecting natural resources.

### Way Forward

Dead Zone creation is a slow process as compared to an Oil Spill, but impact on ocean is comparatively more disastrous. A river, its tributaries and floodplains, and the ocean are an **inter-connected system** that affects—and is affected by—people. Additional food needed by our growing population has come from the intensification of farming on existing acres. If we don't do anything to conserve soil and reduce nutrient loss on existing croplands, we'll have to clear more land and we'll continue to have grown dead zones



Limiting the use of nitrogen-rich fertilizers, implementing water conservation and recycling practices, and preventing sewage leaks and runoff from waste treatment plants should all help to keep nitrogen levels down.

A multi-faceted agricultural policy which incentivises organic agriculture and promotes judicious use of fertilizers should be adopted by nations. These policies should be evolved through an interactive collaboration among International forums, think tanks and governments while taking care of all stakeholders of agricultural and ocean ecosystem.

## CSE Study on Indian Fertilizer Industry

### News Excerpt

India's fertiliser industry needs to prioritise pollution control as per recent CSE Study. The industry has been classified under the 'red category' of polluting sectors by the **Central Pollution Control Board (CPCB)**.

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### The Study

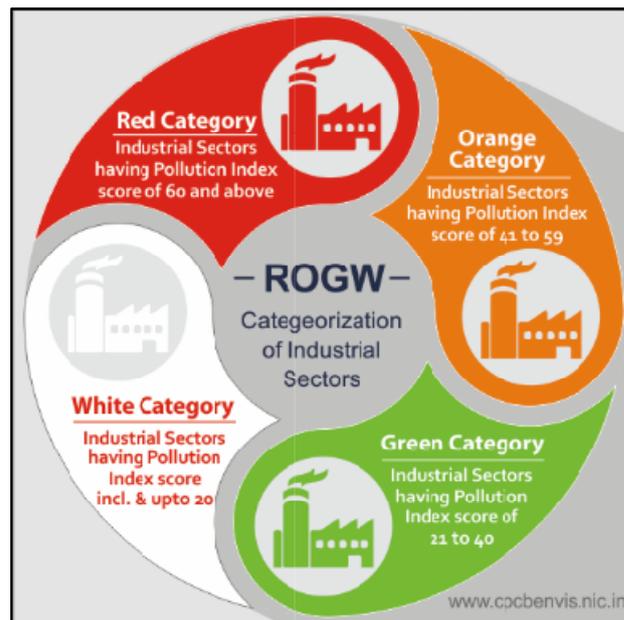
The study is conducted by **Centre for Science and Environment (CSE)** under its Green Rating Project (GRP). CSE is a public interest research and advocacy organisation based in New Delhi. **The Green Rating Project (GRP)** is an effort to rate industrial units within a specific sector based on their environment friendliness. The project aims at encouraging companies to adopt better environment management policies.

### Key findings of the Study

The study was focussed on three aspects of fertilizer industry which needs specific attention

#### I. Water Pollution

- The discharge of untreated or partially treated industrial wastewater has increased pollution of surface water and ground water sources.
- High level of ammonia contamination of groundwater due to the seepage or overflow of a plant's ash pond water into the ground.
- Non-compliance with fertiliser effluent discharge norms set by the Ministry of Environment, Forest and Climate Change, particularly **cyanide concentrations** and **Total Kjeldahl Nitrogen (TKN) levels**.



#### II. Air Pollution

- **Prilling Tower** emissions are the main source of pollution at a urea plant. The emissions, which contain urea dust, ammonia and oxides of nitrogen and carbon, affect the growth and productivity of vegetation and crops around a plant. There is no regulation in India for parameters like emissions of **gaseous ammonia**. Crops become dry due to exposure to excess ammonia gas
- Inefficient air pollution control devices or improper fuel combustion within the systems have led to high emission levels at some plants.

- **Prilling Tower** is important part of prill cooling section of chemical industries. Prilling is a method of producing reasonably uniform spherical particles from molten solids, strong solutions or slurries.
- **Total Kjeldahl Nitrogen (TKN)** is a lab analysis method which determines both the organic and the inorganic forms of nitrogen. TKN is also used by regulating agencies to fix emission levels.

**TKN = Organic Nitrogen + Ammonia/Inorganic Nitrogen**

#### III. Solid Waste

- Solid and hazardous waste management is satisfactory but several operational issues are involved.

- Ash pond maintenance is an issue at most plants, where handling and storage of **fly ash** is inefficient. It causes pollution due to fly ash dispersal and leaching into the groundwater table.

**Way Forward**

According to the study, the Indian fertiliser industry has overlooked the aspects related to environmental pollution, while making improvements in energy efficiency. The reason is relaxed norms for the discharge of untreated or partially treated industrial wastewater, emission of air pollutants and management of solid wastes, particularly hazardous waste. This could be understood by the fact that out of 52 per cent plants, assessed in the study, 12 plants received directions or show cause and even closure notices for water pollution and air pollution or solid waste mismanagement.

**PEPPER IT WITH**  
Green Leaves Award, Environment Risk Liability, Fertigation, Soil Defertilisation, Phosphogypsum, Circulus Theory

Even though pollutant standards for the sector were revised in 2017 but are still relaxed compared to international standards. Thus, there is an urgent need for stricter compliance check systems and enforcement of norms.

**World Day to Combat Desertification and Drought (WDCDD)**

**News Excerpt**

Minister of environment forest and climate change recently launched a flagship project on enhancing capacity on forest landscape restoration and the Bonn Challenge in the country on occasion of World Day to Combat Desertification and Drought.

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**Pre-connect**

World Day to Combat Desertification and Drought (WDCDD), observed on June 17 each year since 1994, is meant to promote public awareness of international efforts to combat desertification. WDCDD promotes **land degradation neutrality** which provides a solid basis for poverty reduction, food and water security as well as climate change mitigation and adaptation. This year the theme was **“Let’s Grow the Future Together”**.

- ❖ **International days** are occasions to educate the public on issues of concern, to mobilize political will and resources to address global problems, and to celebrate and reinforce achievements of humanity.
- ❖ **Desertification** is defined by the **U.N. Convention to Combat Desertification** as “land degradation in arid, semi-arid and dry sub humid areas resulting from various factors, including climatic variations and human activities.”
- ❖ **Drought** is defined as a deficiency of rainfall over an extended period – a season, a year or several years – relative to the statistical multi-year average for the region.

**Issues involved**

Desertification, land degradation and drought are major threats affecting millions of people worldwide particularly women and children, leading to **forced migration, food insecurity and hampered economic growth**.

**Indian initiatives**

At the UNFCCC Conference of the Parties (COP) 2015 in Paris, India had joined the **Bonn Challenge** pledge to bring into restoration 13 million hectares of degraded and deforested land by 2020 and 8 million hectares by 2030. Note that India’s pledge is one of the largest in Asia.

29.3% of India’s total geographical area is being affected by land degradation while India aims to become Land Degradation neutral by 2030. Schemes like Pradhan Mantri Fasal Bima Yojana (PMFBY), Soil Health Card Scheme, Soil Health Management Scheme,

**PEPPER IT WITH**  
Land Degradation Neutrality, UNCCD

Pradhan Mantri Krishi Sinchayee Yojna (PKSY), Per Drop More Crop, etc. are some of the measures India has taken to achieve this goal.

### Jal hi Jeevan Hai Scheme

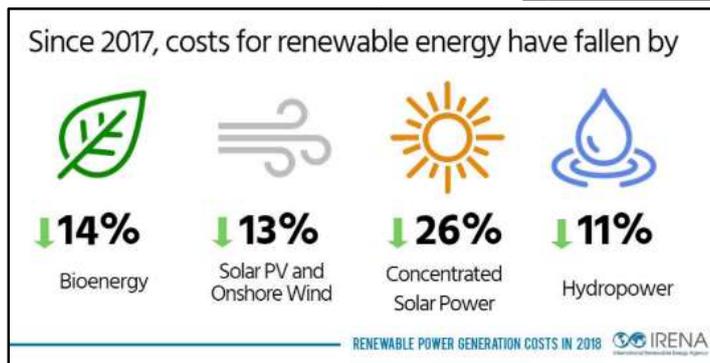
#### News Excerpt

Haryana government has launched 'Jal Hi Jeevan Hai' scheme to diversify paddy crop to maize. The state aims to control soil fatigue because of rice-wheat cycle and introduce soil conservative and micronutrients balanced crop for the soil.

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#### Pre-connect

Due to continuous cultivation of water guzzling crops in rice wheat cropping system, the state has been witnessing groundwater crisis. This crisis was triggered when the government encouraged the cultivation of rice under the Green Revolution in the 1960s, intensified and continued to worsen with the average fall in the state's water table well over 10m for the last 20 years. That's why, Haryana is incentivising farmers to quit growing water-intensive paddy and shift to crops like maize and pulses as the ground water withdrawal has outpaced its recharge through annual precipitation.



#### Benefits of the scheme

- Free maize and pigeon pea seeds.
- A one-time financial assistance of Rs 2,000 per acre.
- Crop insurance coverage where the premium of Rs. 766 per hectare is paid by state.
- Assured procurement under the Minimum Support Price (MSP) regime.

### Renewable Power Generation Costs in 2018

#### News Excerpt

International Renewable Energy Agency (IRENA) published a comprehensive cost study report titled Renewable Power Generation Costs in 2018 which highlights the latest trends for each of the main renewable power technologies.

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#### Key findings of the Study

- **Costs from all commercially available renewable power generation technologies declined in 2018.** The global weighted-average cost of electricity declined 26% year-on-year for concentrated solar power (CSP), followed by bioenergy (-14%), solar photovoltaic (PV) (-13%), onshore wind (both -13%) and hydropower (-12%).
- **India is now the lowest-cost producer of solar power globally.** Renewable energy sources have witnessed cost decline globally with costs drop in India by 80 per cent from 2010 to 2018. Total installed costs of utility-scale solar PV in India is as low as **\$793 per kilowatt (kW)** in 2018 which is 27 per cent lower than for projects commissioned in 2017. While **Canada has the highest cost at \$2,427 per kW.**

#### PEPPER IT WITH

Global Status Report (GSR), REN21, World Energy Outlook (WEO), Carbon-neutral fuel, Energy Harvesting, Cogeneration, Microgeneration

- Renewable power has emerged as a **low-cost climate and decarbonisation solution** with increased capacity and is set to provide lower-priced electricity than the cheapest new coal-fired, oil or natural gas option.
- The renewable energy industry created employment opportunities for nearly 11 million people worldwide in 2018, due to the widespread adoption of renewable technologies with Solar photovoltaics (PV), Bioenergy sector among the biggest employers. With 32 per cent of the workforce represented by women in Renewable Sector, it is higher than 22 per cent average reported for the global Oil and Gas industry.

## Emission Trading Scheme (ETS) of Gujarat

### News Excerpt

India's first trading programme to combat particulate air pollution started at Surat, a dense industrial city of Gujarat where textile and dye factories are a major source of pollution.

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### Pre-Connect

In a report published by Health Effects Institute, air **pollution** has been identified as the third-highest cause of death, contributing to over 1.2 million deaths in 2017. The concentration of tiny particulate matter (known as PM2.5 and PM 10) in India is eight times the World Health Organization's standard. These particles are so tiny that they can enter deep into the lungs and make people susceptible to respiratory and cardiovascular diseases, making them extremely deadly.

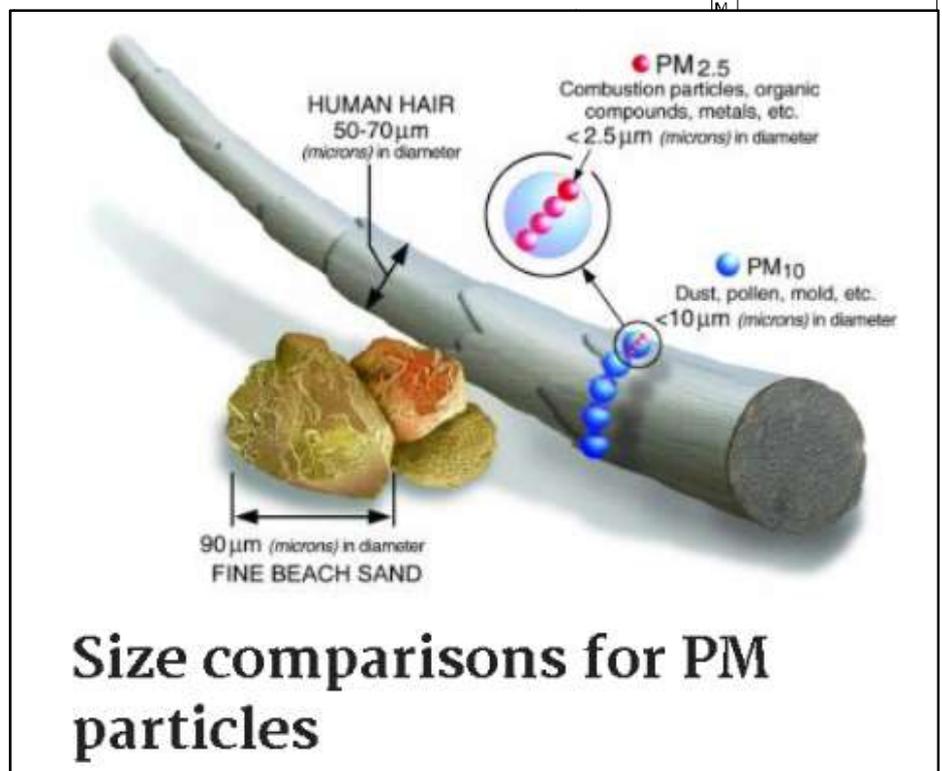
Under existing regulations, every industry must meet a certain maximum concentration of pollutants when it is operating. They are tested occasionally and manually (one or two times a year). However, there is widespread non-compliance across India. This is partly because penalties are rarely applied, in large part because they involve punishments such as closing the entire plant which is not necessarily appropriate for small violations.

### Particulate Matter (PM)

**Particulate Matter** is a term for a mixture of solid particles and liquid droplets found in the air. Some particles, such as dust, dirt, soot, or smoke, are large or dark enough to be seen with the naked eye. Others are so small they can only be detected using an electron microscope. These particles are also the main cause of reduced visibility through haze.

These particles come in many sizes and shapes and can be made up of hundreds of different chemicals.

**Particle pollution** includes:



**PM 10:** inhalable particles, with diameters that are generally 10 micrometres and smaller;

**PM 2.5:** fine inhalable particles, with diameters that are generally 2.5 micrometres and smaller.

PMs are so small that they can be inhaled and cause serious health problems. Some particles less than 10 micrometres in diameter can get deep into your lungs and some may even get into your bloodstream. Of these, PM 2.5 pose the greatest risk to health.

Some are emitted directly from a source, such as construction sites, unpaved roads, fields, smokestacks or fires while others are formed indirectly in the atmosphere as a result of complex reactions of chemicals such as sulphur dioxide and nitrogen oxides, which are pollutants emitted from power plants, industries and automobiles.

### **What is Emission Trading Scheme (ETS)?**

The ETS programme, a market-based system where a cap is set on emissions and allows industries to buy and sell permits to stay below the cap, is the first to regulate particulate air pollution in the world. The government has set a cap on concentration of emissions for each industrial unit at 150 micrograms per cubic metre, which is the 24-hour average for emission standard set by the Central government for industrial units.

Under the **cap and trade system**, the regulator first defines the total mass of pollution (in terms of particulate matter emissions) that can be put into the air over a defined period by all factories put together. This is known as the cap. Then, a set of permits is created, each of which allows a certain amount of pollution, and the total is equal to the cap. Industries must hold a permit for each unit of particulate that they emit and must comply with the prescribed standard. These permits are the quantity that is bought and sold. Each factory is allocated a share of these permits (this could be equal or based on size or some other rule). Although industries can trade permits among themselves, the total quantity of these permits are fixed, so that air pollution standards are met.

The basic commodity in the emissions trading system is **Particulate Matter (PM)**, which is emitted by industries through their smokestacks. The regulatory agency for the ETS will be the **Gujarat Pollution Control Board (GPCB)**, which has received approval from the Union ministry of Environment, Forests & Climate Change (**MoEFCC**).

**PEPPER IT WITH**  
National Clean Air Programme (NCAP), Air Quality Index (AQI), Indoor Air Quality (IAQ), Volatile Organic Compound (VOCs), World Sustainable Development Summit (WSDS)

Importantly, this trading system gives firms an incentive to find ways to reduce emissions because they can sell any extra reductions to other firms. These incentives may prompt firms to innovate and find new inexpensive ways to reduce their emissions.

### **Earlier Indian initiatives to combat industrial emissions**

In 2015, MoEFCC ordered 17 highly polluting industries - such as pulp and paper, distillery, sugar, tanneries, power plants, and iron and steel - to mandatorily install **Continuous Emission Monitoring System (CEMS) devices**. They are a network of sensors installed in factories that send live readings of pollution emitted through their smokestacks.

India's Bureau of Energy Efficiency (BEE) has been running a programme to improve industrial energy efficiency. It targets some 500 large users of energy across India and encourages trade in energy efficiency certificates. This has led to decreased energy use and emissions, as well as cost savings.

### **Best Practices - World**

China, the world's largest greenhouse gas emitter, launched a national carbon market in 2017. A central tool in China's strategy to combat air pollution, the national ETS is the largest carbon market of its kind. The European Union's Emissions Trading System has also been effective in mitigating global warming with capped emissions in 2016 being 26 percent than in 2005, when the scheme was first launched. The US also launched its own cap-and-trade scheme in California in 2013. They have successfully reduced sulphur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) emission levels with expected reduction by more than 16 percent by 2020.

**World Population Prospects (WPP) Report 2019**

**News Excerpt**

India likely to add 273 million people between 2019 and 2050 as per UN Population Report. The world's population could reach its peak around the end of the current century, at a level of nearly 11 billion.

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**About the Report**

The WPP Report is published by the **Population Division of the UN Department of Economic and Social Affairs** to highlight global population estimates, projections and global demographic patterns. The report covers 235 countries or areas, based on detailed analyses of all available information about the relevant historical demographic trends from 1950 till date. It also presents population projections from the present until 2100, depicting a range of possible or plausible outcomes at the global, regional and country levels.

**Significance**

People and populations are at the centre of sustainable development. Each of the four global demographic megatrends – **population growth, population ageing, migration and urbanization** – have social, economic and environmental implications. Timely and accurate population estimates and projections allow Governments to anticipate future demographic trends and to incorporate that information into development policies and planning.

**Major highlights of the report**

- China, with 1.43 billion people in 2019, and India, with 1.37 billion, have long been the two most populous countries of the world, comprising 19 and 18 per cent, respectively, of the global total in 2019.
- India's Total Fertility Rate (TFR, the average number of children a woman has in her lifetime) is 2.2, with half of the country's population in 24 states having reached "replacement TFR" of 2.1 or less, which is number of children per woman at which a population replaces itself and stops growing.
- Many of the fastest growing populations are in the poorest countries, where population growth brings additional challenges in the effort to eradicate poverty, achieve greater equality, combat hunger and malnutrition and strengthen the coverage and quality of health and education systems.
- More than half of the projected increase in the global population up to 2050 will be concentrated in just nine countries, led by **India** and followed by **Nigeria, Pakistan, Democratic Republic of the Congo, Ethiopia, Tanzania, Indonesia, Egypt and the US**.
- In 2019, around 40 per cent of the world's population lives in intermediate-fertility countries, where women have on an average between 2.1 and four births over a lifetime. Average lifetime fertility of 2.1 live births per woman is roughly the level required for populations with low mortality to have a growth rate of zero in the long run.
- The report highlights migration to countries with a falling ratio of working-age people to those above 65 will be steady, as those economies open to workers to sustain economic production. On the other hand, India will have a vast number of young people and insufficient natural resources

The Indian Council of Agricultural Research (ICAR)

- ❖ Is an autonomous organization under the Department of Agricultural Research and Education (DARE), Ministry of Agriculture and Farmers Welfare, Government of India.
- ❖ Headquarters at New Delhi, it was **established on 16 July 1929** as a registered society under the Societies Registration Act, 1860.
- ❖ The Council is the apex body for co-coordinating, guiding and managing research and education in agriculture including horticulture, fisheries and animal sciences in the entire country

**PEPPER IT WITH**  
 Demographic Trap, Zero Population Growth, Paleo demography, Sub-replacement Fertility, Malthusian Catastrophe

left for exploitation. But the opportunities available to Indian population through migration will depend on a skills revolution.

- A growing population of older adults throws open prospects for employment in many new services to them.
- The Sustainable Development Goals framework provides a roadmap to this new era. But progress in poverty reduction, greater equality, better nutrition, universal education and health care, needs state support and strong civil society institutions. Making agriculture remunerative and keeping food prices stable are crucial to ensure nutrition for all.

## Beekeeping Development Committee

### About the Committee

The report was prepared by the Beekeeping Development Committee, set up by the Economic Advisory Council to the Prime Minister **under the chairmanship of economist Bibek Debroy**. The committee was set up to identify ways of advancing beekeeping in India that can help in improving agricultural productivity, enhancing employment generation, augmenting nutritional security and sustaining biodiversity. It has submitted the report to the PM.

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### Recommendations of the Committee

- The committee has suggested that the government should institutionalize the National Bee Board and rechristen it as the Honey and Pollinators Board of India under the Ministry of Agriculture and Farmers' Welfare.
- India ranks eighth in the world in terms of honey production, almost 65,000 tonnes in 2017-18, of which 51,500 tonnes were exported. China leads the global pack, producing 5.5 lakh tonnes each year.
- The role of honeybees in increasing agriculture and horticulture productivity needs to be recognised, it aims to double farmers' income by 2022. Apiculture should be recognised as a subject for advanced research, and the related board should strengthen bee development and create a Honey Price Stabilisation Fund.
- Beekeeping cannot be restricted to honey and wax only but products such as pollen, propolis, royal jelly and bee venom are also marketable and can greatly help Indian farmers
- Government should recognize honeybees as inputs to agriculture and considering landless beekeepers as farmers besides ensuring the plantation of bee friendly flora at appropriate places.
- Based on the area under cultivation and bee forage crops, India has a potential for about 20 crore bee colonies as against the 34 lakh colonies that exist today. Promoting beekeeping could contribute to the Centre's goal of doubling farmers income by 2022, it added. Increasing the number of bee colonies will not only increase the production of bee-related products but will boost overall agricultural and horticultural productivity.
- Creation of national and regional infrastructure for storage, processing and marketing of honey and other bee products, along with clear standards and procedures for exports. Bee friendly flora should be planted, and women self-help groups should be engaged to manage such plantations.

## The State of India's Environment Report 2019

### News Excerpt

Centre for Science and Environment (CSE), a New Delhi based research and advocacy think tank recently released its latest edition of the State of India's Environment (SOE) 2019. The 4<sup>th</sup> edition of the report was released on World Environment Day (5<sup>th</sup> June).

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**Highlights of the report**

- **12.5% deaths in India were due to Air Pollution.** Over 100,000 children below the age of five die due to bad air in the country. Despite of the target of 15-16 million e-vehicles by 2020, the country had 0.28 million vehicles till May 2019.
- With just 10 years left for UN Sustainable Development Goals 2030, **India is yet to identify its indicators for setting its targets towards climate change.** India has recorded an increase of 22% in greenhouse gas (GHG) emissions between 2010 and 2014.
- **The bulk of the polluted water bodies are in Karnataka, Telangana and Kerala.** Groundwater is also getting overexploited. The number of deep tube wells has also increased unsustainably.
- **India still holds the world's largest burden of at least 11 major neglected tropical diseases, which includes diseases like dengue.** There is 35 per cent shortfall in the number of 24x7 public health centres (PHCs), and the state of Kerala has no 24x7 PHC.
- **57 per cent of towns with slum are in Tamil Nadu, Madhya Pradesh, Uttar Pradesh, Karnataka and Maharashtra.** Though the target of creating 100 smart cities was launched in 2015-16, but still 21% of the amount has been allocated for the same.
- India process 96 per cent of its biomedical waste. **It has recorded a 56 per cent increase in the number of hazardous-waste generating industries between 2009 and 2016-17.** Most of these industries are not properly maintaining their waste inventory, as mandated by the law.
- **India has recently shifted to a powerful forest fire monitoring and alert system, SNPP-VIIRS, which can capture forest fires with better accuracy and precision.**
- India has witnessed **a 1.9 times increase in the unemployment rate** in the past two years, which has especially affected the youth and the educated.

**Critical issues of environment and development –**

Climate change, agriculture and air pollution, Sanitation, water management, environmental governance, and human-wildlife conflicts.

Of the three states least prepared to meet the Sustainable Development Goals (SDG) by 2030, the target year, Uttar Pradesh and Bihar lag in eight of the 13 SDGs. Assam struggles with six goals.

**PEPPER IT WITH**

Forest Fire, Fame India Scheme, hydro-chlorofluorocarbon,

**Significance of SOE:**

The State of Environment report, CSE’s flagship annual publication, brings to the notice and knowledge of the discerning reader all that has happened in the year on issues of environment and development, with rich analysis and state-of-the-art data and statistics.

**Small Island Developing States (SIDS) and SDGs**

**Context**

According to **the United Nation’s report on World Population Prospects 2019**, many small island developing states (SIDS) may fail to achieve several Sustainable Development Goals by 2030.

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**What are SIDS?**

SIDS are a group of small island countries that tend to share similar sustainable development challenges, including **Limited resources, Remoteness, Susceptibility to natural disasters, Vulnerability to external shocks, Excessive dependence on international trade, Fragile Environments, Small but growing populations.**

**Why SIDS are not able to achieve SDGs?**

- **Population:** According to the UN report, the total population of these countries are growing fast which is an issue of concern.

- **Climatic risk:** The challenge is bigger for these small countries because of their vulnerability to climate variability and sea level rise. These countries **contribute 1% of global GHG emission but are the first in facing the worst impacts.**
- **Economy:**
  - Agriculture production, fisheries, and related sectors are declining as the climate change is threatening livelihoods and economic growth.
  - Extreme weather destroys SIDS land, real estate and infrastructure.
  - Tourism also gets affected as tourist fears of the violent and life threatening storms.

**What needs to be done for strengthening capacity for SIDS?**

- Many Pacific SIDS rely on groundwater and **implementation and achievement of Goal 6 for protection and sustainable management of the limited groundwater resources.** These aspects can be adapted globally.
- Finance from international sources, public and private transfer of reliable, affordable, modern environmentally sound technology can help SIDS in disaster risk reduction.
- An initiative called “**SIDS DOCK**” that connects the energy sectors of the SIDS with the global finance market, can enable SIDS to achieve SDG goals.
- The capacity development partnership dialogues would provide an opportunity to raise the capacity of various stakeholders, and drive implementation of **SAMOA Pathway** priority areas and SDGs in SIDS.
- Commercial activities should be made sustainable. There is also a need for **Waste infrastructure management for reducing plastic pollution** marine litter and microplastics.

**PEPPER IT WITH**

GLISPA; SDGs; Marine Protected Areas; Green Climate Fund; Sendai Framework; Barbados Declaration; Blue Action Fund Commitment

**Way Forward**

Global leadership is of paramount importance for SIDS and SDGs. So, the need of the hour is to support SIDS with ambition and partnership in the context of sustainable development and oceans, the challenge is to first, **think opportunity, and then think blue.**

**Acute Encephalitis Syndrome**

**News Excerpt**

Recently, an epidemic of Acute Encephalitis Syndrome (AES) has broken out in five districts of Bihar in which scores of children have died. In local parlance, **it is known as ChamkiFever.**

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**About AES**

- It is a **neurological manifestation** caused by several different **viruses, bacteria, fungi, parasites, spirochetes, chemicals/ toxins,** etc.
- AES is characterized by acute onset of fever and a change in **mental status (mental confusion, disorientation, delirium, or coma)** and/or new onset of seizures in a person of any age at any time of the year.
- Apart from viral encephalitis, **a severe form of Leptospirosis** (a rare bacterial disease) **and Toxoplasmosis** (a disease caused by protozoan parasites) **can cause AES.**
- Keeping in mind the wide range of causal agents and the rapid rate of **neurological impairment due to pathogenesis, clinicians face the challenge of a small window period between diagnosis and treatment.**

**Prevention from AES**

- Increased access **to safe drinking water and proper sanitation facilities.**
- Improve the **nutritional status of children who are at risk of Japanese encephalitis (JE)/AES.**
- **Vector Control**

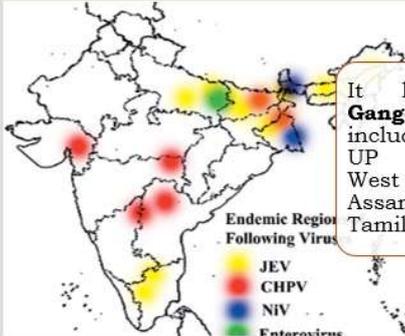
- JE vectors are **exophilic and endophage in nature**. The risk of transmission increases, when the **human dwellings and animal sheds** particularly piggeries are situated very close to each other. Piggeries may be kept away (4-5 km) from human dwellings.

### Who is affected?



Most **vulnerable age group** is between 1-5 years followed by 5-10 years and 10-15 years in that order.

### Endemic Zone



It lies in the **Gangetic plain** including states of UP (east), Bihar, West Bengal and Assam and parts of Tamil Nadu

### Litchi Fruit



Litchi contains **hypoglycin A and methylenecyclopropylglycine (MCPG)**, which when consumed empty stomach causes a sudden drop in blood sugar, vomiting, altered mental states leading to lethargy, unconsciousness, coma and death.

- Personal **protection against mosquito bites using insecticide-treated mosquito nets and insecticidal products like mosquito repellents.**
- Clothing reduces the risk of mosquito biting if the cloth is sufficiently thick or loosely fitting.
- Vaccination:**As per Govt. of India guidelines, **2 doses of JE vaccine have been approved to be included in** Universal Immunization Programme (UIP).There are 4 main types of Encephalitis vaccines currently in use.
- Strengthen the **health infrastructure and**there is also a need for an **aggressive awareness campaign in the preceding months when these cases are reported in higher numbers.**
- Need to strengthen the research base so that actual causes of mortality can be identified along with **active collaboration between the State and Central governments**for rapid actions to control the spread of disease.

#### Treatment of AES

- Since AES is an **umbrella term** for a variety of infections, doctors need to know the specific type of infection before they can consider treatment options.
- Not all forms of AES can be treated equally well.** For example, Japanese encephalitis, caused by the Japanese encephalitis virus, can be prevented using a vaccine of the same name and once it has infected a person, treatment is usually carried out only of the symptoms, not of the cause itself.
- The treatment of **hypoglycemia**is done by giving the

**PEPPER IT WITH**  
Nipah Virus, Yellow Mosquito Fever, National Vector Borne Disease Control Programme

patient **dextrose** (a simple sugar made from corn) **through intravenous means.**

**National Programme for Prevention and Control of Japanese Encephalitis/Acute Encephalitis Syndrome**

The Program follows a multi-pronged strategy encompassing **Prevention** (sanitation, safe drinking water, improvement in nutrition, etc.), **Case Management** (capacity building of medical and para-medical staff, referral, etc.) and **Rehabilitation** (physical and social rehabilitation of disabled children) to address the problems relating to JE/AES.

**Internet Corporation for Assigned Names and Numbers (ICANN)**

**News Excerpt**

Internet Corporation for Assigned Names and Numbers (**ICANN**) and National Association of Software and Services Companies (**NASSCOM**) have announced collaboration for developing standards and identifier technology that will feed into the global consultation for **managing Internet-of-Things (IoT) devices and infrastructure using the internet.**

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**About ICANN**

- It is a **non-profit organization set up in 1998** by the US government.
- It oversees **the administration of domain names and coordinates these identifiers across the world** and ensures the smooth and secure functioning of the **cybernetic framework.**
- It is responsible for ensuring **universal resolvability** which means that wherever one is on the network, he/she will receive the same predictable results when he/she accesses the network.
- It performs four major functions:
  - **Approval of companies** that can become accredited registrars for domain names.
  - **Decision making** regarding the addition of new **Top Level Domains (TLDs) to the Root system.**
  - **Coordinating technical parameters** to maintain universal connectivity.
  - **Creating a Uniform Domain Name Dispute Resolution Policy (UDRP)** for competing for a domain name.
  - **Internet Engineering Task Force:** It is an **advisory committee** of ICANN which is a community of network designers, operators, vendors and researchers involved in researching and theorizing the evolution of the internet.

**Domain**

The Internet consists of a set of numerical instructions or Internet Protocol (IP) addresses that form part of a domain. These domains are identified and used by humans through their equivalent host domain names.

The Internet Domain Name Service translates these domain names to and from IP addresses as required by the programs running them. This Domain Name system has been in place since the genesis of the Internet.

**IANA**

The Domain Name System ensures that each URL leads to the right server which in turn pulls up the requisite website. The information regarding these identifiers (the names, numbers, etc) is found in a database controlled by the Internet Assigned Numbers Authority, or the IANA. It works under the control of ICANN

**India's Relation with ICANN**

- As an emerging global power with an ever-increasing populace, **the database of internet users in India is constantly on the rise.**
- Government's vision of a **"Digital India"** is something that **relies heavily on collaboration with registries and organizations world over.**

- The aim of a digital India will involve tremendous investment on the behalf of **government towards capacity building, access provision and inclusivity.**
- India has a larger role to play in the global governance of the Internet and this is indicated by its inclusion in the **United Nations Group of Governmental Experts (UNGGE).**
- India firmly believes that the internet must remain plural, must be managed through a **multi-layered and multi-stakeholder system.**

<b>Issues and Limitations of ICANN</b>	<b>Lack of Accountability</b>  <ul style="list-style-type: none"><li>• It's hierarchical structure is often criticized for being opaque.</li><li>• Its “multi-stakeholderism”, which means that everybody has some say leads to creation of bureaucratic hurdles.</li></ul>	<b>Lack of Representation</b>  <ul style="list-style-type: none"><li>• Being an American body it has predominance of North American representatives</li><li>• 2/3rd of the ICANN leadership consists of native English speakers which can pose language barriers that would inhibit the formation of a seamless global internet architecture</li></ul>	<b>Lack of Diversity</b>  <ul style="list-style-type: none"><li>• Only 26% of the leadership comprises of women. The figure is dismal given the online threat women faces across the globe.</li><li>• Under representation of Civil society and the public sector. This is due the fact that its majority of member belongs to the business or tech community.</li></ul>
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### Conclusion

- ✓ Despite the various limitations of the ICANN, currently, it remains a **key multi-stakeholder private body in internet governance.**
- ✓ The need of the hour **is a globalized diverse peaceful cybernetic architecture built on transnational collaboration.** As Internet is an integral part of the daily functioning, it is regressive and pointless to yearn for days past when state boundaries placed unimpeachable restrictions on every aspect of life. In the age of global commerce and the **post-modernist world of capitalistic hedonism, it is also regressive to leave private stakeholders out of decision making process.**
- ✓ Given the changing demographics of internet usage and the proliferation of technology, it is essential to reconfigure the internet into a **more inclusive mould reflective of the globalized world order we inhabit today.**
- ✓ **Creating an accessible Cybernetic discourse is the first step towards building a secure and smooth functioning Internet architecture.**

**PEPPER IT WITH**  
IPv4 vs IPv6, UN GGE, Digital India, Rotating Cryptographic Keys

## E-2020 Initiative

### News Excerpt

Four countries from Asia viz. China, Iran, Malaysia and Timor-Leste and one from Central America El Salvador have reported no indigenous cases of malaria in 2018, according to the **World Health Organization (WHO)**. **The countries were part of the global health body's E-2020 initiative.**

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### About E-2020

- World Health Assembly in 2015 launched a **new Global Technical Strategy for Malaria 2016-2030**. The goal of the policy is to lower the global malaria burden over the 15-year period.
- A key milestone for 2020 is the elimination of malaria in at least 10 countries that had reported cases of the disease in 2015.**
- According to a WHO analysis published in 2016, **21 countries have the potential to eliminate malaria by 2020**. They were selected based on an analysis that looked at the likelihood of elimination across 3 key criteria:
  - Trends in malaria case incidence between 2000 and 2014
  - Declared malaria objectives of affected countries and
  - Informed opinions of WHO experts in the field.
- Together, these 21 malaria-eliminating countries are part of a concerted effort known as the E-2020 initiative, supported by the WHO and other partners, **to eliminate malaria in an ambitious but technically feasible time frame.**

### Other highlights

- Contracted through the bite of an infected mosquito, malaria remains one of the world's leading killers. **It accounted for an estimated 219 million cases from 87 countries and over 400,000 related deaths in 2017.**
- Over **60 percent of fatalities were among children under five years, and caused 266,000 of all malaria deaths worldwide, according to WHO's World malaria report 2018.**
- India (4 percent)** was among the **five countries**, the others being — Nigeria (25 percent), the Democratic Republic of the Congo (11 percent), Mozambique (5 percent), and Uganda (4 percent) — **that accounted for nearly 50 percent of all malaria cases worldwide.**
- India was also among the 11 countries — 10 in Africa (**Burkina Faso, Cameroon, Democratic Republic of the Congo, Ghana, Mali, Mozambique, Niger, Nigeria, Uganda and the United Republic of Tanzania**) — **that reported approximately 70 per cent of all malaria cases (151 million) and deaths (274,000).**
- Among these countries, only India reported progress in reducing its **malaria cases in 2017 (24 percent reduction in cases) compared to 2016, according to the report.**

## One Health Concept

### Perspective

The **World Organization of Animal Health, commonly known as OIE** (an abbreviation of its French title), summarizes the One Health concept as “human health and animal health are interdependent and bound to the health of the ecosystems in which they exist”.

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### Pre-connect

- Hippocrates in his treatise On Airs, Waters, and Places had urged physicians **that all aspects of patients' lives need to be considered including their environment;** disease was a result of an imbalance between man and environment.
- As human population expands, it results in **greater contact between domestic and wild animals, providing more opportunities for diseases to pass from one to the other.**

- Climate change, deforestation, and intensive farming further disrupts the environment's characteristics, **while increased trade and travel result in closer and more frequent interactions, thus increasing the possibility of transmission of diseases.**

**Red-Alert  
Rising Crisis**

60% of existing human infectious diseases are **Zoonotic** i.e. they are transmitted from animals to humans.

One-fifth of premature deaths in poor countries are attributed to diseases transmitted from **animals to humans.**

75% of emerging infectious human diseases have an **Animal origin.**

80% of biological agents with potential bio-terrorist use are **Zoonotic pathogens**

**Things to do**

- Strict health surveillance** to incorporate domestic animals, livestock and poultry too
- Strengthening Veterinary Institutions and Services** for early detection at source
- Close collaboration** at local, regional and global levels among veterinary, health and environmental governance.
- Reinventing the entire animal husbandry sector** for prevention and surveillance to minimize the threat to human health.
- A robust animal health system** is the first and a crucial step in human health.

**Issues for India**

- Developing countries like India have a **much greater stake in strong One Health system** on account of agricultural systems resulting in uncomfortable proximity of animals and humans.
- A **network of 1.90 lakh health institutions** in the government sector form the backbone of health governance, **supported by a large number of private facilities.**

**PEPPER IT WITH**  
SARS coronavirus, Ebola, Reston Virus, Megabats, Filoviridae

- On the other hand, only 65,000 veterinary institutions tend to the health needs of 125.5 crore animals.
- Private sector **presence in veterinary services is close to being non-existent**

*Illustration for E-Cigarettes*

**ICMR CALLS FOR COMPLETE BAN ON E-CIGARETTES**

**WHAT ARE ELECTRONIC NICOTINE DELIVERY SYSTEMS (ENDS)?**

- AN ELECTRONIC CIGARETTE (OR E-CIG) IS A BATTERY-POWERED VAPORIZER THAT MIMICS TOBACCO SMOKING. IT WORKS BY HEATING UP A NICOTINE LIQUID, CALLED "JUICE."
- NICOTINE JUICE (OR E-JUICE) COMES IN VARIOUS FLAVORS AND NICOTINE LEVELS. IT IS COMPOSED OF FIVE INGREDIENTS WHICH INCLUDES VEGETABLE GLYCERIN AND PROPYLENE GLYCOL

**WHO OPINION**

- ENDS EMITS NICOTINE, THE ADDICTIVE COMPONENT OF TOBACCO PRODUCTS. ADVERSE EFFECTS ON THE DEVELOPMENT OF THE FOETUS DURING PREGNANCY AND MAY CONTRIBUTE TO CARDIOVASCULAR DISEASE.
- THE WHO FURTHER SAYS THAT ALTHOUGH NICOTINE ITSELF IS NOT A CARCINOGEN, IT MAY FUNCTION AS A "TUMOR PROMOTER" AND SEEMS TO BE INVOLVED IN THE BIOLOGY OF MALIGNANT DISEASE, AS WELL AS OF NEURODEGENERATION.

**ISSUES WITH VAPING**

**Addictive in Nature:** Research Suggest that these are gateway for New tobacco addiction

**Health Damages:** They Can cause DNA damage, respiratory/ cardiovascular/ neurologic disorder

**Promotes the use of actual cigarettes:** Vaping in early age especially in Teens promotes actual smoking at later stages.

**REGULATION QUESTION**

**Does not contain Tobacco** Therefore not fall within the ambit of the Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003 (COTPA)

**Sold as therapeutic product** Easily available on e-commerce sites without any appropriate health warning

**A Way-Forward**

**Follow a uniform approach:** Nicotine is not classified uniformly. This will not only jeopardize the health of the people, but will also enable the sellers of such products slip through the holes.

**Plug the Vacuum of Regulation:** Few States in India have banned ENDS. There is also need to appropriate restrictions on the sale and advertisement. It is as incorrect to call it a tobacco product as calling penicillin, a fungal product.

**Independent research Commission:** Establish an independent commission that will conduct the scientific research the benefits and risks posed by these products in the Indian context.

**Fixed Dose Combinations (FDCs)**

News Excerpt

A drug advisory body sub-committee has asked pharmaceutical companies to prove that 324 combination medicines are safe and effective for patients to consume in order to decide whether these drugs should continue to be sold in India.

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About FDCs

- An FDC is a cocktail medicine with two or more therapeutic ingredients packed in a single dose and administered in various forms, including syrups, tablets, inhalers, injections, and skin creams.
- When FDCs offer an incremental benefit in their therapeutic effect or convenience or cost, all within the line of safety, it is considered to be "rational" to use FDCs.
- When an FDC is "irrational", there may not be a rationale for creating such a combination and it may not be safe for use, effective or required.

Irrational FDCs in India

- FDCs' popularity in India is due to advantages such as increased efficacy, better compliance, reduced cost and simpler logistics of distribution. FDCs have shown to be particularly useful in the treatment of infectious diseases like HIV, malaria, and tuberculosis where giving multiple antimicrobial agents is the norm. FDCs are also useful for chronic conditions especially when multiple disorders co-exist.

- But **irrational FDCs have flooded the Indian pharma market**, they are freely available and offered inappropriately for various ailments and stretched far beyond their therapeutic advantages.
- Irrational FDCs are driving **Antimicrobial Resistance (AMR)** when at least one of the medications is targeted against micro-organisms. **The irrational FDCs with sub-standard doses of antimicrobials, which fail to offer an adequate therapeutic response to successfully kill the bugs**, would end up rather helping them develop resistance to the FDCs. Over a period of time, the bugs gain capabilities to survive against even the correct regimens as well as rational FDCs.

**Conclusion**

<b>Reasons for proliferations of "Irrational FDCs in India"</b>	<b>1988 Factor</b>
<ul style="list-style-type: none"> <li>• Even though the sale of FDC began in 1960s, their regulation began in 1988 through amendment in the Drug &amp; Cosmetic Act, 1940</li> <li>• This is used as a potent tool by Pharma companies against government ban on their FDCs product. They prove that they were selling it before 1988.</li> </ul>	
<b>Central Licensing Authority Vs State Licensing Authority</b>	
<ul style="list-style-type: none"> <li>• The state and central level agencies fell short of full clarity in their roles and mutual confidence in their capabilities while screening and approving new drugs.</li> <li>• CDSCO as Central licensing Authority (CLA) approves the FDCs after reviewing relevant pharmacological studies such as bioequivalence, safety profile and documentation related to the initial clinical trials. Only after the approval from CLA for an FDC, the state licensing authorities (SLAs) can issue licenses for its import, manufacturing, marketing and sales.</li> <li>• However, despite not having adequate technical expertise the SLAs ignored this aspect and ended up directly giving licenses for FDCs in numerous instances. Such FDCs would have found their way difficult through the approval process of CLA, whose technical capacity- even though not up to the desired level- is relatively better</li> </ul>	
<b>Circumventing the regulation</b>	
<ul style="list-style-type: none"> <li>• The inclusion of many commonly used drugs under the National List of Essential Medicines (NLEM 2011) and the Drug Price Control Orders (DPCO 2013) strained the financial comforts of pharmaceutical companies.</li> <li>• Pharmaceutical companies use the route of FDCs to circumvent price reduction mandated for essential drugs- mostly SDFs- under the ambit of Drug Price Control Orders (DPCO), a prominent tool tried by the central government to make drugs affordable.</li> <li>• Understandable, pitfalls in the regulatory framework augur well for the shortcut-seeking industry players to maximize profits even when lacking the rationale.</li> </ul>	
<b>Unethical marketing</b>	
<ul style="list-style-type: none"> <li>• Marketing practices of drug companies influence the prescription of brands by the private health care practitioners, who cater to over 70 percent of the outpatient consultations where the scope for FDCs is high.</li> <li>• Drug companies continue to rampantly promote brand-based sales of both rational as well as irrational FDCs with aggressive marketing strategies. Medical practitioners currently do not have any alternate and credible platforms- from the professional associations or government agencies- to remain updated on the rational drug innovations and combinations but are forced to choose from an unnecessarily large number of brands being made available in the market.</li> </ul>	

- The root cause for the explosion of FDCs in India, **amidst the aggressive marketing strategies of pharmaceutical companies, lie in the decade-old shortcomings of the country's regulatory framework both at the state and central levels.** States issuing approvals directly and bypassing the central authority has led to the availability of more than 6,000 FDCs in the market against the 1,292 official approvals given by the Centre since 1961.
- It is important **to ensure that the corrective course of action on irrational FDCs does not get derailed and a logical long-term solution is set into motion to prevent** both unnecessarily large numbers of FDCs and the irrational FDCs for the future.
- This will be possible only when the **pharmaceutical companies, physicians and pharmacists take cognizance of the problem and work towards the larger public health interests.**
- The need of the hour in case of FDCs is **extreme caution by Pharma, careful check by Regulatory authority and due diligence on the part of health care providers.**

**PEPPER IT WITH**  
 Generic Drug, CDSCO,  
 DGCI, NPPA

## Data Localization

### Perspective

With technology developing rapidly, devices becoming smarter and the Internet of Things taking over, a genuine concern about the leakage of private data has gained ground.

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### About Data Localization

- Data localization is the **act of storing data on any device physically present within the borders of a country**. As of now, most of these data are stored, in a cloud, outside India.
- The **government constituted a committee of experts under the headship of Justice B.N. Srikrishna which has issued a report (Srikrishna Report)** and the draft Personal Data Protection Bill, 2018.
- One of the notable proposals in the Srikrishna Report is the requirement that companies **must store certain categories of user data on Indian Territory**.

The Draft Bill envisions that the **Data Protection Authority (DPA)** that will specify categories of data that will be required to be hosted locally.

- The Reserve Bank of India (RBI) issued a directive that all **payment data must be stored only in India by payment gateways**.
- The citizenship of the data principal i.e. to whom the data relates is the basis for jurisdiction **in the Draft Bill akin to the European Union's General Data Protection Regulation (GDPR)**. This principle seeks to overcome the limitations of territorial jurisdiction **given the ubiquity of the internet and data**.
- The **localization requirement pre-supposes that territorial jurisdiction over data is a sine qua non for enforcement**. This inherent contradiction dilutes the uniquely Indian fiduciary jurisprudential approach to privacy mooted by the Srikrishna Report.

### Shortfalls of Data Localization

- Mutual Legal Assistance Treaty (MLAT):** Since most of the internet sites accessed by Indians are US based, Indian law enforcement had to rely on (MLAT) process to obtain data stored by U.S. companies because the U.S. law effectively bars these companies from disclosing user data to foreign law enforcement authorities. This scenario will not change even after technology companies relocate Indian data to India.
- Data of Local:** Localization can provide data only for crimes that have been committed in India, where both the perpetrator and victim are situated in India. Prevalent concerns around transnational terrorism, cyber crimes and money laundering that the committee rightly highlights will often involve individuals and accounts that are not Indian, and therefore will not be stored in India.
- Issue of Procedure:** Continuing of provisions such as Section 91 of the Code of Criminal Procedure (empowering police to access any "document or thing"). How local data will be obtained by police authorities after the data localization or whether it will be within its mandate or not. Even rudimentary requirements such as a time limit for which data can be stored by law enforcement are missing.
- Data is more than new oil:** Data, unlike oil, which is found in limited quantities, has different properties. Limiting cross-border data flows would only stifle innovation and entrepreneurship for Indian startups, and in turn, that of the entire Indian economy. For startups, which rely on leveraging the economies of scale on distributed systems across the world, access to cross-border data flows is crucial.

### Alternative to Data Localization

- Strengthen Mutual Legal Assistance**  
With other countries for data requests, particularly with the United States, which is a slow and cumbersome process
- Lessons form GDPR**  
The government can also consider the European Union's General Data Protection Rules (GDPR) where people have a "right to explanation" for the output of an algorithm.
- Other**  
Levying taxes on large multinational technology companies, and enforcement of competition law. Mirroring of certain data sets, too, should be considered as an alternative.

### CLLOUD ACT

The Clarifying Lawful Overseas Use of Data (CLOUD) Act, seeks to de-monopolize control over data from U.S. authorities. The law will for the first time allow tech companies to share data directly with certain foreign governments. This, however, requires an executive agreement between the U.S. and the foreign country certifying that the state has robust privacy protections, and respect for due process and the rule of law.

The CLOUD Act creates a potential mechanism through which countries such as India can request data not just for crimes committed within their borders but also for transnational crimes involving their state interests. Access to data would be determined by where the user is located and the reasonableness of claim that a country has in seeking the data.

**Conclusion**

- The localization proposals severely **compromise the ability of the digital economy from benefiting on its efficiencies**. It further creates a barrier to market entry that will **potentially isolate India** from new innovations in the internet space.
- One must be wary of regulation **replacing commercial decision making in a market economy**. This is even more crucial for the technology and internet **sector where change the equilibrium**.
- The need of the hour is to:
  - **Create an opportunity for local data centers** all over the country.
  - **Devising an optimal regulatory and legislative framework** for data processors and data centers operating in the country.
  - **Adequate infrastructure in terms of energy**, real estate, and internet connectivity also needs to be made available for India to become a global hub for data centers.
  - **Adequate attention needs to be given to the interests of India’s Information Technology Enabled Services (ITeS) and Business Process Outsourcing (BPO) industries**, which are thriving on cross border data flow.

**PEPPER IT WITH**  
 Data Mining, Privacy, Identity Theft, Data is

**AWaRe**

**News Excerpt**

The World Health Organization (WHO) has launched a **global campaign AWaRe**

**About AWaRe**

- The AWaRe tool was developed by the **WHO Essential Medicines List** to contain rising resistance and make **antibiotic use safer and more effective**.
- The tool, known as ‘AWaRe’, classifies antibiotics into three groups:

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- **Access** — antibiotics used to **treat the most common and serious infections**
- **Watch** — antibiotics available **at all times in the healthcare system**
- **Reserve** — antibiotics to be **used sparingly or preserved and used only as a last resort**

Antibiotic resistance is already one of the biggest health risks and is estimated to kill 50 million by 2050 worldwide.

The threat continues to escalate globally because more than 50 per cent of antibiotics in many countries are used inappropriately such as for treatment of viruses when they only treat bacterial infections or use of the wrong (broader spectrum) antibiotic.

**Concerns Regarding Anti-microbial resistance**

Besides, reduced access to effective and appropriate antibiotics in many low- and middle-income countries contributes to childhood deaths and lack of funding and implementation of national plans to tackle antimicrobial resistance.

- The new campaign aims to increase the proportion of global **consumption of antibiotics in the Access group to at least 60%** and to reduce the use of the antibiotics most at risk of resistance from the **Watch and Reserve groups**.
- Using Access antibiotics lowers **the risk of resistance because they are ‘narrow-spectrum’ antibiotics** (that target a specific microorganism rather than several). They are also less costly

**PEPPER IT WITH**  
 Mission Indradhanush, Pradhan Mantri Swasthya Suraksha Yojana (PMSSY), National Ayush Mission, WASH

because they are available in **generic formulations**.

**Causes of the problem**

- The factors underlying the problem of sub-optimal antibiotic use are complex, but include, among others-
  - **Lack of knowledge and awareness** of the problem by prescribers and the public, diagnostic uncertainty due to limitations of actual diagnostic tests and insufficient diagnostic capacities.
  - **Lack of access to evidence-based** treatment guidelines taking into account local epidemiology.
  - **Lack of access to data** reflecting the quality of antibiotic prescribed and used, preference for dispensing large spectrum antibiotics even when narrow spectrum alternatives are available.

**WayForward**

- With the **emergence of infections** that are untreatable by all classes of antibiotics, antimicrobial resistance has become an invisible pandemic.
- In the absence of development of new drugs, “we must safeguard these precious **last-line antibiotics** to ensure we can still treat and prevent serious infections”.

**NITI Aayog Health Index**

**News Excerpt**

The NITI Aayog with technical assistance from the **World Bank, and in consultation with the Ministry of Health and Family Welfare** has released its second edition of comprehensive Health Index report titled, “**Healthy States, Progressive India**”.

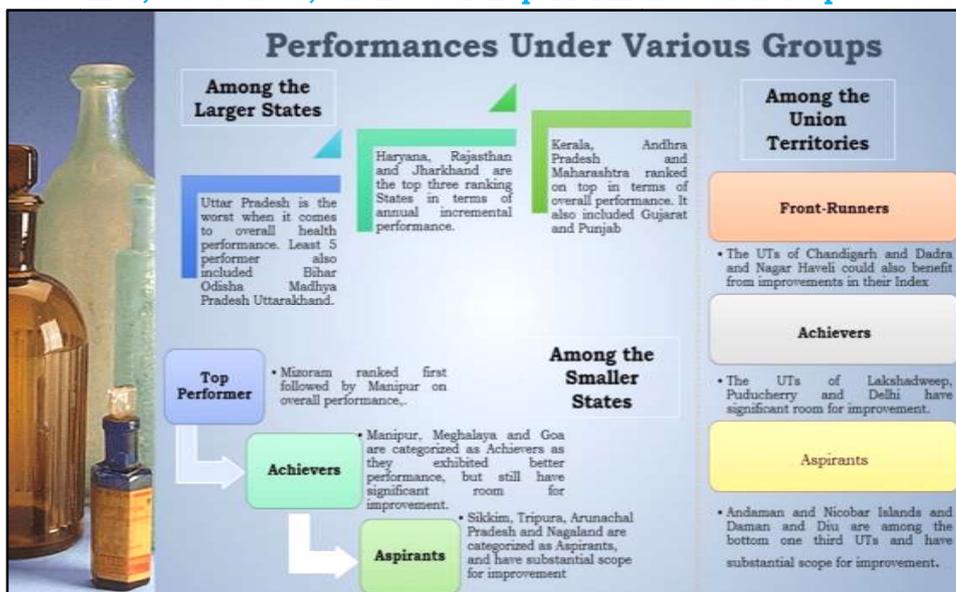
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**About Report**

- The report ranks states and Union territories innovatively **on their year-on-year incremental change in health outcomes, as well as, their overall performance with respect to each other**.

- The Health Index is a weighted composite Index, which for the larger States, is based on indicators in three domains:

- (a) **Health Outcomes (70%)**
- (b) **Governance and Information (12%)**
- (c) **Key Inputs and Processes (18%), with each domain assigned a weight based on its importance.**



- The Index includes 23 indicators which are used to calculate the composite index score and generate overall performance ranks and incremental ranks.

- Indicators are selected based on the **importance and availability of reliable data from existing data sources (at least annually).**

**Significance of the Index**

- Health Index has been developed as **a tool to leverage Co-Operative and Competitive Federalism to accelerate the pace of achieving health outcomes.**
- It would also serve as an instrument for “nudging” States & Union Territories (UTs) and the **Central Ministries to a much greater focus on output and outcome-based measurement of annual performance than is currently the practice.**
- With the annual publication of the Index and its availability on public domain on a dynamic basis, it is expected to keep every stakeholder **alert to the achievement of Sustainable Development Goals (SDGs) Goal number 3.**

**PEPPER IT WITH**  
National Family Health Survey,  
National Health Mission,  
Janani Sukarsha Yojana

**5-G Network**

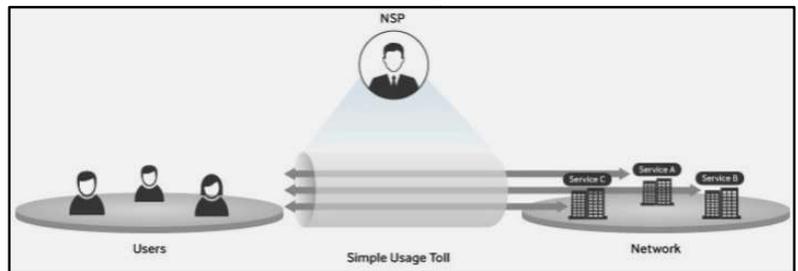
**Perspective**

While some countries such as **South Korea and the U.S. have begun rolling out commercial 5G services,** India is yet to begin trial for these even as the government is targeting 2020 as the launch year for 5G in the country.

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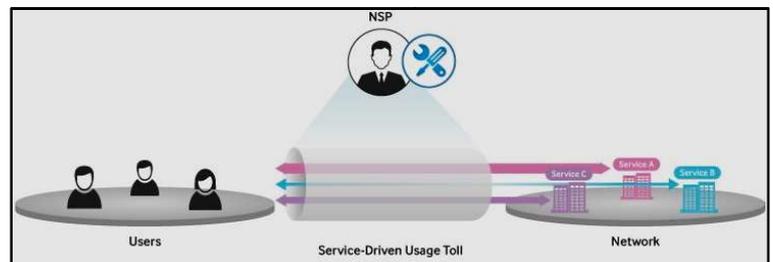
**The Current Challenges in Communication**

- Current internet services **are external to the mobile networks, with users simply leveraging the connectivity as an agnostic vehicle** that allows the applications in their devices to communicate with the servers that manage the experience, **leaving The Network Service Providers (NSPs) standing in the middle providing what often amounts to a dumb pipe.**
- This means that an entire component of the process - the connectivity - remains **generalized, unoptimized and ignorant of the very services, applications and experience it serves.**
- This creates a considerable challenge, both for NSPs who seek to innovate the services they offer to end-users, **as well as for the application service providers, who often find themselves constrained** by the capabilities and one-dimensional scope of today's mobile networks.



**About 5-G Technology**

- It is the next generation of cellular technology that will **provide faster and more reliable communication** with ultra-low latency.
- It is an important shift from **monolithic and proprietary hardware-based platforms** that provide static performance characteristics, **towards a more dynamic software-driven architecture, that will enable NSPs** and the infrastructure they deploy to constantly adjust themselves to **meet ever-changing user demands and network conditions.**
- International Mobile Telecommunication 2020 standards (IMT-2020) of the ITU will set the macro level requirements for 5G. 5G network deployment is also going to harness advances in



technologies like **Millimetric Band, Network Function Virtualization, Network Slicing, MIMO, and Software Defined Networks**. The three main technology categories underpinning 5G deployment are-

- ✓ **Enhanced Mobile Broadband (eMBB)** can enable high user mobility, especially under scenarios requiring high data rates across a wide coverage area or ultra-high speed connection such as **on trains or in thickly populated areas. It can also support Virtual Reality and Augmented Reality services.**
- ✓ **Massive Machine Type Communications (mMTC)** can support a very large number of connected devices, such as in the **case of Internet of Things (IoT), with varying requirements of quality of service** and located in a small area such as an industry or a production facility. This enables a high density of **connectivity (around one million connections per square kilometer) for smart cities, smart power grids, smart industries, etc.**
- ✓ **Ultra-Reliable Low Latency Communications (URLLC)** lays down stringent requirements on latency, **which is as low as one millisecond (compared to 50 milliseconds for 4G LTE), as well as reliability in terms of packet loss of less than one in 10,000 packets.** Enabling communications in mission-critical applications, **this technology finds applications in robotics and autonomous vehicles.**
- The core components of 5G networks can be abstracted into two major components: **technologies and services.** 5G networks will continue to **play the traditional part of data-carrier**, but it will increasingly be called upon to be both **a possibility-enabler and itself a host of services.**

### 5G-a more integrated ecosystem

- In 5-G NSPs will no longer play the **role of men-in-the-middle charging a toll for access to 'dumb pipes'**. Their ability to meaningfully shape network characteristics and performance, will allow them to engage directly with **new ecosystem partners from end-to-end, and develop applications, and the services we can only dream of today - enhancing the user experience and building unique, new connectivity scenarios**, with a network that plays an active role in expanding the potential for technological innovation.
- By simultaneously expanding and tightening the telecommunication ecosystem, **as well as building bridges between newly-connected or under-connected industries**, 5G networks will call upon the industry to **reconsider the traditional mobile connectivity paradigm, to explore new possibilities and shape new realities.**

### 5G in India

- The Government of India had constituted a High-Level 5G India 2020 Forum to evaluate and build a roadmap or action plan for 5G deployment in India by 2020.
- The forum also investigated the possibilities of designing and manufacturing products and solutions in the country as well as generate IPR on the subject.
- The report of the Steering Committee of the High-Level Forum laid out three priority areas in 5G:
  - a) **Deployment** – An early rollout of 5G services to maximize the value proposition of 5G as a technology.
  - b) **Technology** – To build indigenous industrial and R&D capacity, especially for the design and Intellectual Property.

- c) **Manufacturing** – To expand the manufacturing base for 5G technologies, this includes both semiconductor fabrication and equipment assembly along with testing.

## The Five Challenges of 5G in India

**Declining revenue of Telecoms:** the Average Revenue Per User (ARPU) for telecom service providers has nose-dived from INR 123 in 2015 to a meagre 69 by the end of the second quarter of 2018. 5G deployment is a costly affair and debt-ridden telecom service providers must work their finances out before they chart out plans for acquiring 5G spectrum or investing in equipment.

**Infrastructure Issues:** India will have to make a quantum leap in optical-fibre penetration for 5G deployment. As mentioned in the National Digital Communications Policy 2018, the fibre-to-the-tower programme is supposed to enable at least 60 per cent of telecom towers thereby accelerating migration to 4G/5G. However, to achieve these targets a major change is necessary in existing construction and clearance processes.

**Telecom Market:** Imports account for a whopping 90 per cent of India's telecom equipment market. TRAI has recommended measures to bring imports to 'net zero' by 2022, for both economic and security reasons. However, is economically and logistically unviable for a single country to manufacture telecom products end-to-end on its own. Moreover, The entire manufacturing process is based on global supply chains, as components are sourced from different countries depending upon their respective competencies.

**R&D Issues:** 5G Requires high level of indigenous R&D. Limited private sector capacity and academic interface leaves industrial and R&D capacity in the lurch. That partially explains India's meagre participation at global standards bodies, where South Korea, United States, Japan and China are much more influential because of their contributions to inventions and patents underpinning 5G technologies. Without human and capital investments in this segment, it is just not possible to gain a foothold in product design, Intellectual Property, and standards development aspects of 5G technology.

**Frequency Issues:** There is also the uphill task of harmonizing radio-frequency spectrum for 5G rollout especially in the 24.5-29.5 GHz band, L band (1427-1518 MHz) and C band (3300-3700 MHz). The 5G High Level forum has recommended 698-803 MHz, 3300-3600 MHz, 24.25-27.5 GHz, and 27.5-29.5 GHz bands being made available for 5G rollout. Expensive spectrum is another barrier on the road to 5G. TRAI's recommended price of INR 492 crore per MHz is 375 per cent higher than what operators in South Korea paid.

### Conclusion

- Outrightly joining **the 5Gbandwagon may not be the best option for India**, as some of the lucrative use cases like autonomous cars and connectivity in high-speed trains do not at present fit the Indian requirement. 5G, **beyond the consumer segment**, should also **appeal to the industry for specialized applications**.
- Declining ARPU and fierce price wars and battles for market share are already hurting the bottom line of Indian telecom service providers. Keeping in mind that India is a price sensitive market, **5G affordability will depend upon lower spectrum and equipment costs**, efficient **usage of the spectrum and network and infrastructure sharing across operators**.
- In order to move up the value chain, **Indian manufacturers need to think beyond assembly and manufacture and build competency in areas such as R&D, design, testing and operational and support services built around telecom networks**.
- As for the Government, a slight push in the right direction would be much more productive and efficient, such as treating telecommunications as a utility rather than a market **and building innovation and IPR ecosystems rather than incentivizing licensed production. The idea, at the end of the day, should be “Designed and Made in India”, and not just “Made in India”**.

**PEPPER IT WITH**  
ITU, IoT, Smart Grid, Smart City Mission, VR & AR

**COAL AND CANCER DETECTION**

**Perspective**

A team of scientists in Assam have developed a chemical process that turns 'dirty' coal into a biomedical 'dot' to help detect cancer cells.

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**About**

- Indian scientists from the Council of Scientific & Industrial Research (CSIR)- North East Institute of Science and Technology have developed a chemical method of producing **Carbon Quantum Dots (CQDs) from cheap, abundant, low-quality and high-sulfur coal.**
- CQDs **are carbon-based nano materials** whose size is less than 10 nm, or nanometer.
- These are used as diagnostic tools for **bio-imaging**, especially in detecting cancer cells, for **chemical sensing and in optoelectronics**. Moreover, they are cheaper than alternatives in the western market.
- The product has shown **High-stability, good-conductivity, low-toxicity, environmental friendliness, and good optical properties.**
- CQDs are futuristic materials whose demand in India has been increasing leading to a considerable volume of import. The CSIR-NEIST technology can produce approximately 1 liter of CQDs per day **at a low cost to become an import substitute.**
- Other advantages of the process are the use of environment-friendly reagents and less usage of water than other methods. **The process can also be recycled with a manageable supply chain.**

**National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS)**

**News Excerpt**

A meeting to review the status of the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and strokes (NPCDCS) was held recently.

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**About NPCDCS**

- Considering the rising burden of NCDs and common risk factors to major Chronic Non – Communicable Diseases, Government of India initiated an integrated **National Programme for Prevention and Control of Cancers, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) under the National Health Mission.**
- The focus of the Programme is on **health promotion and prevention, strengthening of infrastructure including human**

## Objectives of NPCDCS

**Health promotion through behavior change with involvement of community, civil society, community-based organizations, media etc.**

**Management of chronic Non-Communicable diseases, especially Cancer, Diabetes, CVDs and Stroke through early diagnosis, treatment and follow up through setting up of NCD clinics.**

**Provide support for diagnosis and cost-effective treatment at primary, secondary and tertiary levels of health care.**

**Outreach Camps are envisaged for opportunistic screening at all levels in the health care delivery system from sub-centre and above for early detection of diabetes, hypertension and common cancers.**

**Build capacity at various levels of health care for prevention, early diagnosis, treatment, IEC/BCC, operational research and rehabilitation.**

**Provide support for development of database of NCDs through a robust Surveillance System and to monitor NCD morbidity, mortality and risk factors.**



resources, early diagnosis and management and integration with the primary health care system through NCD cells at different levels for optimal operational synergies.

- The funds are being provided in the ratio of 60:40 centre: state (except for North-Eastern and Hilly States, where the share is 90:10).

**Non-Communicable diseases**

- Non-communicable diseases (NCDs), also known as chronic diseases, tend to be of long duration and are the result of a combination of genetic, physiological, environmental and behavioral factors.

## Threats from Non Communicable Diseases

Non-communicable diseases such as diabetes, cancer and heart disease, are collectively responsible for **over 70% of all deaths worldwide, or 41 million people**. These include 15 million people dying prematurely, aged between 30 and 69.



The NCDs disproportionately affect the poor, impoverish families, and place a **growing burden on health care systems**.

The four 'major' NCDs are caused, to a large extent, by four modifiable **behavioral risk factors: tobacco use, unhealthy diet, insufficient physical activity and harmful use of alcohol**.

**One third of these deaths are premature** and occur before the age of 70, affecting economically productive individuals

- The main types of NCDs are **cardiovascular diseases (like heart attacks and stroke), cancer, chronic respiratory diseases (such as chronic obstructive pulmonary disease and asthma) and diabetes,**

- NCDs threaten progress towards the **2030 Agenda for Sustainable Development**, which includes a target of reducing premature deaths from NCDs by one-third by 2030.
- Poverty is closely linked **with NCDs. The rapid rise in NCDs is predicted to impede poverty reduction** initiatives in low-income countries, particularly by increasing household costs associated with health care.
- Vulnerable and socially disadvantaged people get sicker and die sooner than people of higher social positions, especially because they are **at greater risk of being exposed to harmful products, such as tobacco, or unhealthy dietary practices, and have limited access to health services.**
- In low-resource settings, **health-care costs for NCDs quickly drain household resources. The exorbitant costs of NCDs, including often lengthy and expensive treatment** and loss of breadwinners, force millions of people into poverty annually and stifle development.

**PEPPER IT WITH**

National Tobacco Control Programme, National Nutrition Mission, National Viral Hepatitis Control Program

**Global Disability Summit**

News Excerpt

2nd Global Disability Summit is being held in Buenos Aires, Argentina.

About the Summit

- The **objectives** of the summit are to **deliberate on issues across the world concerning empowerment and inclusion of Persons with Disabilities (PwDs)** and to work out a mechanism for enabling them to live an independent and dignified life.
- The first-ever Global Disability Summit was held in London, United Kingdom (UK) in 2018. It was hosted by the UK Department for International Development (UK DFID), along with the co-hosts International Disability Alliance (IDA) and Government of Kenya.

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- The Global **leaders attending the summit expressed their commitments towards eliminating stigma and discrimination against PwDs** and to work towards promoting inclusive education, economic empowerment, **technology and innovation in assistive devices, data desegregation, etc.**

## SPACE

### SPECTRUM-ROENTGEN-GAMMA (SRG)

- “Spectrum-Roentgen-Gamma” (Spectra-RG or SRG) is **an X-ray observatory developed jointly by Russia and Germany**. SRG’s main scientific goal is **to chart an unprecedented map of the Universe in X-ray** on which all large clusters of galaxies will be marked.
- The **four-year mission will survey the entire sky eight times and track the evolution of the universe and dark energy** which is a mysterious repulsive force that is accelerating its expansion.
- It also aims to detect X-rays from as many as **700,000 stars in the Milky Way** and up to **three million supermassive black holes** many of which are unknown.
- The telescope is the first of its kind to be sensitive to **high-energy ‘hard’ X-rays** and map the entire sky.
- SRG will carry two independent X-ray telescopes:
  - **A German-built eROSITA** (Extended Roentgen Survey with an Imaging Telescope Array)
  - **A Russian-built ART-XC** (Astronomical Roentgen Telescope — X-ray Concentrator).
- **The SRG will also research on the dark matter** which is the main engine of galaxy formation and is spread in the universe. It will not detect the gamma radiation.

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### Is this a new Initiative?

- **X-ray sky surveys** have also been conducted **by previous missions**, but they were not able to map the entire sky.
- **Germany's ROSAT mission in the 1990s was sensitive only to ‘soft’ X-rays**, with energies of about 2 keV. Existing missions, such as **NASA’s Chandra X-ray Observatory and NuSTAR, can see high-energy radiation and resolve tiny details of cosmic structures**. But, they see only small parts of the sky.

### LUNAR EVACUATION SYSTEM

- It is a part of NASA’s 2024 Moon mission and is developed by **the European Space Agency (ESA)**.
- LESA is a **pyramid-like structure** whose purpose is to **rescue an astronaut** if he or she suffers an injury on the lunar surface.
- It is **required as Astronauts will be wearing a heavy extravehicular activity (EVA) suits**. These will restrict their ability to rescue their fellow crewmate in case of injury.
- It enables **an astronaut to lift their crewmate onto a mobile stretcher in less than 10 minutes**, before carrying them to the safety of a nearby pressurized lander.
- LESA is being tested under the sea. **With its rocky, sandy terrain and buoyant salt water, the bottom of the ocean floor has much in common with the lunar surface.**

## METHANE ON MARS

### News Excerpt

NASA’s **Curiosity rover discovered high amounts of methane in the air on Mars**. However, within a week methane levels had fallen back to usual levels.

### Why Variations?

- High amounts of **methane detected were actually a transient methane**

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**plume**, which has been observed in the past also.

- Curiosity **doesn't have the instruments to determine whether the source of methane is biological or geological**. Further, scientists have yet to figure out a pattern for Martian's transient plumes.

**Methane and Life**

- On Earth, **Methane is a naturally occurring gas with concentrations well over 1,800 parts per million**. Most of the methane on Earth is produced **in biological processes** such as by **microbes**, while some is occurring as underground natural gas that had been formed by **earlier generations of microbial life**.
- Many of these methane-producing **microbes live in the digestive systems of animals, especially cows**.
- However, **methane can also be produced by abiotic processes** (those that do not involve living organisms).
- It has been found to occur in formations such as **rocks, springs, and aquifers, and studies have concluded** that it was formed as a result of chemical reactions between carbon and hydrogen atoms at low temperature.
- Once it is released into the atmosphere of either Earth or Mars, **methane is relatively short-lived**.

**NASA Curiosity**

Curiosity is a car-sized robotic rover exploring Gale Crater on Mars as part of NASA's **Mars Science Laboratory mission (MSL)**.

The rover's goals include investigation of the Martian climate and geology; assessment of whether the selected field site inside Gale Crater has ever offered environmental conditions favorable for microbial life, including investigation of the role of water; and planetary habitability studies in preparation for future human exploration

**Significance of Methane on Mars**

- Since, the time the gas was first detected on Mars, **it has been considered a potential biomarker**.
- They were hoping to detect the source of the gas, and in the process discover clues that **might point to the existence of life on the Red Planet**.

**India's own Space Station**

The space station, which is estimated to weigh around 20 tons, would be an extension of the **Gaganyaan Mission**. The space station will most likely be used to conduct microgravity experiment.

The only countries that have had space stations so far are the US, Russia, China and a consortium of nations that own the International Space Station.

**Conclusion**

- To determine where the plumes are located on Mars, **scientists would need a clearer understanding of these plumes**, combined with coordinated measurements from other missions.
- They also need time to collaborate with other science teams, including those with the **European Space Agency's Trace Gas Orbiter, which has been in its science orbit for a little over a year**.
- Combining observations from the surface and from orbit could help scientists locate **sources of the gas on the planet and understand how long it lasts in the Martian atmosphere**.

**INDIA - A SPACE POWER**

**Context**

The government **decided to set up a Defence Space Agency (DSA) with command over the space assets of the Army, Navy and Air Force**. It is the most significant development in India's defense establishment since the operationalization of the nuclear arsenal around 15 years ago.

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**Space War**

- It is not Star Wars yet, but space has undoubtedly become a military theatre. **The US, Russia, China, and India have shown that they have the capability to physically destroy satellites in orbit.**
- The US, Russia, China, and Europe developed space capabilities for military purposes first, and then put those technologies to civilian use.
- India, on the other hand, **developed space capabilities for civilian use first and then for military purpose.**
- India has a handful of military satellites in operation, compared to over 40 civilian ones. **India's first dedicated military satellite was launched only in 2013.**
- Though India has **unstated space doctrine**, but it has used space to promote the development, well-being and prosperity of its people. **It now must include security in its policy** as it will help the policy goal that will change from having a space presence to be a space power.



**Financial Stability and Development Council**

**News Excerpt**

Financial Stability and Development Council (FSDC) recently reviewed the current global and domestic economic situation and financial stability issues including those concerning Banking and NBFCs.

**Pre-connect**

There are different regulators for various segments of financial sectors viz. the RBI for commercial banks and NBFCs, SEBI for capital market etc.

It is indispensable to have coordination among these financial regulators to ensure better efficiency and avoiding any overlap in the functions. The tussle between SEBI and IRDA (Insurance Regulatory and Development Authority) on the regulations of ULIPs (Unit Linked Insurance Plan) was the triggering point for the establishment of FSDC.

**About FSDC**

FSDC is non statutory, autonomous, super regulatory body tasked with maintaining financial stability, enhancing inter regulatory coordination, promoting financial literacy and inclusion.

It coordinates financial and economic regulations through consultations of the heads of the various regulatory organizations.

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**FSDC Sub-committee**

It is chaired by the Governor of RBI. It meets more often than the full Council. All the members of the FSDC are also the members of the Sub-committee. Additionally, all four Deputy Governors of the RBI and Additional Secretary, DEA, in charge of FSDC, are also members of the Sub Committee.

The council is chaired by finance minister and its members include the heads of financial sector regulators.

**Way Forward**

Financial sector regulation is a vital service for bringing healthy and efficient financial system in the economy.

Financial sector regulation is a vital service for bringing healthy and efficient financial system in the economy.

**PEPPER IT WITH**  
Financial Data Management Centre,  
CERT-Fin, IMA Jewels Ponzi Scheme

**Kaleshwaram Multi Purpose Irrigation project**

**News Excerpt**

Kaleshwaram Lift Irrigation Project (KLIP) was inaugurated recently. It is the world's largest multi-stage, multi-purpose lift irrigation project in terms of capacities.

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**Pre-connect**

- The project is built on river Godavari, in Telangana's kaleshwaram town where Godavari meets Pranhita river (largest tributary of Godavari).
- It has world's longest tunnel route of 203 km and utilisation of 139 MW maximum capacity pumps which were never used anywhere in the country.

**Did You Know**  
The record was held by Colorado lift scheme in America and great manmade river in Egypt.

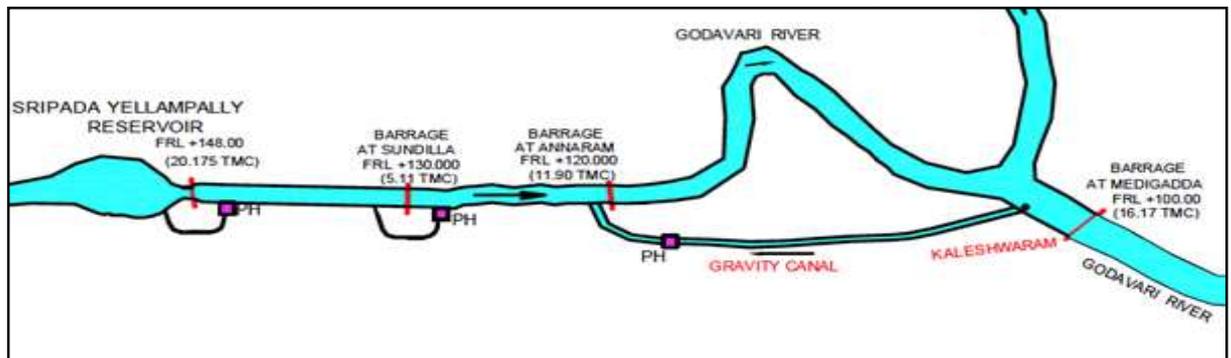
**Analytica**

It can be purported to focus on few aspects mentioned below:

- ✦ **Irrigation: To irrigate 45 Lakh acres for two crops in a year**
- ✦ **Drinking Water: Meet the drinking water requirement of 70 percent of the state**
- ✦ **Industry: Meeting needs of the industry.**
- ✦ Enhancing the **socio-economic profile** of Telangana including fisheries development, inland waterways, tourism, and biodiversity.
- ✦ It will also support **Mission Kakatiya and Mission Bhagirathi** (both of these have plan for providing Drinking water to villages).
- ✦ The project also has the capacity to harness **hydel power**.
- ✦ Boost to Co-operative federalism (Maharashtra and Telangana)

Lift irrigation is a method of irrigation in which water instead of being transported by natural flow (as in gravity-fed canal systems) requires external energy through animal, fuel based or electric power using pumps or other mechanical means. They must also distribute this water to the field of the beneficiary by means of a suitable and proper distribution system.

**PEPPER IT WITH**  
Flow Irrigation, Gravity irrigation, International Commission on Irrigation and Drainage,



### UK Sinha panel on MSME

#### News Excerpt

Recently, eight member expert committee chaired by UK Sinha submitted its report on MSME which suggested long-term solutions for the **economic and financial sustainability for the sector and also the impact of the recent economic reforms on the sector and identify the structural problems impacting its growth.**

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#### Highlights

- The committee recommended setting up of **Rs 5,000 Crore stressed asset fund** for domestic MSME hurt by Demonetisation, GST and ongoing liquidity crunch.
- **To leverage investment** the committee recommended setting up of Government sponsored funds of fund of **Rs 10,000 Crore to support venture capital and private equity firms investing in the sector**
- The committee highlighted **the problem of delayed payment** issue faced by MSME aggravated by the problem of weak bargaining power of the sector to enforce legal provision available to them. To address this problem the committee recommended the requirement of **mandatorily updating the invoice of defaulters and naming and highlighting the defaulters** which will act as a **moral suasion to repay.**
- Committee also led stress **on deepening the role of SIDBI**, which **would deepen the credit market** for MSME in underserved region by handholding the private lender such as NBFCs, Micro finance institution. Further, they must develop additional instruments for debt and equity which would help crystallize new sources of funding for MSMEs and MSME lenders
- Other suggestions include introduction of **adjusted priority sector lending guidelines** for banks to specialize in lending to a specific sector, **doubling the collateral-free loan limit to ₹20 lakh** and **providing insurance coverage** to MSME employees by the government
- the committee suggested that the PSBLoansIn59Minutes.com portal also cater to new entrepreneurs, who may not necessarily have information like GSTIN, income-tax returns and bank statement

#### Analytica

- **Roughly 65 million MSMEs are contributing immensely to countries economic growth, and could be called as engines of growth**
- The sector accounts for about **45% of manufacturing output, more than 40% of exports, around 30% of gross domestic product and employs about 120 million people.**
- The push for 'Make in India' , increase in FDI etc. show that MSMEs sector is poised for rapid growth
- Problems faced: **Absence of adequate and timely bank finance, high cost of credit, non-availability of suitable technology and over-regulation impede the growth of this sector**

### Recommendation of Nandan Nilekani on Digital Payments

#### News Excerpt

Nandan Nilekani led high-level committee on deepening digital payments submitted their report to the Reserve Bank of India. The five-member team was formed in January this year to consult with various stakeholders of the payments ecosystem and deliberate on solutions to further strengthen the industry.

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#### Highlights

- **Boost Digital transaction:** In order to give a thrust to digital transaction the committee recommended to scrap charges on digital payment system like RTGS, NEFT and also to scrap duty on import of point of sale machines

- **Hassle free service:** Committee recommended of charging no convenience fee from customers on payment made to government agencies. And also to address customer complaints payment system should use machine driven, online dispute resolution system
- **Surveillance:** To keep an eye on digital transaction mechanism on a case to case basis the committee recommended the government to setup an appropriate mechanism and also must make aggregated information(based on blocks, and pin code) available to all players involved on a monthly basis
- **Robust Infrastructure:** The Committee highlighted the point of Infrastructure backwardness noting the point of inadequate POS machines and other machines a robust infrastructure offering a good network of ATM outlets and mini ATMs in close vicinity will facilitate smooth cash-in cash-out at the convenience of the customer. This will infuse a behavioural change thereby drastically shoring up the volume of digital payments
- Committee has also asked RBI to set an **interchange rate for transaction** between customers and leave the MDR on competitive market pricing which would reduce the transaction cost for customers.

**Analytica**

**...but It's Early Days for Online Transactions...**

While purchases of four out of five rural internet users are digitally influenced, the amount of actual online commerce is still small

From 2015 to 2016, the penetration of online purchasing doubled to 8%

**...and for Digital Payments...**

Prepaid recharge is still the largest use case across metros and non-metros

Mobile bill payment and other utility bill payment are the second largest use case

PoS (point of sale) payment and usage for other services are low

**...Thanks to Barriers to Adoption**

Habit of using cash

Complexity of usage

Lack of compelling value proposition

Inertia of non-cash methods

Fraud/hidden charges

Source: BCG: Rising Connected Consumer in Rural India; Google-BCG market study 2016

- The committee is targeting for a 10x growth in the number of digital payments in India over the next three years by focusing on low value-high volume and low-cost transactions
- Post Demonetisation government is pushing towards digitalising the payment system but it's still early days for digital payment to get full acceptance
- The reason why people are still hesitant to accept digital payment is because of issues like cyber threat, low digital literacy, bleak digital infrastructure in some areas etc
- However with mobile and internet penetration at its peak, thanks to Digital India initiative and NOFN(National Optical Fibre Network) it is expected that by 2050 digital transition will be at its peak
- Digital payment comes along with a myriad of benefits like issues of dealing with fake currency, corruption, increasing tax base etc
- Digital transactions result in larger balances with the bank.

**PEPPER IT WITH**  
Electronic Fund Transfer,  
Cryptocurrency, Payment Gateway

**Islamic banking**

**Context**

The Reserve Bank of India (RBI) has suggested an idea to open “Islamic window” in traditional banks for gradual initiation of Islamic banking or Sharia Banking or **interest-free banking** in the country. It is being proposed to ensure the financial inclusion of those sections of the society that remain marginalized due to religious reasons.

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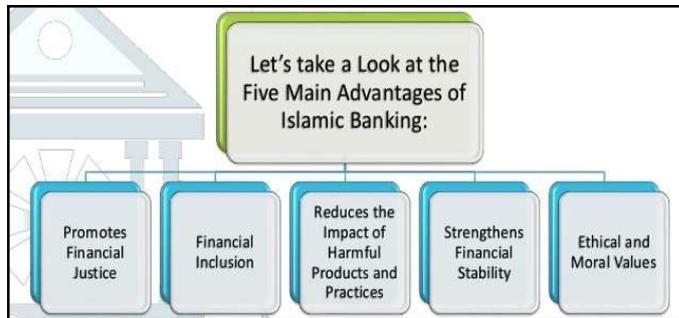
**Perspective**

- **Sachar committee report** revealed that on financial inclusion fronts Muslims are seriously lagging. Muslims avail just 4% and 0.48% credits from NABARD and SIDBI.
- Conventional system of banking based on ‘riba’ is discouraging the Muslims financial inclusion as Muslims feel aversion to this scheme of things and In the absence of any alternative lot of wealth remain idle which would have been used for other purposes.

Islamic banking is different from the conventional banking system in the sense that it is based upon the principle of Islamic laws(sharia laws). It is grounded and founded on the principle of sharing of profit and loss and prevention of collection and payment of interest called ‘Riba’ which is not allowed under shariah law.

**Banking without interest: how it works**

- Islamic banks use **equity-participation systems**. In this method, if a bank gives the loan to a business, the business pays back the loan without interest, but it pays its share of profit to the bank. If the business fails on the loan or does not earn any profits, the bank does not get any profit either.
- There are two kinds of deposits for saving accounts. In one, customers deposit their savings in the bank and allows the bank to use their money, with the promise that they would get the full amount back. The bank is not accountable to pay interest to the savers. Some banks do return certain sum to the account holder as profit accumulated from their operations.
- In the other kind, the holder allows the bank to invest his money in specific projects and gets returns after a stipulated term based on how the business performs.



**Thematic Connect**

- ✓ Muslims constitutes 14% of the population therefore catering to their need in congruence with their religious practices will go a long way in mainstreaming them into the banking channel.
- ✓ Not only Muslims, but other communities could also get served in the underserved regions of the country, when the government is vouching for financial inclusion. Eminent environment scientist **MS Swaminathan** said Islamic banking will lower the rate of farmer suicide.
- ✓ Attracting Huge funds in the domestic market and attracting huge investments from West Asia and those who invest mainly in shariat compliant.
- ✓ But this comes along with several other challenges. Political consensus is still far from being one.
- ✓ Critics are of the opinion that in a secular country like India setting up a financial institution based upon a particular religious law is against the secular fabric of our country.
- ✓ Lack of trained workforce and cases of frauds.
- ✓ **Shariah law** is not in conformity to the current banking laws therefore an overhaul of banking regulatory system is needed.

**PEPPER IT WITH**  
Sukuk, Repo Rate, Reverse Repo Rate

## Periodic Labour Force Survey

### News Excerpt

Latest edition of the Periodic Labour Force Survey (PLFS) has been released. Ministry of Statistics and Programme Implementation (MOSPI) had constituted PLFS under the chairmanship of Amitabh Kundu. The **data was collected by**

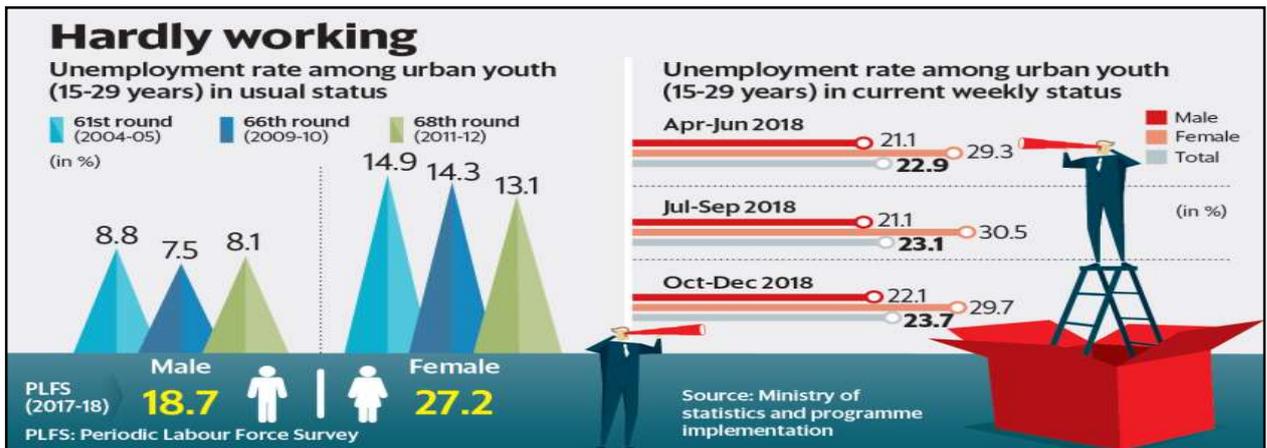
**NSSO from July 2017 to June 2018 period.**

### Highlights

- As per the NSSO, the work force participation rate (WPR) was 39% at the all India level during 2011-12, but according to the PLFS, it has declined to 35% in 2017-18
- The PLFS also notes that between 2011-12 and 2017-18, the WPR declined for both the sexes in rural and urban areas. However, the decline was the highest (by seven percentage points) for rural female workers (because of increasing involvement in domestic care activity in both rural and urban areas. This activity includes household chores such as cooking, cleaning, washing, shopping, caring for the elderly and children.
- For the same period, women experienced a decline in domestic and allied activity. This includes collecting water, fuel wood, vegetables, fruits for the household and fodder, wood and raw material for family businesses (Could be used to assess the development of infrastructural facilities or evaluating schemes like Ujjwala).
- Unemployment rate was **6.1% in 2017-18** as compared to **2.1% in 2011-12**. This rate of

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**Labour force participation rate** is defined as percentage of working population in the age group of 16 -64 in the economy currently employed or seeking employment



unemployment is alarming

- The **Joblessness among youths (15-29)** years is **very high**. Joblessness rate in urban areas (7.1%) is higher than rural areas (5.3%)
- Joblessness among males (18.7%) in urban areas is lower than Joblessness among females in urban areas (27.2%)
- In rural areas there is (17.4%) joblessness among rural males as compared to 13.6% among rural females

## LIBRA

### News Excerpt

Facebook has recently launched **its own digital currency Libra which is to be rolled by 2020** through which its user-base would be able to make financial transaction online.

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### Details

- Libra is cryptocurrency run by **Libra association**, a Geneva based entity (Consortium of many companies)
- It's a virtual currency which user can buy and store in a dedicated digital wallet app Calibra which will be built into whatsapp and messenger to let user store and use libra coins.
- Users will be able to send money at low cost, offline payment option is also available. Libra will also be used for offline payments, such as paying bills, buying coffee, or paying for public transport.

### Benefits of Cryptocurrency

- Transfer funds directly between two parties in a transaction, without the need for a trusted third party such as a bank or credit card company
- Providing a data structure for this ledger that is exposed to a limited threat from hackers and can be copied across all computers running Bitcoin software
- Making it almost impossible to forge transaction histories

### Drawbacks of Cryptocurrency

- are virtual and do not have a central repository, a digital cryptocurrency balance can be wiped out by a computer crash
- The semi-anonymous nature of cryptocurrency transactions makes them well-suited for a host of nefarious activities, such as money laundering
- Since prices are based on supply and demand, the rate at which a cryptocurrency can be exchanged for another currency can fluctuate widely.

### Significance of Libra

- High cost attached to financial transactions is one of the biggest reasons for financial exclusion in developing countries. Libra would have a near-zero cost attached to it.
- There is definitely a need for a digital currency that can help in cross-border transaction, with minimum regulatory intervention and cost.
- With the confidence that each of the Libra units can be exchanged for fiat

#### RBI organised Financial literacy week

The Financial Literacy Week is an initiative by RBI to promote awareness on key topics every year through a focused campaign. Financial Literacy Week 2019 was observed from June 3-7 on the theme of "Farmers" and how they benefit by being a part of the formal banking system. The week focused on creating awareness among customers of Banks about financial products and services, good financial products and going digital.

money, users need not worry about its actual worth.

- With large payment, technology, communication and venture capital companies backing the initiative, the usage of these units is likely to grow manifold in the coming years.
- Remitting money globally will be easier, without central bank intervention, if done with Libra. There could be derivatives and even exchange-traded funds based on Libras, if the usage increases.

**PEPPER IT WITH**  
Bitcoin, Ethereum, Ripple, Litecoin

**Concerns for Libra**

- ✓ Facebook’s co-founder Hughes, terming the digital currency “frightening”, has said it is a shift of power from central banks towards multinational corporations.
- ✓ Markus Ferber, a German member of the European Parliament, has also been reported as saying that Facebook could become a “shadow bank” and that regulators should be on high alert
- ✓ Threat of Money laundering is another concern, ensuring that this currency is not used outside organised financial system is not full proof
- ✓ Privacy is the another concern haunting the developers, recently facebook’s privacy was breached.

**Pension Scheme for small retail traders and shopkeepers**

**News Excerpt**

Budget 2019, announced **pension benefits** for retail traders and shopkeepers as a part of PM’s universal social security programme.

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**Highlights**

- **Beneficiary:** The new pension scheme will cover near about 3 Crore retailers and other small shopkeepers with an annual turnover less than Rs 1.5 Crore.
- **How it works:** The scheme will work on a contributory basis with centre contributing an equal amount that of a recipients contribution
- **Benefits:** Beneficiary will get an monthly pension of Rs 3000 after attaining 60 years of age.
- **Who can enrol:** All small shopkeepers ,self employed and retail traders with GST turnover below Rs 1.5 Crore and age of 18-40 years can enrol for the scheme

**Analytica**

- Pension scheme would assure a life of dignity and financial security especially during the old age of retailers and shopkeepers
- The timing of this much needed step is excellent when our government is vouching for self employment initiatives. This step would encourage people to go for business and make them self sustainable
- The GST underwent significant simplification after taking feedback of the trading community. In the same way, Mudra loans gave wings to the entrepreneurial zeal of young India. Loans upto Rs. 1 crore are now easily available along with this a new pension scheme would definitely encourage the trading community

**RBI launched complaint management system**

**News Excerpt**

Country’s central bank has launched online complaint management system (CMS) for filing online complaints against Banks, NBFCs.

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**Perspective**

- In the wake of rising complaints against banking system, RBI took a much needed step of launching a online complaint management system where customer can lodge a complaint against any Regulated entity with public interface like commercial bank, urban cooperative bank, NBFCs

- To make the system user friendly, CMS will be accessible on desktop/mobile device and also to track the status of application a designated Interactive Voice Response system (IVRS) is being developed
- To ensure transparency Complainant is informed through a auto generated acknowledgement and enable them to track status of complaint

**Analytica**

- CMS would **improve customer experiences** in timely redressal of grievances
- Data obtained from CMS would help the policymakers for undertaking the root cause analysis with the objective of understanding the customer’s pain areas, behaviour and expectation so as **to improve services for maintain customer loyalty**
- Also insights from data can be used by bank for designing products which meet expectation of their customers and also can be **used for regulatory and supervisory intervention**

**RBI’s Revised Norms to Deal With Stressed Assets**

**News Excerpts**

Following the quashing of RBI’s revised framework for resolution of stressed assets by the apex court, RBI issued a prudential framework for resolution of stressed assets.

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**What the old norms says**

- It was mandatory on banks to identify nascent stress in loan account which has not yet been classified as NPA.
- After identifying the stress, classify such loans as SMA on the very first day of default, unlike 90 days period earlier.
- On default of more than Rs 2000 Crore debt, banks should make and implement a resolution plan in 180 days and if failed to implement, than automatically Insolvency proceedings is invoked mandatorily under IBC.

These norms was lashed with heavy criticism from different sectors, even the government asked RBI to relax and revise these norms, companies complaint of one size fits all approach, for example construction sector said the reason of defaulting on loans was myriad like because of raw material delayed supply , regulatory clearance they had to face delay in projects.

**As a result RBI came up with the new prudential framework for resolution of stressed assets.**

**What the new norms says?**

- The new norms relaxed the norm of classifying loans as SMA on the very first day, instead the new norms gave a window of 30 day review period after default date within which banks have to decide resolution plan and approach i.e. lender may choose whether they want to initiate legal proceedings for insolvency or initiate recovery.
- Unlike the old plan where resolution plan has to be finalised through inter creditors agreement by all, the new norms stipulates that final decision on resolution plan has to be finalised by 60% of lenders in number & 75% of total outstanding credit facilities by value.

**TOUGH NORMS**

- The February circular on the new mechanism has asked lenders to go ahead with a resolution plan even if loan repayment is overdue for just a day 
- In case a solution is not found within 180 days, banks have been asked to initiate bankruptcy process and set aside 50% of the loan amount for provisioning once case is referred to NCLT
- Bankers believe that the plan is virtually impossible to implement

**Old order chngeth**

- Lenders to undertake prima facie review of borrower account within 30 days of default
- All lenders to enter into inter-creditor pact for implementing resolution plan
- Resolution plan to be implemented within 180 days from end of review period



- DisIncentive for banks if they delay implementing viable resolution plan

- Lenders may choose to initiate legal proceedings for insolvency or recovery

- Implement resolution plan within 180 days after 30 days review period are over.
- Even after 180 days if the resolution plan has not been implemented, it is not mandatory on party of banks to start insolvency proceedings now it has been left on bankers wisdom either to invoke IBC or restructure the loan.
- There is a disincentive for banks if they delay implementing a viable resolution plan. In case the plan is not implemented within 180 days from the end of review period, banks have to make additional provision of 20% and another 15% if the plan is not implemented within 365 days from the start of the review period. The additional provisions would be reversed if resolution is pursued under Insolvency and Bankruptcy Code (IBC).

**PEPPER IT WITH**

Scheme for Sustainable Structuring of Stressed Assets, SARFAESI Act, Insolvency and Bankruptcy Code

**Way Forward**

The government has to assess what ails the insolvency resolution process, which has got bogged down in the case of several high-profile defaulters, beginning with Essar Steel. The delays in resolution are not good optics, and the gaps that defaulters typically use to subvert the process must be plugged. Ultimately, the RBI's efforts will be negated if banks, put off by the long delays in the resolution process, choose not to refer cases to the insolvency court.

**Fiscal performance index launched by CII**

**News Excerpt**

Confederation of Indian Industry (CII) has launched a Fiscal Performance Index (FPI) to assess state and central budget using multiple indicators.

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**Perspective**

- To arrive at a more holistic picture of fiscal performance than the Fiscal deficit to GDP ratio, the index incorporates qualitative assessment of revenue and capital expenditure, revenues, fiscal prudence and the level of public debt. As an example the index will consider expenditure on infrastructure & other social sectors beneficial for economic growth compared to other revenue expenditures.
- A single criterion such as the 'fiscal deficit to GDP ratio' does not tell us anything about the quality of the Budget. Hence, the Government should use multiple indicators to measure the quality of Budgets at the Central and the State levels rather than a single indicator.
- Using the old method, the study shows that relatively high income states including Gujarat, Haryana and Maharashtra which are presumed to have good fiscal health, because of low fiscal deficit to GDP ratio do not perform well on the composite FPI because of poor expenditure and revenue quality compared to other states. Other states including, Madhya Pradesh, Andhra Pradesh, Uttar Pradesh and Bihar have done well on the FPI because of their good performance in revenue and capital expenditure indices.
- Tax revenues, a more sustainable source of revenues for the government, as compared to one-time income.

Indian banks' NPA as a percentage of advances is **expected to be at 10.3 per cent as of March 2019**, from 11.5 per cent in March 2018, according to RBI's financial stability report.

**Confederation of Indian Industry(CII)**

The Confederation of Indian Industry (CII) is a business association in India. CII is a non-government, not-for-profit, industry-led and industry-managed organization. Founded in 1895, it has over 9,000 members, from the private as well as public sectors, including SMEs and MNCs.

**About fiscal performance index**

It has been constructed using the UNDP's Human

development index methodology, which comprises of 6 components for holistic assessment of the quality of government budget

**6 components are:**

- Quality of capital expenditure: measured by share of capital expenditure in GDP
- Degree of fiscal prudence 1: fiscal deficit to GDP
- Degree of fiscal prudence 2: Revenue deficit to GDP
- Quality of revenue: Ratio of net tax revenue to GDP
- Debt index: Change in debts and guarantee to GDP
- Quality of revenue expenditure: measured by share of revenue expenditure

**Way forward**

The government should attempt to **broaden the tax base, increase investments in education and healthcare as well as maintenance of assets** and well as increase investments in infrastructure, affordable housing and encourage **public sector undertakings to also increase capital expenditure** by limiting dividends to the government.

**PEPPER IT WITH**  
FRBM, fiscal deficit to GDP ratio

Also, FRBM Act (which sets targets for the government to reduce fiscal deficits should not only focus on one component, to get a realistic picture. Expenditure on infrastructure, education, healthcare and other social sectors can be considered beneficial for economic growth.

**Multilateral Convention to Prevent Base Erosion and Profit Shifting**

**News Excerpt**

The Union Cabinet, has approved the ratification of the **Multilateral Convention to Implement Tax Treaty Related Measures to Prevent Base Erosion and Profit Shifting (MLI)**.

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**Highlights**

- The Multilateral Convention is an outcome of the OECD / G20 Project to tackle Base Erosion and Profit Shifting (the "BEPS Project") i.e., **tax planning strategies that exploit gaps and mismatches in tax rules to artificially shift profits to low or no-tax locations where there is little or no economic activity, resulting in little or no tax being paid.**
- The Convention enables all signatories, inter alia, to meet treaty-related minimum standards that were agreed as part of the Final BEPS package, including the minimum standard for the prevention of treaty abuse under Action 6.

**PEPPER IT WITH**  
DTAA, OECD, Tax Haven

**What the convention does**

- The Convention will operate to modify tax treaties between two or more Parties to the Convention. It will not function in the same way as an amending protocol to a single existing treaty, which would directly amend the text of the Covered Tax Agreement. Instead, **it will be applied alongside existing tax treaties, modifying their application in order to implement the BEPS measure**
- The Convention will modify India's treaties in order to curb revenue loss through treaty abuse and base erosion and profit shifting strategies by ensuring that profits are taxed where substantive economic activities generating the profits are carried out and where value is created

**Analytica**

- ✓ The Convention will modify India's treaties in order to curb revenue loss through treaty abuse and base erosion and profit shifting strategies by ensuring that profits are taxed where substantive economic activities generating the profits are carried out and where value is created
- ✓ It will lead to amendments to double taxation avoidance agreements (DTAA) with the countries signatories to the convention to plug revenue leakages.

**Shanta Kumar Committee and Food Corporation of India**

**News Excerpt**

The government is planning to revamp and restructure Food Corporation of India and for this “The government is likely to implement few of the Shanta Kumar recommendations for the face lifting of FCI. It will revamp FCI and make it trimmer, transparent and effective,” said a senior food ministry official.

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**Pre-connect**

- The three main task FCI is dealing with is **procurement, storage and distribution** and as the data speaks barring few states, FCI **performance is not meeting the expectation**
- FCI MSP programme is not on track, only 6% of Indian farmers could sell their produce to government agencies **and only the Big farmers are real beneficiaries. The reason being, that procurement is limited to wheat and rice in a handful of states.**
- NSSO report says 55-60% PDS grains are siphoned to Black market
- FCI has to accept whatever grains it is offered therefore in the past years FCI has been storing more than the buffer limit and added to this the problem of inadequate cold storage. India has godowns to store 16 million tonnes of food grains when it needs almost three times that as result the issue of bags of rotten grains being wasted in the country where food security is starving

In the wake of these problems to address this problems government t in the year 2014 has constituted a high powered committee on FCI restructuring headed by **Shanta Kumar**

**Shanta kumar committee key recommendation**

1. **On procurement related issues:** FCI hand over all procurement operations of wheat, paddy and rice to states that have gained sufficient experience in this regard and have created reasonable infrastructure for procurement. FCI will accept only the surplus (after deducting the needs of the states under NFSA) from these state governments (not millers) to be moved to deficit states. FCI should move on to help those states where farmers suffer from distress sales at prices much below MSP, and which are dominated by small holdings, like Eastern Uttar Pradesh, Bihar, West Bengal, Assam etc.
2. **On PDS and NFSA related issue:** HLC recommends that GoI has a second look at NFSA, its commitments and implementation. Given that leakages in PDS range from 40 to 50 percent, and in some states go as high as 60 to 70 percent, GoI should defer implementation of NFSA in states that have not done end to end computerization; have not put the list of beneficiaries online for anyone to verify, and have not set up vigilance committees to check pilferage from PDS.
3. **On stocking and movement related issue:** HLC recommends that FCI should outsource its stocking operations to various agencies such as Central Warehousing Corporation, State Warehousing Corporation, Private Sector under Private Entrepreneur Guarantee (PEG) scheme. It should be done on competitive bidding basis, inviting various stakeholders and creating competition to bring down costs of storage.
4. **On buffer stock operation and liquidation policy :**FCI should be given greater flexibility in doing business , it should offload surplus stock in open market or exports as the situation warrants

Foodgrain wastage	
Year	Quantity (In tons)
2013-14	24695.5
2014-15	18847.2
2015-16	3115.7
2016-17	8775.6
2017-18	2244.74
Maximum wastage	
West Bengal	12,670
Maharashtra	9,370
Odisha	8,219
Bihar	6,184
Andhra Pradesh	4,944
FCI storage depots	
Total covered storage	1,840
Owned by FCI	537
Hired	1,303

**PEPPER IT WITH**  
MSP basics, Chattisgarh model of MSP, NFSA

- 5. **On end to end computerisation:** HLC recommends total end to end computerization of the entire food management system, starting from procurement from farmers, to stocking, movement and finally distribution through TPDS.

## Human Trafficking Report

### News Excerpt

Recently, the Trafficking in Persons (TIP) report for 2019, released by the U.S. State Department has placed India in Tier 2 on the country trafficking scale using the data from International Labour Organisation (ILO).

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### Highlights

**U.S. State Department's Annual "Trafficking in Persons" Report**

"Tier 1" countries as those whose governments comply fully with Trafficking Victims Protection Act of 2000.

"Tier 2" countries do not fully comply with the act but are making "significant progress" toward compliance.

"Tier 3" countries do not comply and are not making efforts to do so.

The report stresses on the implementation of the **Palermo Protocol (India is also its signatory)**. The countries need

building **legal frameworks** to prosecute traffickers and provide care for survivors.

For India, the report recommended for amending the

definition of trafficking in Section 370 of the Indian Penal Code to "include forced labour trafficking and ensure that force, fraud, or coercion are not required to

Based on a report published by the Govt of India, there are approximately 10 million sex workers in India out of which 1,00,000 belong to Mumbai alone which is Asia's largest sex industry center. 300,000 to 500,00 under 18 years of age children are involved in the sex trade. Such is the extent of trafficking within the boundaries of the country, forget about the trafficking rate abroad.

prove a child sex trafficking offence," & establish Anti-Human Trafficking Units in all districts with dedicated funding and clear mandates.

### Palermo Protocol

- It is a United Nations (UN) protocol to prevent, suppress and punish trafficking in human beings, especially women and children, supplementing the UN Convention against Transnational Organized Crime and its Protocols.
- The Protocol was adopted in Palermo, Italy in 2000 and is one of three protocols supplementing the UN Convention against Transnational Organized Crime. The other two are:
- Protocol against the Smuggling of Migrants by Land, Sea and Air (Smuggling Protocol)



**Internal trafficking is more than the external trafficking.** Victims trafficked domestically were more than those from foreign victims, except in few parts of the world like **Western and Central Europe, The Middle East, and certain Asian countries.**

**Large number of sex trafficking victims were from across the border and victims of forced labour were more exploited domestically.**

**25 million adults and children suffering from labour and sex trafficking all over the world.**

**PEPPER IT WITH**  
 IPC 1860; Trafficking of Persons (Prevention, Protection and Rehabilitation) Bill, 2018; Immoral Trafficking Prevention Act, 1986

<p><b>Factors</b></p> <p>Poverty, Unemployment, Gender inequalities, Social norms, commercial demand for Sex, globalization, lack of educational &amp; economic opportunities</p>	<p><b>Anti Trafficking Bill</b></p> <ul style="list-style-type: none"> <li>- Treat Survivors as victims in need of assistance</li> <li>- Integrating existing anti-trafficking laws</li> <li>- Special courts to expedite trafficking cases</li> <li>- Anti-trafficking committees at all 3 tiers</li> </ul>	<p><b>Way Forward</b></p> <p>Changing community outlooks at gender roles, victims must be integrated into the main stream expeditiously by counseling,</p>
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- Protocol against the Illicit Manufacturing and Trafficking in Firearms, Their Parts and Components and Ammunition (Firearms Protocol).

**Analytica**

The causes of human trafficking in India include gender discrimination, a vulnerability of the impoverished population and the desperation of the impoverished to support their families. Trafficking industries in India are taking advantage of the plight of India's disadvantaged and impoverished population for the benefit of others, as trafficking victims are rarely paid as they're promised. In June 2011, India ratified an international legal instrument targeting trafficking, namely, the United Nations Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children, which supplemented the 2000 UN Convention Against Transnational Organised Crime.

In India, as per **Article 23** of the Indian Constitution, traffic in human beings and other forms of forced labour are prohibited. Government of India passed **The Bonded Labour System (Abolition) Act, 1976** based on that. In addition to this, there are a few more legislations in consonance with this major law in India such as **Contract Labour (Regulation and Abolition) Act 1970**, **Minimum Wages Act 1948** and **the Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979** and even the **Indian Penal Code 1860**.

**End of childhood index**

**News Excerpt**

Recently, the End of Childhood Index ranked India 113 out of 176 countries. It was released by **UK based NGO "Save the Children"** which works for the education and protection of child rights.

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**Perspective**

The report measures 8 indicators to evaluate the well being of the children.

The report points, towards a decline in number of children who lost their childhood from an estimated 970 million children to 690 million since 2000.

**PEPPER IT WITH**  
SABLA, Prohibition of child marriage act 2006, Conditional Cash Transfer, NITI Aayog health index 2019

The major causes for the loss of childhood are ill-health, child labour, early pregnancy and violent death.

**India specific findings**

India has strived to bring down the number of married girls in the age group of 15-19 years by 51% in the last 19 years.

Child mortality rates have come down by 55%, but the stunting rate was a high of 38%. Also, 20% of children in the age group of 8-16 years were still out of school.

India has been gradually improving its performance in preventing child marriage and related health indicators.

The report also highlights that even today child marriage prevalence is higher in rural areas.

**Way Forward**

An increase in public investments, and intervention through programmes targeted at marginalised children to ensure universal healthcare and education are needed to help improve the wellbeing of children. A minimum financial security for all children through child-sensitive social protection needs to be on governments’ agenda. Adopting a national action plan to reduce and eliminate child poverty, together with dedicated budgets and monitoring systems that track improvements in poverty-related deprivations, will help achieve better childhood outcomes.



**Global Peace Index Report**

**News Excerpt**

The Global Peace Index (GPI) 2019 report finds that the average level of global peacefulness improved very slightly in the 2019. India’s rank has slipped five places to **141** this year compared to **136 in 2018**.

**Perspective**

It was published by Australia based **Institute for Economics and Peace (IEP)**, in consultation with an international panel of peace experts from peace institutes and think tanks with data collected and collated by the Economist Intelligence Unit. **This year’s report includes new research on the possible effects of climate change** on peace.

**Highlights**

Iceland topped the index (since 2008) while Afghanistan was ranked as the least peaceful country in the world, replacing Syria which is now the second least peaceful. While global peacefulness improved for the first time in five years, as per the index findings, the world remains less peaceful than a decade ago.

**India’s position**

India has the **7th highest overall natural hazard score**. India along with few other countries have the **highest risk of multiple climate hazards, highlighted the report**. India, US, China, Saudi Arabia, and Russia are the top five countries with the largest total military expenditure.

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### Significance of the report

It is the world’s leading measure of global peacefulness. It presents the most comprehensive data driven analysis on **peace, its economic value, trends and the way to develop peaceful societies**. In addition, **this year** also provide an **analysis to Positive Peace: the attitudes, institutions, and structures that create and sustain peaceful societies**.

**PEPPER IT WITH**  
IEP, World Religious Freedom Report, Gandhi peace prize, SIPRI Report on Trend in International Arms Transfer

## SDG GENDER Index

### Perspective

Recently, a new index to measure global gender equality, ranked India at 95th among 129 countries which was topped by Denmark.

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### About the index

It has been developed by the **Equal Measures 2030**. It measures the state of gender equality aligned to 14 of the 17 Sustainable Development Goals (SDGs) in 129 countries in five regions and 51 issues such as poverty, health, education, literacy, political representation and equality at the workplace.

**EQUAL MEASURE 2030**  
It is a joint effort of regional and global organisations including African Women’s Development and Communication Network, Asian-Pacific Resource and Research Centre for Women, Bill and Melinda Gates Foundation, and International Women’s Health Coalition.

### India specific highlights

- The goals on which India has scored highest are on health, hunger & nutrition, and energy while its lowest goal scores are on partnerships (18.3, in the bottom 10 countries worldwide), industry, infrastructure and innovation (38.1), and climate (43.4).
- The percentage of female students enrolled in primary education who are overage is 95.3%
- Few of India’s lowest scores on indicators include the proportion of seats held by women in national parliaments, and in the Supreme Court (4%), it has a score of 18.2.
- On gender-based violence, indicators include proportion of women aged 20-24 years who were married or in a union before age 18 (27.3%).

**PEPPER IT WITH**  
Gender inequality, Gender Gap Index (WEF), Women reservation bill (108<sup>th</sup> constitutional amendment)

### Significance of the report

The report shows where the world stands in respect of equality of women in various countries of the world, whether the women are providing with equal opportunities in Health, Employment, and other sectors. Data and evidence can drive accountability on gender equality issues.

## UN WOMEN

### News Excerpt

Recently, Anita Bhatia, an Indian origin, has been appointed as Deputy Executive Director of **United Nations Entity for Gender Equality and the Empowerment of Women (UN-Women) for Resource Management, Sustainability and Partnerships**, by United Nations Secretary-General (UNSG).

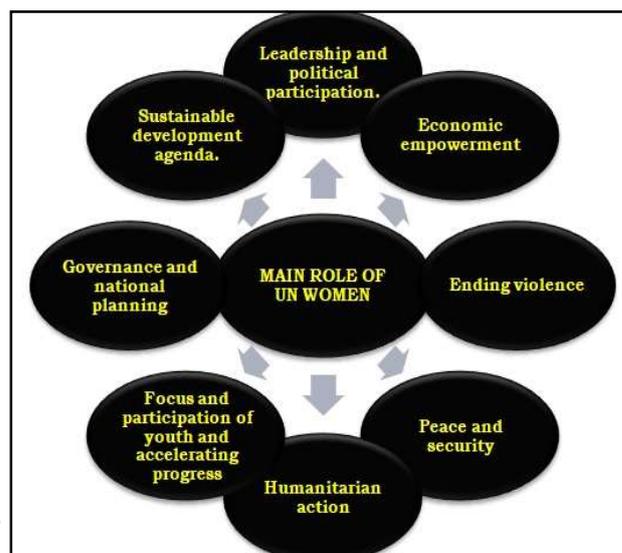
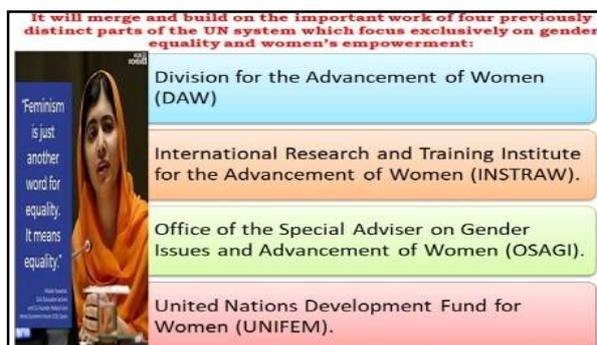
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### About UN WOMEN

**It was established in 2010**, by United Nation General Assembly (UNGA).

All human development and human rights issues have gender dimensions. UN Women focuses on priority areas that are fundamental to women’s equality.

### UN WOMEN INDIA



- In India, UN Women works closely with the Government of India and civil society to set national standards for achieving gender equality.
- UN Women works **to strengthen women’s economic empowerment** through its support to women farmers, and manual scavengers.
- Another priority is to end violence in all its forms – from domestic violence to trafficking to violence in public places.
- UN Women advocates **for greater participation of women in politics and decision-making**, and works with planning bodies such as NITI Aayog to ensure that policies and budgets reflect the needs of women.
- UN Women trains peacekeepers to detect and stop conflict-related sexual violence.

**PEPPER IT WITH**  
33% Reservation for women, Beti Bachao Beti Padhao, One Stop Centre Scheme

## Hidden Hunger

### News Excerpt

India has been ranked 103<sup>rd</sup> among 119 countries on the **Global Hunger Index (GHI)**. According to report, India is among the 45 countries that have “**serious levels of hunger**”.

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### Hidden Hunger: A different type of Hunger

- Hidden hunger, also known as micronutrient deficiencies, refers to the deficiency of micronutrients (e.g vitamins and minerals). Its effects can be devastating, leading to mental impairment, poor health, low productivity, and even death.
- As developing countries are moving from traditional diets based on minimally processed foods to highly processed, energy-dense, micronutrient-poor foods and drinks, it leads to obesity and diet-related chronic diseases. With this nutrition transition, many developing countries face a phenomenon known as the “**triple burden**” of **malnutrition—undernourishment, micronutrient deficiencies, and obesity**.
- It is estimated that over two billion people—more than one-in-three—suffer from micronutrient deficiencies globally and nearly half of the world’s micronutrient deficient population live in India according to **FAO (Food and Agriculture Organisation)**. **FAO** as a part of its mandate strives to eradicate hunger, food insecurity, and all forms of malnutrition as a part of its mandate.

### Causes of Hidden Hunger

- **Poor diet:** Diets based mostly on **staple crops**, such as maize, wheat, rice, and cassava, which provide **a large share of energy** but relatively **low amounts of essential vitamins and minerals**, frequently result in hidden hunger.

➤ **Poverty:** Poverty **limits access to adequate nutritious foods.** When food prices rise, consumers tend to continue to eat staple foods while cutting their intake of non staple foods that tend to be richer in micronutrients.

➤ **Impaired absorption:** Absorption may be impaired by infection or a parasite that can also lead to the loss of or increased need for many micronutrients. Unsafe food handling and feeding practices can further exacerbate nutrient losses.

➤ **Diet:** Diet also affects absorption. Fat-soluble vitamins such as vitamin A are best absorbed when consumed with dietary fat, while consumption of some compounds such as tannins or phytates can inhibit iron absorption.

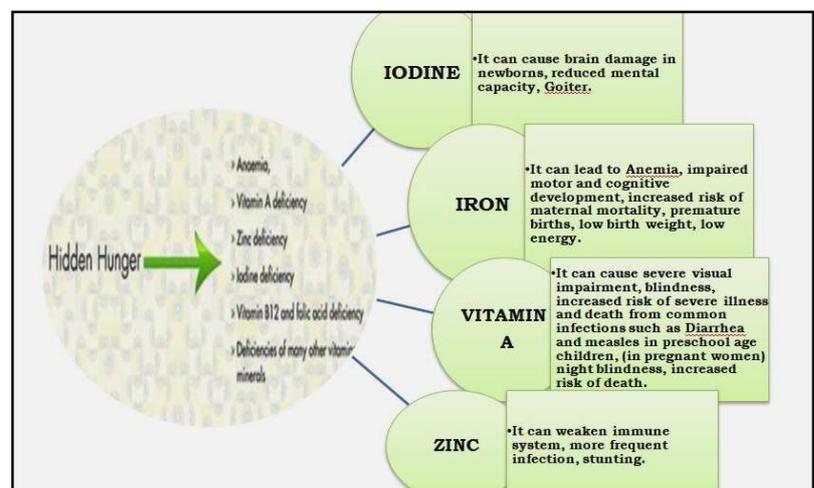
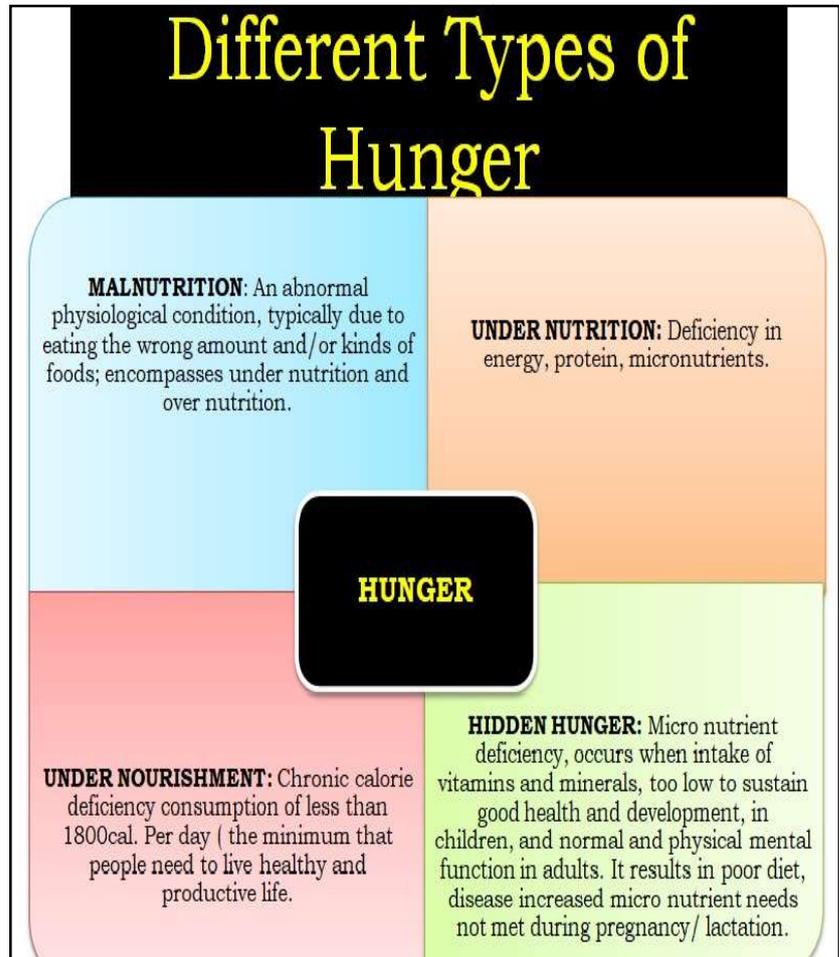
➤ **Alcohol** consumption can interfere with the absorption of micronutrients.

**How the challenge of Hidden Hunger can be addressed?**

✓ **Diversification of diet:** Dietary diversification ensures a healthy diet that - contains a balanced and adequate combination of macronutrients (carbohydrates, fats, and protein); essential micronutrients; and other food-based substances such as dietary fiber.

✓ **Fortification of commercial food:** Commercial food fortification adds micronutrients to staple foods during processing and helps consumers get the recommended levels of micronutrients. In India, Global NGOs, pharma companies and international donor agencies are all scrambling to provide aid, technology and partnerships to fight malnutrition, or hidden hunger.

✓ **Bio-fortification:** It is a technology where a nutrient is



either increased or added to a crop through conventional plant breeding or by tweaking the genes through GM technology. It can provide a steady and safe source of certain micronutrients.

- ✓ **Supplementation:** Programs to supplement vitamin A are often integrated into national health policies because they are associated with a reduced risk of all-causes of mortality and a reduced incidence of diarrhea.
- ✓ **Behavioural changes:** A focus on empowering women by increasing access to education would improve women's, infants', and young children's utilization of health services, clean water, good sanitation, and hygiene to protect them from diseases that interfere with nutrient absorption.

**How can India Fight?**

- India's ability to harness long-term demographic dividends rests on it prioritizing nutrition in its health agenda and meeting its Sustainable Development Goals (SDG-2) on hunger and reforming the institutional framework through which interventions are delivered.
- Though the food security act, Nutrition Revolution 2.0, the ICDS, the National Rural Health Mission, the midday meal scheme, the public distribution system have been able to address the issue **but time bound nutrition targets need to be followed.**
- The **growth in agricultural output, allied sectors such as dairy, poultry, fishing and livestock** also needs a boost, which would help increase rural prosperity in line with the government's aim to double farmers' income.
- The government should facilitate **public-private partnerships.** Private sector engagement can provide technological solutions for scaling up food fortification initiatives.
- Behavioural changes with the help of schemes **like Swachh Bharat Abhiyan, social messaging, and information-education-communication activities** should be used to leverage policy complementarities with household sanitation.

**Key Facts about Hunger in India**

- ❖ India is home to the largest undernourished population in the world.
- ❖ 14.9% of our population is undernourished
- ❖ 195.9million people go hungry everyday
- ❖ 21.0% of children under 5 are underweight
- ❖ 38.4% of children under 5 years of age are stunted
- ❖ 1 in 4 children malnourished

**PEPPER IT WITH**

World Hunger Day, Global Hunger Index, India Food Banking Network, Zero Hunger Index, Nutrition revolution 2.0., Golden Rice

**Way forward**

Though eliminating hidden hunger will not be easy keeping in mind the challenges ahead. But these challenges can be overcome through proper utilisation of resources, right policies and right investment models.

**Defending in Numbers Report**

**Perspective**

Defending in Numbers is a biennial report published by **FORUM-ASIA, that reviews the situation of Human Rights Defenders (HRD) across Asia.**

**Key Findings**

- **Asia** continues to be a **dangerous place for defenders of human and environment rights**, even after 20 years of United Nations Declaration on Human right defenders.
- **Fifty per cent** of the total 688 cases in the year have **been against those fighting for the cause of democracy and access to land and environmental rights. Pro-democracy defenders are the most targeted group** with over 210 cases.

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- The activists **include indigenous and tribal peoples, farming and peasant groups and other local communities**, whose land, life, and livelihoods are threatened by the exploitation of the environment.
- **Both State** (police, the judiciary and armed forces) **as well as Non-State Actors are behind the abuse**. Most common forms of violation **include judicial harassment, arbitrary arrest and violence**.

**Recommendations**

- According to the **Sustainable Development Goals (SDG16)**, states must protect fundamental freedoms in accordance with national legislation and international agreements.
- The **human costs associated** with these attacks cannot be easily quantified but if states do not take requisite actions to halt this onslaught, **key targets of Agenda 2030 will be missed**.
- The report recognizes the need for action to be taken by various stakeholders in order to create a **safer and more enabling environment** for these defenders.
- It also **calls upon the corporations** to comply with the guiding principles for business and human rights while implementing the United Nations **‘Protect, Respect and Remedy’ framework** and other international human rights standards.
- It has also asked the government to ensure that all laws comply with international human rights standards and the **judicial processes remain just and transparent**.

**World’s Stateless people**

**Perspective**

The international legal definition of a **stateless person** is “a person who is not considered as a national by any State under the operation of its law”. In simple terms, this means that a **stateless person does not have a nationality of any country**. Some people **are born stateless, but others become stateless**. An estimated 10 to 15 million people are **not recognized as nationals by any country**, often **depriving them of basic rights** most of the world takes for granted such as education, healthcare, housing and jobs.

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**Stateless people of world**

- **Myanmar** - Being Muslim and of South Asian descent, Rohingyas are native populace of Buddhist-majority Myanmar who were rendered stateless as a result of 1982 Citizenship law. In recent years they have been in news due to Ethnic Violence and mass migration.
- **Ivory Coast**: Ivory Coast is home to 692,000 stateless people. Many are **descended from migrants, particularly from Burkina Faso, Mali and Ghana**, who were encouraged to work on Ivory Coast Coffee and Coffee plantations in 20<sup>th</sup> century.
- **Thailand**: Nearly 479,000 people are stateless, including members of ethnic hill tribes such as **the Yao, Hmong and Karen** who live in the mountainous border with Myanmar and Laos and the semi-nomadic **‘Sea Gypsies’** along the Andaman coast.
- **Estonia/Latvia**: When the Soviet Union broke up, many **ethnic Russians** were stranded in the new Baltic states and defined as “non-citizens”. Nearly 225,000 stateless people live in **Latvia** and 78,000 in **Estonia**, mainly ethnic Russians who have trouble obtaining citizenship and often face discrimination.
- **Syria**: In 1962, many **Kurds in the northeast were stripped of citizenship**, a move that Human Rights Watch described as part of a plan to “Arabise” the resource-rich region. Before the civil war, there were an estimated 300,000 stateless Kurds in Syria, many of whom were promised nationality by President Bashar al-Assad in reaction to the 2011 uprising.
- **Kuwait**: Many people among the **nomadic Bedouin tribes** failed to acquire citizenship at independence in 1961. Their descendants are known as Bidoon, which means “without” nationality in Arabic.

- **Nepal:** Although Nepal says it does not have a stateless population, experts on statelessness believe many people, possibly hundreds of thousands, may be affected. Part of the problem derives from a **law banning women married to foreigners passing their nationality to their children**. There is also a stateless population of people who were **expelled by Bhutan** in the 1990s.
- **Dominican Republic:** A 2013 court ruling, along with earlier changes to nationality laws aimed at tackling illegal migration, has left many stateless, mostly people of **Haitian descent** who were born in Dominican Republic.
- **Iraq:** There are about 47,500 stateless people **who include Bidoon, Palestinian refugees and Faili Kurds**, an ethnic group that historically live both sides of the Iraq-Iran border.
- **Europe:** Tens of thousands of **stateless Roma** – an ethnic group **with origins in India** – are thought to live in central and Eastern Europe. With the break-up of Czechoslovakia and Yugoslavia, successor states claimed they belonged elsewhere. Roma families often **do not register their children's births** or hold official property titles, preferring to pass houses to relatives informally. This can make it hard to prove where they are from.
- **Colombia:** Up to 25,000 children **born to Venezuelan parents** who have fled to Colombia amid a political and economic crisis in their homeland may be stateless or are at risk. Children must have at least one Colombian parent to qualify for citizenship.

**Conclusion**

- Statelessness is a **man-made problem** and relatively easy to resolve and prevent.
- UNHCR has published a handbook called **“Good Practices in Nationality Laws for the Prevention and Reduction of Statelessness”** which offers examples of legislation that States can use to avoid childhood statelessness, eliminate gender discrimination from nationality laws and establish procedures to identify stateless persons and facilitate their naturalization.
- States like **Kenya, Kyrgyzstan and Thailand** are paving the way and have shown that with political will and commitment, and concerted national efforts, the lives of tens of thousands of people can be transformed through the acquisition of nationality.

**SMART Police Survey**

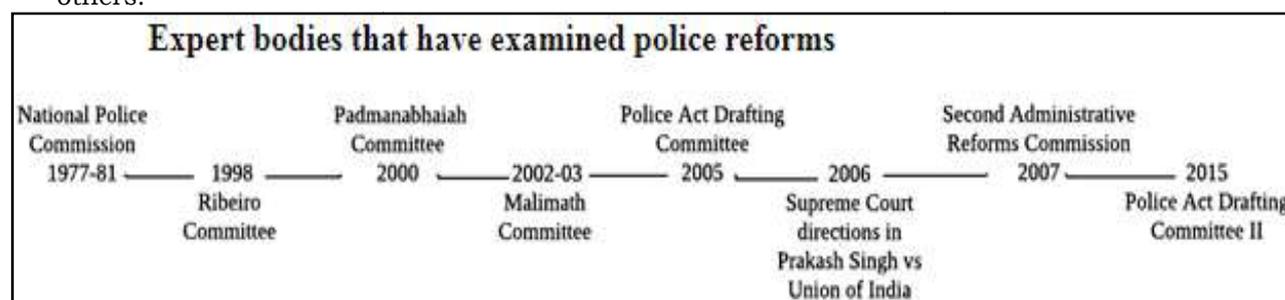
**News Excerpt**

Home Ministry through its internal survey has declared Kalu Police station of Bikaner (Women Friendly), Campbell Bay Police station (Child Friendly) in Nicobar district and Farakka Police station (Police-People friendly environment) in West Bengal as the top 3 Police stations in India.

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**About the Survey**

- It was conducted by Quality Council of India (QCI).
- **Parameters: Approachability and discipline of the police personnel, storage of manual records and station head officer’s (SHO’s) declaration of the budgetary process** are **vital aspects** included under the survey. Some other parameters are **performance in controlling crime, infrastructure, mess** and **optimal use of technology** and **citizen feedback** among others.



### SMART Police Station

- **SMART**: **Strict** and **Sensitive**, **modern** and **mobile**, **reliable** and **responsive**, **tech-savvy** and **trained**.
- **SMART police station** will have basic amenities for visitors, waiting area, toilets, and rest rooms for constables, including separate room for women constables. CCTV cameras, safe and secure armory, record room, communication room for wireless, automated kiosks for filing of complaints by public (with a back-end system for tracking follow up action) are among other features.

**PEPPER IT WITH**

Modernization of Police Force Scheme, Indian Cyber Crime Coordination Centre (I4C) Scheme

### Quality Council of India (QCI)

It was set up in 1997 jointly by the Government of India and the Indian Industry represented by the three premier industry associations i.e. Associated Chambers of Commerce and Industry of India (ASSOCHAM), Confederation of Indian Industry (CII) and Federation of Indian Chambers of Commerce and Industry (FICCI), to establish and operate national accreditation structure and promote quality through National Quality Campaign.

**The Department of Industrial Policy & Promotion, Ministry of Commerce & Industry**, is the nodal ministry for QCI. It is a non-profit autonomous society registered under Societies Registration Act XXI of 1860 to establish an accreditation structure in the country.

### **The DNA Technology (Use and Application) Regulation Bill, 2018**

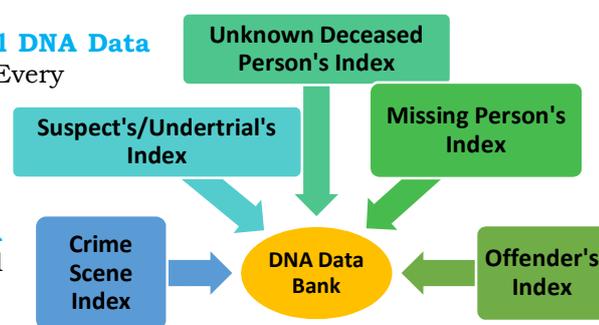
#### News Excerpt

The **Union Cabinet** cleared a **DNA profiling bill**, which seeks to control the use of **DNA technology** for establishing the identity of a person. The bill was passed in the **Lok Sabha** in **January** but **lapsed** as it could **not be cleared in the Rajya Sabha**.

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#### Highlights of the Bill

- It regulates the use of DNA technology for establishing the identity of persons in respect of criminal and civil matters as per IPC.
- It establishes **National DNA Data Bank** and **Regional DNA Data Banks**. It also establishes a **DNA Regulatory Board**. Every **DNA laboratory** that analyses a DNA sample to establish the identity of an individual has to be **accredited** by the **Board**.
- The **Secretary of Department of Biotechnology** will be the **ex-officio Chairperson of the DNA Regulatory Board** which will comprise an additional **12 members**.
- **Consent of individual** for collecting DNA samples is **not required** for offences with punishment of **more than seven years of imprisonment or death**.
- There is also penalty for various offences like unauthorized disclosure of information from the Data Bank, unauthorized use of DNA sample, intentional tampering or destruction of biological evidence etc.



**DNA Technology**

DNA Technology is the study and manipulation of genetic material, and scientists are using DNA technology for a wide variety of purposes and products. Some of its applications are Cloning, Recombinant DNA Technology, DNA Fingerprinting, Gene Therapy, DNA Microarray Technology, and DNA Profiling.

#### Pros of the Bill

- It will help in speedy trials and justice delivery.
- The Bill will allow the so-called **“digital era”** or **technology-enabled era** to flourish further.

- Using technology to **pinpoint** the identity of people in matters of crime, parentage disputes, emigration or immigration and organ transplant will add considerable speed to investigations.

**Cons of the Bill**

- ✓ The Bill lists National and Regional DNA data banks that will be established, and the collected data maintained in indices. It is yet to define if this will be a powerful, insufficiently transparent, or accountable body overseeing the process.
- ✓ Using DNA effectively during criminal investigations requires proper crime scene examination, trained and reliable policing, a trusted chain of custody of samples, reliable analysis, and proper use of expert evidence in court. **Without these prerequisites, a DNA database will exacerbate rather than solve problems in the criminal justice system.**
- ✓ The Bill’s proposed **DNA Regulatory Board** is still too powerful and insufficiently transparent or accountable.

**PEPPER IT WITH**  
DNA, Gene Editing, Designer Baby, CRISPR CAS9

**Conclusion**

There is a need to **set up an independent ethics board to monitor** key processes of the data banks and ensure that they are not been misused by investigative agencies while the DNA samples are being collected.

Restricting DNA profiling to just non-coding DNA in a commonly-used international standard for the procedure, preventing the use of DNA profiling technology to reveal personal information that can be misused.

**Reimagining the NITI Aayog**

**Perspective**

India’s Constitution-makers thought of India as a union of States with a centripetal bias, done, advisedly, **to preserve the unity and integrity of a newly fledged nation**. Since then, the **Indian economy, polity, demography and society** have undergone many changes. There is a need to refresh India’s fiscal federalism by restructuring it around its four pillars.

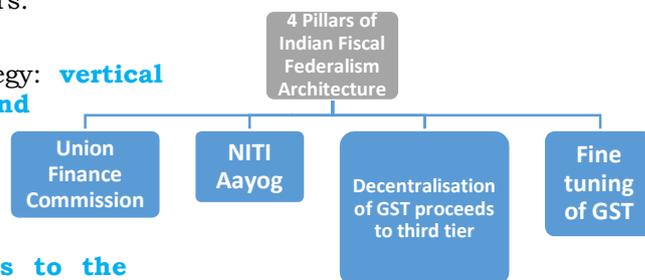
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**Challenges of Fiscal Federalism**

Three **challenges** in India’s development strategy: **vertical imbalance, horizontal imbalance and development imbalance.**

**Vertical Imbalances**

It arises because the tax systems are designed in a manner that yields much **greater tax**



**revenues to the Central government when compared to the State or provincial governments; the Constitution mandates relatively greater responsibilities to the State governments.** For example, in India, post the advent of GST, the share of States in the public expenditure is **60%** while it is **40%** for the Centre to perform their constitutionally mandated duties.

**Horizontal Imbalances**

The horizontal imbalances arise because of **differing levels of attainment by the States due to differential growth rates and their**

**PEPPER IT WITH**  
Gadgil – Mukherjee Formulae, Tinbergen Assignment Principle

**developmental status** in terms of the state of social or infrastructure capital. It involves **two** types of imbalances.

**Type I:** It is to do with the adequate provision of **basic public goods and services**.

**Type II:** It is due to **growth accelerating infrastructure or the transformational capital deficits**. It is known to be historically conditioned or path dependent.

### **Restructuring the Fiscal Federalism Architecture**

#### **Pillar 1: Union Finance Commission**

**Union Finance Commission** should be confined to focus on the removal of the horizontal imbalance across States of the **Type I: i.e. the basic public goods imbalance**.

We need another institution to tackle the horizontal imbalance of the **Type II**. It is too much to expect the Union Finance Commission to do the **dual job**.

#### **Pillar 2: NITI Aayog**

Towards the task of **Cooperative Federalism**, **NITI Aayog 2.0** should receive significant resources (**say 1% to 2% of the GDP**) to promote accelerated growth in States that are lagging, and overcome their historically conditioned infrastructure deficit, thus reducing the developmental imbalance.

To tackle the **horizontal imbalance of the Type II**; for this the **NITI Aayog** is the most appropriate institution.

In short, the **NITI Aayog** should be engaged with the allocation of **“transformational” capital** in a formulaic manner, complete with incentive-compatible conditionalities. The **variables or parameters used in this formulaic transfer will be very different from those traditionally used by the Finance Commission**. It should also be mandated to create an **independent evaluation office**. In doing so, it should not commit the **mistake of micro-management** or conflicts with line departments.

#### **Pillar 3: Decentralisation of GST Proceeds**

**Intra-State regional imbalances** are likely to be of even **greater importance than inter-State ones**. **De jure** and **de facto** seriousness has to be accorded to the **73<sup>rd</sup>** and **74<sup>th</sup> constitutional amendments**.

One of the ways for **creating Local Public Finance** is through the **creation of an Urban Local Body/Panchayati Raj Institutions Consolidated Fund**. This would mean that **Articles 266/268/243H/243X** of our **Constitution** will need to be **amended** to ensure that relevant money directly flow into this consolidated fund of the **third tier**. Through such constitutional amendments, the Centre and States should **contribute an equal proportion of their Central GST (CGST) and State GST (SGST) collections and send the money to the Consolidated Fund of the third tier**.

Further, the **State Finance Commissions** should be accorded the same status as the **Finance Commission** and the **3Fs of Democratic Decentralisation (Funds, Functions and Functionaries)** vigorously implemented.

#### **Pillar 4: Fine-Tuning GST**

In its present form, it is far from flawless. It needs further simplification and extended coverage. To quickly achieve the **goal of a single rate GST with suitable surcharges on “Sin Goods”, zero rating of exports and reforming the Integrated Goods and Services Tax (IGST) and the e-Way Bill**.

The **GST Council** should adopt transparency in its working and create its own **secretariat** with independent experts also as its staff.

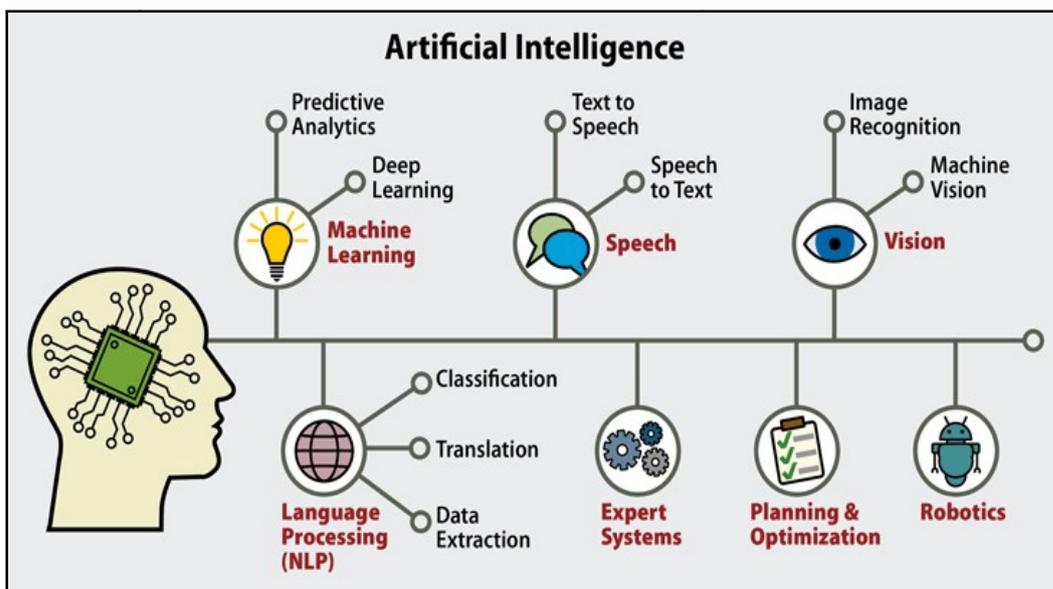
**GST can be enduring glue** holding the **four pillars** together by creating the new **Fiscal Federal Architecture** and strengthening India's unique cooperative federalism.

**Artificial Intelligence (AI): The law and its future**

**What is Artificial Intelligence?**

- It is the **science** and **engineering** of making **intelligent machines**, especially intelligent computer programs.
- It is a **simulation** of **human intelligence** processes such as **learning**, **reasoning** and **self-correction** by **machines**, especially computer systems.
- It uses the field of **computer science** to create a **machine** that could analyse **data**, **think**, **speak**, **recognize**, **make independent decisions**, **solve complex problems**, **learn**, **even feel** and **react without any human help**.

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**AI and India**

- **Accenture**, in its recent **AI research reports**, estimates **AI** to boost **India's annual growth rate by 1.3 percentage points by 2035**. And has the potential of adding **approximately 1 trillion USD to Indian Economy by 2035**.
- **NITI Aayog** released a policy paper, '**National Strategy for Artificial Intelligence**', in **June 2018**. The **Budget 2019** also proposed to launch a **national programme on AI**.
- **AI** is emerging as a **new factor of production**. **AI** has the potential to drive **growth** through enabling: **(a) Intelligent Automation (b) Labour and Capital Augmentation (c) Innovation Diffusion**. This could really help India focus on structural consolidation of its manufacturing sector.
- Traffic accidents lead to about **400 deaths a day in India, 90% of which are caused by preventable human errors**. **AI** can help in bringing this number down.
- **Recent AI usage in India: Kerala**

**What is Disruptive Technology?**  
**Disruptive technology** significantly **alters the way** businesses or entire industries operate. It often forces companies to change the way they approach their business for fear of losing market share or becoming irrelevant.

- Common Challenges related to AI Sector**
- ❖ Lack of enabling data ecosystems
  - ❖ Low intensity of AI research
    - Core research in fundamental technologies
    - Transforming core research into market applications
  - ❖ Inadequate availability of AI expertise, manpower and skilling opportunities.
  - ❖ High resource cost and low awareness for adopting AI in business processes.
  - ❖ Unclear privacy, security and ethical regulations.
  - ❖ Unattractive Intellectual Property regime to incentivise research and adoption of AI.

police inducted a robot for police work, Chennai got its second robot-themed restaurant. In Ahmedabad, a cardiologist performed the world's first in-human telerobotic coronary intervention on a patient nearly 32 km away.

**Legal Challenges**

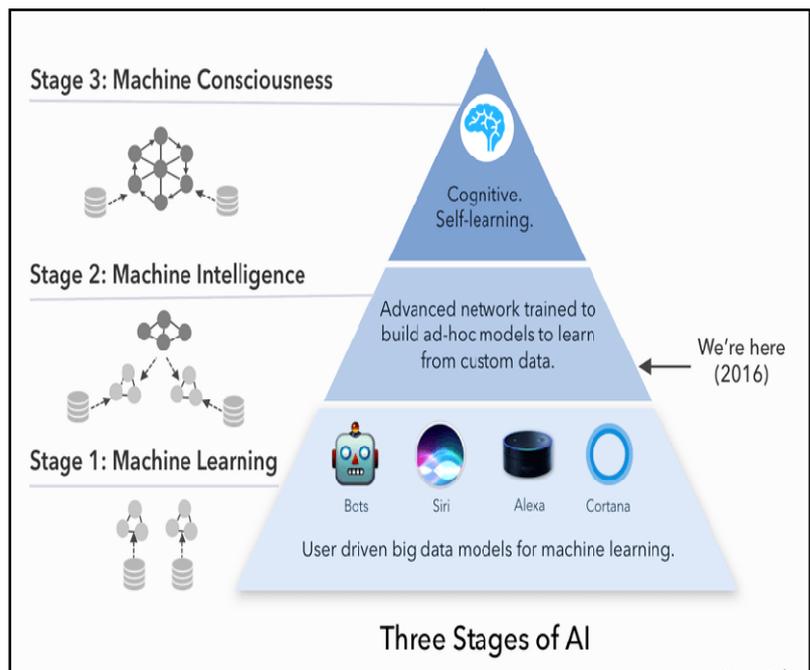
Several legal challenges will have to be properly addressed before the AI will be fully mature.

- ✓ **Liability:** The current legal framework does not have rules, under which robots shall be held liable for their acts or omissions that can cause damage to third parties.
- ✓ **AI Personhood:** Personhood is a quality of being an individual person, having rights and obligations. It is a quality that every natural or legal person has.
- ✓ **Protection of Data Privacy & Private Life:** For machine learning, the free flow of data is essential in order to utilize robots to their full potential. On the other hand, the Union legal framework for data protection must be fully complied.
- ✓ **Intellectual Property Rights:** The current legal definitions of creativity and innovation do not take into consideration non-human innovation.
- ✓ **Competition Law:** AI needs data to learn. In the terms of competition law, the problem could arise from the fact that AI will use all kind of data to learn and react, especially through the accessibility of real-time online data on competitors' algorithms. Many of those reactions can be treated as concentrated practices, anti-competitive agreements, or similar reactions.

Different countries have identified different focus areas for AI development and deployment. Germany has come up with ethical rules for autonomous vehicles. It stipulates that human life should always have priority over property or animal life. China, Japan and Korea are following Germany in developing a law on self-driven cars.

**Way Forward**

- AI should have a legal personality.
- The way forward for India in AI has to factor in our current strengths and weaknesses in AI which requires large scale transformational interventions, primarily led by the government, with private sector providing able support.
- Efforts need to be concentrated across major themes of research, data democratization, accelerating adoption and reskilling – with privacy, security, ethics and intellectual property rights permeating as common denominators for all our recommended initiatives. Also Develop platforms for Big Data Analytics and Assimilation like– AIRAWAT.
- Tax Exemptions to start-ups promoting AI and strong IP laws like EU GDPR.



## Lapsing of Bills in the Indian Parliament

### News Excerpt

Vice President of India recently called for a debate on a **Constitutional provision** that provides for automatic lapsing of any Bill passed by Lok Sabha but remains pending in Rajya Sabha on the dissolution of the Lower House of Parliament.

### When does a bill lapse in the Parliament?

**Art. 107 and Art. 108** of the Indian constitution deal with the issue of Lapsing of bills in the Indian Parliament.

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#### Cases when a bill lapses on dissolution of the Lok Sabha

- ❖ A bill **originated** in the **Lok Sabha** but **pending** in the **Lok Sabha** - lapses.
- ❖ A bill **originated** and **passed** by the **Lok Sabha** but **pending** in the **Rajya Sabha** - lapses.
- ❖ A bill **originated** and **passed** by the **Rajya Sabha** but **pending** in **Lok Sabha** - lapses.
- ❖ A bill **originated** in the **Rajya Sabha** and **returned** to the **Rajya Sabha** by the **Lok Sabha** with **amendments** and still **pending** in the **Rajya Sabha** - lapses.

#### Cases when a bill does not lapse on dissolution of the Lok Sabha

- ❖ A bill **pending** in the **Rajya Sabha** but **not passed** by the **Lok Sabha** - **does not lapse**.
- ❖ A bill **passed** by **both Houses** but **assent** of the **President** is **pending** - **does not lapse**.
- ❖ A bill **passed** by **both the Houses** but **returned** by the **President** for **reconsideration** for **Houses** - **does not lapse**.
- ❖ A bill **not passed** by the **two Houses** due to **disagreement** and if the **President** has **notified** the holding of a **joint sitting** before the **dissolution** of **Lok Sabha** - **does not lapse**.

### Concerns with lapsing of the bills

- Any bill introduced in the Rajya Sabha remained a property of the House irrespective of the fate of Lok Sabha. And this provision is misused by the opposition by disrupting the Upper House and blocking the government in passing the bill.
- Automatic lapsing of bill leads to wastage of important man-hours of the Parliament along with revenue losses. Such lapses **hamper productivity** of the **Parliament**.
- **22 bills**, pending in the **Rajya Sabha**, had lapsed with the dissolution of the **16<sup>th</sup> Lok Sabha**. **Lok Sabha** has to take up these 22 bills again for consideration and passing.
- **33 bills** have been pending for consideration in the **Upper House** for years including the oldest pending bill, the **Indian Medical Council (Amendment) Bill, 1987**, has been pending for more than **32 years**.

## Cabinet Committees Reconstituted

### News Excerpt

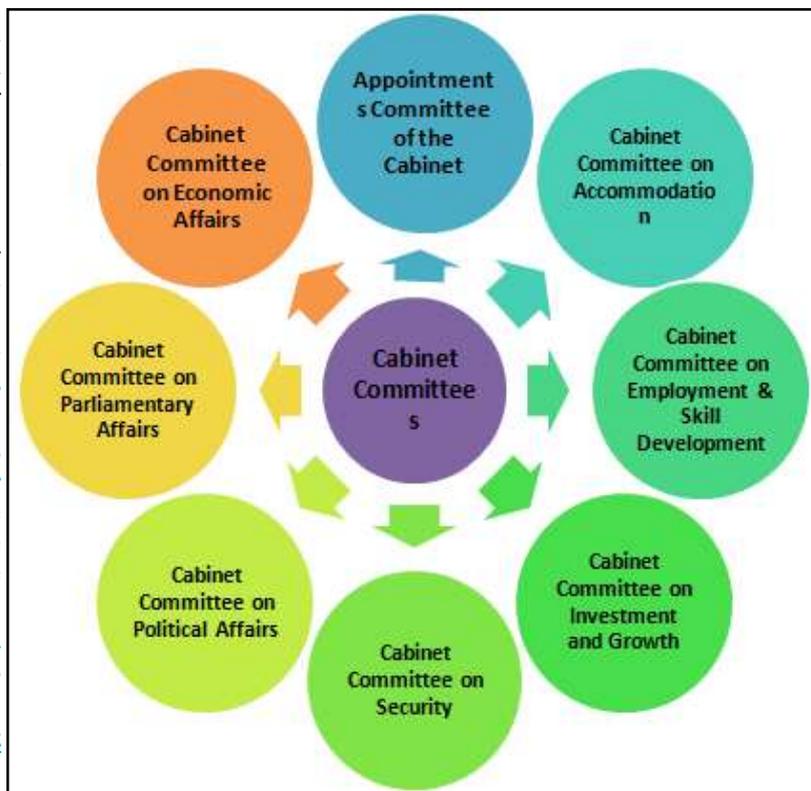
Union government has reconstituted six Cabinet Committees while two new Committees have been formed. The new committees will finalise policies to push growth, investment and employment with special focus on skill development.

### Features of Cabinet Committee

- There are two types of Cabinet Committees: Standing (Permanent nature) Committees and Ad-Hoc (Issue specific; hence are temporary) Committees.
- **Extra Constitutional in Nature**. **Rules of Business** provides for their establishment.
- **Set up by the PM according to the exigencies of the time and requirement of situations**.
- Their **number**, **nomenclature** and **composition** vary from time to time.

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- They usually include **Cabinet Ministers**. However, **non-Cabinet members** are **not debarred** from their membership.
- They not only include Ministers in charge of the subjects covered by them but also include other senior Ministers.
- They are **mostly headed** by the **Prime Minister** but sometimes other **cabinet ministers**, particularly **Home Minister** or **Finance Minister** may be the head.
- In case **PM** is a member of the committee, **he invariably heads it**.
- **They not only sort out issues and formulate proposals for the Cabinet but also take decisions**. However, **the Cabinet can review the decision**.
- **They also facilitate in-depth examination of policy issues and effective coordination**.



**Newly formed Cabinet Committees**

**Cabinet Committee on Investment and Growth**

- It will **“identify key projects required to be implemented on a time-bound basis”**, involving investments of **Rs 1,000 crore or more**, or any other critical projects, as may be specified by it, with regard to **infrastructure** and **manufacturing**.
- It will prescribe time limits for giving requisite approvals and clearances by the ministries concerned in identified sectors. It will also monitor the progress.

**Cabinet Committee on Employment and Skill Development**

- ✓ It is required to **enhance workforce participation, foster employment growth and identification**, and work towards removal of gaps between requirement and availability of skills in various sectors.
- ✓ The panel will **set targets** for expeditious implementation of all **skill development** initiatives by the ministries and to **periodically review the progress** in this regard.

**Women Representation in Parliament**

**Perspective**

- Historically, women often enjoyed **prominent roles in politics in India**. **Megasthenese** mentioned the **Pandya women** running the administration.
- A little after the **Gupta period**, queens used to rule in **Kashmir, Orissa and Andhra**. Women were provincial and village administrators in the **Kannada region**.
- Indian women, **as early as 1917** raised the issue of **Universal Adult Franchise**. The British government granted the right to vote on the basis of **wifehood, property and education**.

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- The Independence Movement brought the **two streams** of politically involved womenfolk together, **the elite** and **the masses**. Both participated together in the struggle for independence.
- In **1926, Dr Muthulakshmi Reddy became the first woman to be nominated to the Madras Legislative Council in the 1932 elections to the Provincial Assemblies.**
- The agenda for **women's empowerment** seems to have **lost** the kind of moral and political legitimacy, it used to enjoy during the **freedom movement**.
- Political participation means not only exercising the **right to vote, but also power sharing, co-decision making, co-policy making at all levels of governance of the state.**

“I measure the progress of a community by the degree of progress which women have achieved.” - Dr. BR Ambedkar.

**Need for Political participation of Women**

- According to **UNICEF**, Political participation of **women has the potential to change societies.**
- It can have positive impact on outcomes for **women and children** especially in the distribution of **community resources.**
- Their participation in **peace negotiations** and **post-conflict reconstruction** is important.
- **Even today we have only around 14% women in parliament.** The reason for this is not the lack of able women, rather they have been actively kept out of the political arena by vested interests.
- **Women legislators** are significantly **less likely than men to be carrying criminal charges.**
- **Women legislators** are **less likely** than **men** to exploit their **office for personal financial gain.**
- **Constituencies of Women Legislators are better on economic front.**
- The **Women's Reservation Bill, 2008** has been framed to address the need of the women to participate in **politics.** It seeks to reserve **one-third of all seats for women** in the **Lok Sabha** and the **state legislative assemblies.**

**THE WORLD TODAY**

- 23.8%** Roughly 23.8% of parliamentarians globally were women in 2018
- 30%** In 2017, only 31 countries in the world had 30% or more women ministers
- 9%** Between 1992-2011, women accounted for less than 9% of participants in peace negotiations

**THE INVESTMENT CASE**

Women in positions of authority tend to:

- Resolve national crises without resorting to violence
- Advocate for social issues that benefit all
- Allocate budgets to health and education

Companies with strong female leadership on their boards have shown a return on equity that is 10.1% annually vs. 7.4% from companies without

**SOLUTIONS**

- Temporary quota systems to help bring women into political spheres
- Civic leadership and political engagement training for girls and women
- Participation of girls and women during humanitarian crisis response, conflict prevention, and peacebuilding processes
- Political environments that are free from discrimination and violence

**Challenges in passing Women’s Reservation Bill,2008**

- ✓ Opponents argue that it would perpetuate the unequal status of women since they would **not be perceived to be competing on merit**. Nor useful because women in politics are **simply representatives of the men** who would have been in politics and **work as proxies**.
- ✓ Opponents also contend that this policy **diverts attention from the larger issues of electoral reforms** such as Criminalisation of Politics and Inner Party Democracy.
- ✓ Political parties lack will to enforce the bill. The **patriarchal mindset** haunts the bill.
- ✓ Reservation of seats in Parliament restricts choice of voters to women candidates.
- ✓ Socio-Economic disadvantage leading to reduction in opportunities for women participation.

**PEPPER IT WITH**

Beijing Declaration, Pradhan Mantri Mahila Shakti Kendra, Gender Parity Index, Gender Budgeting

**Conclusion**

- Increasing women participation is a necessary step in achieving **global Gender Equality and Democratic Governance**.
- Women’s participation in decision-making is highly beneficial and their role in designing and applying public policies has a positive impact on people’s lives. Some experts have suggested alternate methods such as reservation in political parties and dual member constituencies. These alternate methods could be taken as initial steps.
- Hence, efforts should be made to encourage women for active political participation as it will not just lead to women empowerment but will benefit society as a whole.

**State of Indian Prison Report**

**News Excerpt**

**The Prison Statistics India 2016** report was published by the **National Crime Records Bureau (NCRB)** during the elections this year (April 2019). It has come under criticism due to various issues.

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**National Crime Record Bureau (NCRB)**

Accepting the recommendations of the **National Police Commission – 1977**, the **Ministry of Home Affairs** constituted a **Task Force in 1985** to work out the modalities for setting up of the **National Crime Records Bureau (NCRB)**. The Government accepted the recommendations of the **Task Force** and constituted the **NCRB** with **headquarters** at **New Delhi in 1986**.

- Section 436 A of CrPC already states that if an undertrial has been jailed for a period extending up to half the maximum term for that offence, he **shall be released on personal bond**
- This clause does not apply to those who could face **death or life term**
- Home ministry will write to all states to **review all such undertrials** and release them with immediate effect
- Centre to share software



developed by NIC with states to **feed info on all undertrials** in a central databank

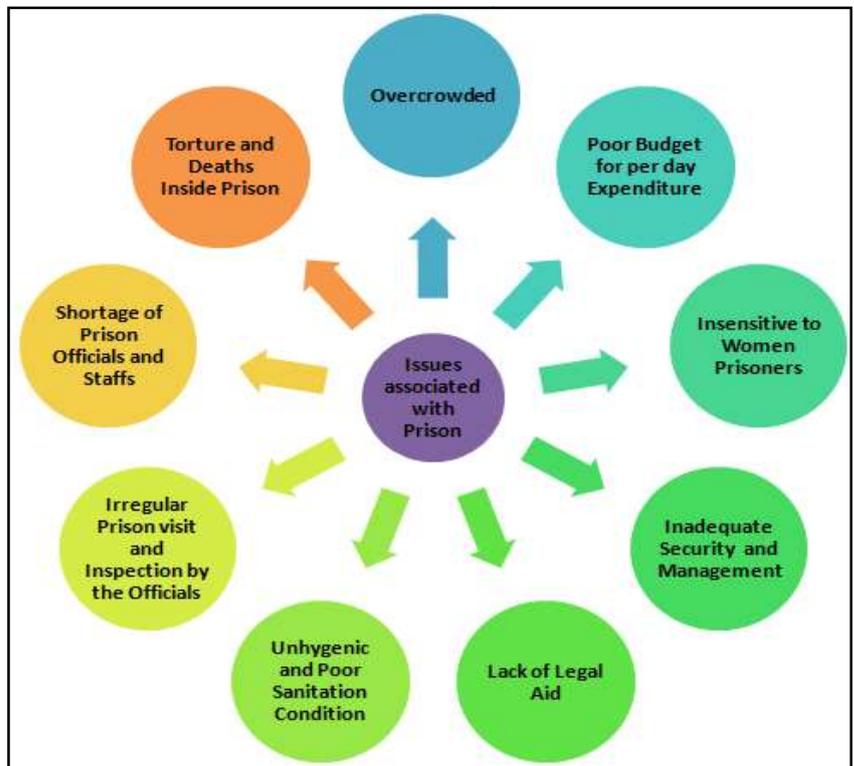
➤ **Two-third of all prisoners (2.54 lakh) are undertrials; only 1/3rd (1.27L) convicts**

### Highlights of the Prison Statistics India 2016 report

- There were close to **4,33,000** people in **prison**. Of these, **68%** were **undertrials**.
- India's **under-trial population** remains among the **highest in the world**.
- Rise in the number of people held under **administrative (or 'preventive') detention laws in Jammu and Kashmir** is a matter of concern. There has been a **300% increase**, with **431** detainees in **2016**, compared to **90 in 2015**.



- A **new** and **important** addition to the report is the **data on number of prisoners eligible to be released and actual releases**.
- In **2016**, out of the nearly **1,500 undertrials** found eligible for release under **Section 436A**, only **929** were released.
- **Unnatural deaths doubled** between **2015** and **2016**, from **115 to 231**.
- **6013** individuals with **mental illness** were in jail in **2016**.
- The report states that there was only **one mental health professional for every 21,650 prisoners in 2016**, with **only six States and one Union Territory having psychologists or psychiatrists**.
- The **rate of suicide** among prisoners also **increased by 28%**, from **77 suicides in 2015 to 102 in 2016**.



### Criticism of the Report

- It **failed** to include **demographic** details of **religion**, and the **Scheduled Caste** and **Scheduled Tribe** status of prisoners.
- It **does not mention the number of prison visits** by official and non-official visitors which typically include **district magistrates** and **judges, social workers** and **researchers**.
- The report does not provide information on whether the reported **mentally affected prisoners** were diagnosed with mental illness before entering prison.

### Way Forward:

- ✓ Prioritize the proper functioning of Prison Oversight Mechanisms.
- ✓ Advocate for early access to counsel and improve legal aid practices.
- ✓ Partner with law schools to develop legal aid clinics that provide free legal support to prisoners.
- ✓ Assess the pre-trial practices of court.
- ✓ Work with governments for early repatriation of foreign national prisoners.
- ✓ Ensure timely release and rehabilitation of vulnerable groups in prison.
- ✓ Build capacity of criminal justice functionaries related to prisons.
- ✓ Litigate in public interest and on behalf of individuals.
- ✓ Undertake research on various aspects of Criminal Justice System particularly using right to information.

**Prison Reform Committees and Acts**

1. **Mulla Committee, 1983**
  - Setting up of a **National Prison Commission** to oversee the **modernization** of the **prisons**.
  - **Ban on clubbing** together **juvenile offenders** with the **hardened criminals**.
  - **Segregation of mentally ill prisoners**.
  - Lodging of **under trial** in jails should be **reduced** to bare **minimum** and they should be kept **separate** from the **convicted** prisoners
2. **Krishna Iyer Committee, 1987**
  - Modernization of Prisons scheme.
  - **e-Prisons Project**
  - **Induction of more women in the police force**.
3. **The Supreme Court** formed a Committee on **Prison Reforms** chaired by **former apex court judge, Justice Amitava Roy, to examine the various problems plaguing prisons in the country, from overcrowding to lack of legal advice to convicts to issues of remission and parole**.

**Acts:** The Prisons Act, 1894, The Repatriation of Prisoners Act, 2003, The Transfer of Prisoners Act, 1950, The Repatriation of Prisoners Rules, 2004, Model Prison Manual 2016.

### National Anti-profiteering Authority (NAA)

#### News Excerpt

The National Anti-Profiteering Authority's (NAA) tenure extended by 2 years.

#### About NAA

It has been constituted under section 171 of the Central Goods and Services Tax (CGST) Act 2017, **cease to exist** after the expiry of two years. GST Council may extend tenure.

**Purpose:** To ensure that the reduction in GST rates on goods and services or the benefit of input tax credit is passed on to the recipient by way of commensurate reduction in prices. National Anti-Profiteering Authority is a mechanism devised to ensure that prices remain under check and to ensure that businesses do not pocket all the gains from GST.

#### Changes Introduced by GST Council

- Council decided to impose additional payment in case the

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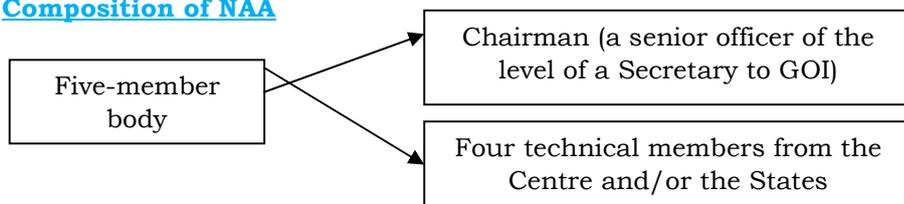
**GST Council**

The tax rates, rules and regulations of GST are governed by the **GST Council** which consists of union finance ministers and representatives from all states & UTs (with legislature).

profiteered amount is not deposited within a month.

- It also gave in-principle approval for introduction of E-invoicing in a phased manner for Business-to-Business transactions.
- It also decided to allow Aadhaar to be used for new registrations.
- On issues relating to GST concessions on **electric vehicles (EV)**, it would be examined by the **Fitment Committee** and be brought to the Council.

**Composition of NAA**



**Powers of the Authority**

- It can **deregister an entity** or business if it fails to pass on the benefit of lower tax rate under GST to the customer.
- It will **recommend the return of undue profit**, which a business earned from not passing on reduction and benefit of tax to consumers along with an **18 per cent interest**. It can also impose a **penalty** if it sees it necessary.
- Order passed by the Authority shall be immediately complied with by the registered person, failing which action shall be initiated to recover the amount in accordance with the provisions of the IGST Act or the CGST Act or the U.T GST Act or the State GST Act of the respective States, as the case may be.

**PEPPER IT WITH**  
101<sup>st</sup> Amendment Act, Voting Power of States in GST Council, 7<sup>th</sup> Schedule.

**Procedure followed at NAA**



**Steps taken by the Government to promote EV:**

- ❖ FAME-India Scheme (Phase-1 & 2) under National Electric Mobility Mission Plan (NEMMP).
- ❖ NITI Aayog has introduced electric buses in various cities for Public transportation on PPP mode.
- ❖ Ministry of Power has issued a policy on charging infrastructure to facilitate establishment of charging infrastructure by stakeholders easily.
- ❖ ISRO has commercialized the indigenously developed Lithium-ion battery technology.

### Other steps taken by NAA

- ✓ **Holding regular meetings** with the Zonal Screening Committees and the Chief Commissioners of Central Tax to stress upon consumer awareness programmes.
- ✓ Launching a **helpline** to resolve queries of citizens regarding registration of complaints against profiteering, **receiving complaints** through email and NAA portal and **working with consumer welfare organizations** in order to facilitate outreach activities.

### Challenges

- While it requires firms to pass on commensurate savings from GST cuts or input credit to consumers, it doesn't specify how the firms must determine **what is 'commensurate'**. It places an undue compliance **burden on the businesses**.
- The Authority or the Standing Committee consists of only government officials. No representatives from the business, make NAA government oriented only.
- Many people criticize it by calling it a **draconian law that would bring back "Inspector Raj"**.

### Conclusion

As per the available data, over 25 lakh calls have been made to the GST Network help desk till now. Out of these queries of 24.55 lakh callers have been resolved successfully. This shows the success rate of 96.6 per cent, as per Finance Ministry.

## **One Nation One Election**

### News Excerpt

Centre mulls 'One Nation, One Election' policy, invites political party heads for deliberations and to build consensus over policy.

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### Pre-Connect

Simultaneous elections were the norm until 1967. But following the dissolution of some Legislative Assemblies in 1968 and 1969 and that of LS in December 1970, elections to the state and Parliament have been held separately. Idea of reverting to simultaneous polls was mooted in the annual report of the EC 1983. The law Commission's report also referred to the same in 1999.

### Arguments in favour

- **Reduced expenditure of money and administration:** Entire state and district level administrative machinery remains busy during elections twice in a period of five years. So, simultaneous polls would reduce burden and cost involved in separate elections
- **Governance and consistency:** It will help ruling parties focus on legislation and governance instead of being constantly in election mode.
- **Continuity in policies and programmes:** As the **Model Code of Conduct** prevents government from announcing any new schemes, make any transfers or appointments without the approval of election commission. This brings standstill for government.
- **Impact of black money on voters** will be reduced as all elections are held at a time.

### How will it work?

There were **two proposals** for simultaneous elections:

1. To switch to simultaneous polls in a phased manner. General elections may be conducted in 12 state assemblies and UTs in 2019 and the rest may be synchronized by the end of 2021. For such synchronisation political consensus, term extension upto six months in some states as well as constitutional amendments will be needed. Thus, **simultaneous elections would be held from 2024.**
2. Elections to the 12 state assemblies and UT, may be synchronized with elections to the LS in 2019 and elections to the rest of states and 1 UT may be conducted by the end of 2021. In this manner, **elections will be held twice every 5 years.**

- **Simultaneous elections do have split-ticket voters**, who vote for different parties at national, federal and local level elections. E.g. The results of simultaneous elections at Andhra Pradesh, Odisha and Sikkim in 2004 and 2009 showed that people voted for different parties at federal and local levels.

**Simultaneous elections:** The idea envisages system where elections to all states and the Lok Sabha (LS) will have to be held simultaneously. Voters cast their votes for LS and for state assemblies on a single day or in a phased manner.

**Arguments against it**

- The national and state issues are different, and holding simultaneous polls is likely to **affect the judgment of voters**. Will reduce the government's accountability to the people. **Repeated elections keep the legislators on their toes and increases accountability.**
- **Blow to Democracy and Federalism.** When election in a state postponed until the synchronized phase, president's rule will remain in the interim period in that state.
- Biggest challenge is achieving **political consensus** for simultaneous elections. Regional parties will be more opposed to the idea than national parties because there is a tendency for voters to vote for same party in power in the state as well as at the centre.
- **Lack of awareness among voters.** When they will be confronted by two EVMs in a booth, one for a parliamentary constituency and another for a state assembly constituency, he/she may exercise their franchise unthinkingly.

**Constitutional Changes to be made (Amendment)**

- ❖ Article 83 (duration of Houses of Parliament)
- ❖ Article 85 (dissolution of Lok Sabha by the President)
- ❖ Article 172 (duration of state legislatures)
- ❖ Article 174 (dissolution of state assemblies)
- ❖ Article 356 (President's Rule)
- ❖ The Representation of People Act, 1951

**Way ahead**

Although it may not be immediately possible to move towards simultaneous elections, it is still worth debating and finding ways to eventually do so. It is the need of hour, which would facilitate accelerated development.

**PEPPER IT WITH**

Election Commission, National Party, State Party, Constitutional Amendment, Modal Code of Conduct, EVM, President Rule and RPA.

**Conclusion**

The effect of such an idea has to be necessarily assessed with its degree of impact on the federal structure of India. It is supposed to bring a major reform in the electoral system and functioning of one of the largest vibrant democracies of the world.

**Draft National Education Policy (NEP)**

**News Excerpt**

The Committee for Draft National Education Policy (NEP) under Chairmanship of **Dr K. Kasturirangan** which was constituted by the Ministry of HRD in June 2017. Recently, the committee submitted its report. draft National Education Policy has been released.

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**Introduction**

The draft policy provides for reforms at all levels of education from school to higher education. It seeks to increase the focus on **early childhood care**, reform the current **exam system**, strengthen **teacher training**, and restructure the **education regulatory framework**. It also seeks to set up a **National Education Commission**, increase **public investment** in education, strengthen the use of **technology** and increase focus on **vocational and adult education**.

## Key points of the policy

### • School Education

- **Early childhood education:** The Policy emphasizes the criticality of the early years and aims to ensure quality early childhood care and education for all children between 3-6 years by 2025 with significantly increased investment and new initiatives.
- **Foundational literacy and numeracy:** Special attention should be paid to early language and mathematics in Grades 1-5. The Policy aims to ensure every student in Grade 5 and beyond must achieve foundational literacy and numeracy by 2025.
- **Curriculum and Pedagogy:** A new curriculum and pedagogical structure for school education based on principles of brain development and learning has been developed based on a **5 + 3 + 3 + 4 design** to replace current **10+2 design**. There will be equal emphasis on all subjects.
- **Universal Access:** The Policy aims to achieve **100% Gross Enrolment Ratio for all school education by 2030** through various measures. **Special Education Zones** will also be set up to focus on this.
- **Teachers:** Teachers will be **recruited through robust, transparent processes, promotions** will be **merit-based, multi-source periodic performance appraisals** will happen and progression paths to become **educational administrators or teacher educators** will be available.
- **Regulation of Schools:** Regulation and operations of schools will be carried out by separate bodies to eliminate conflicts of interest. There will be clear, separate systems for policy making, regulation, operations and academic matters.

#### **Three-Language Formula**

It states that state governments should adopt and implement study of a modern Indian language, preferably one of the southern languages, apart from Hindi and English in the **Hindi-speaking states**, and of Hindi along with regional languages and English in the **Non-Hindi speaking states**.

### • Higher Education

- **New architecture:** A new vision and architecture for higher education has been envisaged with large, well-resourced, vibrant multidisciplinary institutions.
  - **Liberal Education:** A broad-based liberal arts education at the undergraduate level for integrated, rigorous exposure to science, arts, humanities, mathematics and professional fields will be put in place.
  - **Governance:** Institutional governance will be based on **autonomy - academic, administrative and financial**. Each higher education institution will be governed by an **Independent Board**.
  - **Regulation:** It will be **light but tight** to ensure **financial probity and public-spiritedness** - standard setting, funding, accreditation, and regulation will be conducted by independent bodies to eliminate conflicts of interest.
- **Teacher Education** will be rigorous and will take place in vibrant, multidisciplinary higher education institutions.
  - **Vocational Education** will be an integral part of all education - Policy aims to provide **access to vocational education to at least 50% of all learners by 2025**.
  - **National Research Foundation** will be set up to catalyse and expand research.
  - **Technology in education** for appropriately integrating technology into all levels of education to improve classroom processes, support teacher professional development, enhance educational access for disadvantaged groups and streamline educational planning, administration and management.
  - **Adult Education** to achieve **100% Youth and Adult Literacy by 2030**.
  - **Promotion of Indian languages Three-Language Formula** has been re-emphasized to ensure preservation, growth, and vibrancy of all Indian languages.

- **Financing Education** there will be substantial public investment to expand and vitalize public education.
- **Rashtriya Shiksha Aayog** or **National Education Commission** will be formed, headed by the Prime Minister - this will be custodian of vision of education in India.

**Thematic Concerns**

- **Expanding coverage under the RTE Act** to include pre-school children is extremely important, but should perhaps be introduced gradually, keeping in mind the quality of infrastructure and teacher vacancies.
- **Rashtriya Shiksha Aayog** is crucial to integrate approaches and programmes of multiple departments. However, it is fraught with many administrative problems and possible turf battles. Bringing medical or legal education under one umbrella is likely to be met with stiff opposition.
- Draft policy is **silent on the Institutions of Eminence and agencies** like Higher Education Funding Agency. **Three-language formula** has received a lot of criticism, especially by south Indian states.

**PEPPER IT WITH**

Scheduled Languages, National Education Policy 1992, 5+3+3+4 Design, National Curricular Framework (NCF) 2005, NUEPA, NCTE, Home-Schooling

**Way Forward**

Education is **concurrent subject**. Apart from a consensus between the Union and States, all the other stakeholders including institutions, public and academicians should also be consulted. There should be courses like **Masters of Teacher Education** and a need to build good **teacher training institutions**. The education policy should maintain a symbiotic relationship between the different regions of the country through the study of different languages.

**Removal of Judges**

**News Excerpt**

Allahabad High Court judge has been found guilty of misconduct. In the same matter, Chief Justice of India has written to Prime Minister to initiate a motion for his removal.

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**Removal of Judges**

- **Article 124(4)** and the **Judges Inquiry Act 1968** determine the procedure of removal.
- **A motion of impeachment** addressed to the President is to be signed by at least 100 members of the Lok Sabha or 50 members of the Rajya Sabha and then delivered to the Speaker of Lok Sabha or the Chairman of Rajya Sabha. The presiding officer may admit or refuse to admit the motion.
- If accepted, the motion is to be **investigated** by a **Committee** of a **Supreme Court judge**, a **Chief Justice of an HC** and a **distinguished jurist**.
- If charges stand proven, that is if the Committee finds the judge **guilty of misbehaviour** or **incapacity**, the motion along with the report of the committee is taken up for consideration in the House, where motion was moved.
- It must be passed by a **majority** of the House **and 2/3<sup>rd</sup>** of the members **present and voting**. If the charges are proved, the Parliament is not bound to remove the judge.
- Finally, when the motion is passed by the Parliament, **President** will issue the **order for removing the judge**.
- **Judge's Right** - During the inquiry, the judge has the full right to defend.

**Key facts**

- A judge is removable from his office, only on the grounds of proved **misbehavior or incapacity**.
- Parliament is empowered to regulate the procedure for the investigation and proof of such misbehaviour or incapacity.

**What all constitute 'proved misbehavior or incapacity'?**

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- ✓ The Constitution does not define ‘incapacity’ and ‘proved misbehaviour’.
- ✓ As suggested in the **Judges (Inquiry) Bill, 2006**, ‘proved misbehaviour’ constitutes:
  - wilful or persistent conduct bringing disrepute to the judiciary.
  - failure to perform the duties of a judge.
  - wilful abuse of judicial office, corruption, lack of integrity or committing an offence involving moral turpitude.

**PEPPER IT WITH**

Powers of HC Judge, Role of President, Impeachment by Majority.

**Thematic Concerns**

- The political process may or may not impeach judges, despite a 3-member committee holding the Judge guilty. Hence, the 1968 Act may not prove to be effective each time.
- Entire process concerns of a possibility of harming judicial independence. This stems from a **possibility of Judges being harassed** to toe the ideology of a party in majority.
- Term “misbehaviour” or “incapacity” have neither been defined nor clarified.
- Process of removing a judge is quite contradictory (**neither political nor judicial entirely**).

**Conclusion**

There is a need to place an in-house as well as a legislative mechanism to maintain **Judicial Accountability**, without affecting **Judicial Independence**.

**Muslim Women (Protection of Rights on Marriage) Bill 2019**

**News Excerpt**

The Muslim Women (Protection of Rights on Marriage) Bill 2019 has been approved. It replaces the Muslim Women (Protection of Rights on Marriage) Ordinance, 2018.

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**Key Provisions**

- The Ordinance makes **all declaration of talaq**, including in written or electronic form, **to be void** (i.e. not enforceable in law) **and illegal**.
- **Offence and penalty:** It make declaration of talaq a **cognizable offence**, attracting up to three years imprisonment with a fine. The offence will be cognizable only if information relating to the offence is given by:
  - (i) the married woman (against whom talaq has been declared), or
  - (ii) any person related to her by blood or marriage.
- It provides that the **Magistrate may grant bail** to the accused. But it may be granted only after hearing the woman (against whom talaq has been declared), and if the Magistrate is satisfied that there are reasonable grounds for granting bail.
- The **offence may be compounded** by the Magistrate upon the request of the woman (against whom talaq has been declared). The terms and conditions of the compounding of the offence will be determined by the Magistrate.
- **Allowance:** A Muslim woman against whom talaq has been declared, is entitled to seek subsistence allowance from her husband for herself and for her dependent children. The amount of the allowance will be determined by the Magistrate.
- **Custody:** A Muslim woman against whom such talaq has been declared, is entitled to seek custody of her minor children. The manner of custody will be determined by the Magistrate.

**Talaq-e-biddat**

It refers to the practice under Muslim personal laws where pronouncement of the word ‘talaq’ thrice in one sitting by a Muslim man to his wife results in an **instant and irrevocable divorce**.

**Compounding the offence**

It refers to the procedure where the two sides agree to stop legal proceedings and settle the dispute.

### Benefits

- The bill would protect rights of married Muslim women and prevent divorce by the practice of instantaneous and irrevocable ‘talaq-e-biddat’ by their husbands.
- It provides the rights of subsistence allowance, custody of minor children to victims of triple talaq i.e. **talaq-e-biddat**.
- If implemented successfully, would lead to the breaking of dominance nature of patriarchal society.

### Criticism of bill

- ✓ There is no reason given behind the three-year jail term for guilty Muslim men while a non-Muslim man get only one year of jail term for a similar offence. Thereby **violating the Principle of Natural Justice**.
- ✓ Apprehensions have been raised over the **cognizable nature** of the instant triple talaq saying that it **provides the ground for misuse**.
- ✓ It has been argued that while pronouncing instant triple talaq would no longer end the marriage, **the Muslim men could be jailed and denied bail for uttering a word that holds no legal value**.
- ✓ Those opposing the Bill have argued that if instant triple talaq does not result in divorce in the wake of the Supreme Court order, **how a Muslim man would be forced to provide subsistence to the woman, who is still his wife legally**.

### Significance

Time has come to put an end to the suffering of Muslim women who have been at the receiving end of instant talaq for several years. More than 20 Islamic countries have already banned the practice. This is a significant step to bring the status of Muslim women at par with that of women of other religions.

## **National Policy on Domestic Workers**

### News Excerpt

Draft National Policy on domestic workers has been released the Ministry of Labour.

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### Features

- Inclusion of Domestic Workers in the existing legislations.
- Domestic workers will have the right to register as unorganized workers. Such registration will facilitate their access to rights & benefits.
- Right to form their own associations/unions.
- Right to minimum wages, access to social security.
- Right to enhance their skills.
- Protection of Domestic Workers from abuse and exploitation.
- Domestic Workers to have access to courts, tribunals for grievance redressal.
- Establishment of a mechanism for regulation of private placement agencies.
- Establishment of a grievance redressal system for domestic workers.

### Why a policy is needed?

- The domestic work industry is characterised by low, stagnant and irregular wages.
- Extraction of more work than agreed upon the start of employment. Practice of arbitrarily reducing wages.
- Private nature of regulation has allowed the employer to enforce his whims and fancies over his/her domestic workers in India.

**Drawbacks of policy**

- ✓ The policy has made recommendations on working hours, leave entitlements and minimum wages, but has **left it to states to notify them.**
- ✓ It also envisages that states would set up mechanisms to register and regulate placement agencies for domestic workers, **with no provision for Central regulation.**
- ✓ Their access to the **rights and benefits** as workers, have **not been clearly defined.**
- ✓ The draft is not clear about **minimum wages &** enhancement of the skills of workers.

**Steps by Government for workers**

- The Central Government has enacted the **Unorganized Workers’ Social Security Act, 2008** for providing social security to all unorganized workers including domestic workers. Under this act, the state governments are mandated to formulate suitable welfare schemes for unorganized sector workers including domestic workers.
- Schemes like **National Old Age Pension Scheme, National Family Benefit Scheme, Janani Suraksha Yojana, Ayushman Bharat** have been implemented.
- **Domestic Workers Sector Skills Council** has been established under Ministry of Skills Development to enable professionalization of domestic workers.

**Conclusion**

Domestic worker unions and NGOs, have been demanding a Central legislation, providing for inter-state registrations of domestic workers, with centrally set norms for wages, working hours and social security benefits. Their demands have been reflected in the draft policy. But a strong central legislation is needed, accompanied by its strict enforcement.

**Jal Shakti Abhiyan**

**News Excerpt**

Jal Shakti Abhiyan has been launched for water conservation.

**Highlights**

- Jal Shakti Abhiyan is launched by **Union Jal Shakti Ministry** with **collaborative effort of various Ministries** of the Government of India and State Governments, being coordinated by the Department of Drinking Water and Sanitation.
- It is a **time bound campaign** focussed on 1,592 “**water-stressed**” blocks in 257 districts.
- The campaign will run **through citizen participation** in two phases:
  - Phase 1- States which receives monsoon
  - Phase 2- States which receives Retreating Monsoon
- The 'Jal Shakti Abhiyan' will focus on **five aspects:**

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**Intervention Areas**



Water conservation and rainwater harvesting



Renovation of traditional and other water bodies/tanks



Reuse and recharge structures



Watershed development



Intensive afforestation

**Special Intervention Areas:**

<p><b>Block and District Water Conservation Plan</b></p> <p>Development of Block and District Water Conservation Plans (To be integrated with the District Irrigation Plans)</p>	<p><b>Krishi Vigyan Kendra Mela</b></p> <p>Krishi Vigyan Kendra Melas to promote efficient water use for irrigation (Per Drop More Crop), and better choice of crops for water conservation</p>	<p><b>Urban Waste Water Reuse</b></p> <p>In urban areas, plans/approvals with timebound targets to be developed for waste water reuse for industrial and agriculture purposes. Municipalities to pass by-laws for the separation of grey water and blackwater</p>	<p><b>Scientists and IITs</b></p> <p>Scientists and IITs to be mobilised at the national level to support the teams</p>	<p><b>3D Village Contour Mapping</b></p> <p>3D Village Contour Maps may be created and made accessible for efficient planning of interventions</p>
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The 1,592 blocks, identified as “water-stressed” as per the Central Ground Water Board’s 2017 data, include 313 critical blocks, 1,000-odd over-exploited blocks and 94 blocks with least water availability (for states without water-stressed blocks).

**Implementation**

The Centre has issued an **18-point to-do list** to all joint secretaries and additional secretaries deputed as **Central Nodal Officers (CNO)/Central Prabharis** for implementation of the Jal Shakti Abhiyan. A CNO is responsible for the implementation and monitoring of the scheme in their allotted districts.

**Initiatives for water conservation**

- Telangana’s **Bhagiratha project** is worth emulating across India.
- Maharashtra’s **Jalyukt Shivar Abhiyan** has undertaken water conservation work in 16,522 villages.

**PEPPER IT WITH**

Hydro zoning, Non-Revenue Water (NRW), Peak Water, Micro-Sustainability, Water Footprint, Virtual Water Concept

**Significance**

The campaign will help people to work for rainwater harvesting, maintenance and upkeep of ponds and village tanks and conservation of water. With this initiative government wants to provide drinking water to every household on priority and in a sustainable manner.

**Conclusion**

Jal Shakti is a landmark step for **revitalisation and conservation of rivers and water bodies**. “**Nal se Jal**” (tap water) for everyone by 2024 is a delayed yet essential goal for India to break into the middle-income league and become a global economic power.

**Leader of Opposition**

**Leader of Opposition (LoP)**

- The LoP is **leader of the largest Opposition party** in the house, that has **not less than one-tenth of the total seats in the house**.
- It is a **statutory post** defined in the **Salaries and Allowances of Leaders of Opposition in Parliament Act, 1977**.
- In recognizing LoP, **Speaker cannot exercise his discretion**.
- In the **British parliament**, the leader of opposition is referred to as the ‘**shadow prime minister**’, so called because he or she is always in a state of readiness to take over the

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government, if the incumbent government falls. There, the leader of opposition forms a **shadow cabinet** too.

**Significance of the office**

- LoP exercises direct influence on the course of parliamentary business and on the whole policy of the Government.
- LoP is also consulted, when the important appointments are made. E.g. Comptroller and Auditor General (CAG), Central Vigilance Commissioners etc.

**PEPPER IT WITH**  
Political Spectrum, Majoritarianism, Minority Leader, Westminster System

**Reform needed**

When **no party in opposition secures 10% or more seats**, in their respective houses, the numerically largest party in the **opposition should have the right, that their leader is recognised as leader of the opposition by the speaker.**

**Conclusion**

The leader of the opposition is one of the key parliamentary functionaries whose role, though not defined in any rule, is of very great importance in the functioning of a legislature. He or she is invariably **a senior leader representing the main opposition party in the legislature.**

**Operation Sunrise**

**News Excerpt**

India-Myanmar target insurgent groups camp in North East.

**About**

- It was carried out by the armies of India and Myanmar.
- Operation is aimed at hitting militant groups that are impacting both India and Myanmar.
- In the operation, other than NSCN (K), the groups hit were Kamtapur Liberation Organisation (KLO), the United Liberation Front of Assam, and the National Democratic Front of Bodoland (NDFB).

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**Pre-Connect**

The first phase of the operation was launched in February in order to prevent the threat on the Kaladan Project.

**Significance of Kaladan and Sittwe Port:**

- It is a multi-modal project for cargo shipments. It will connect North-Eastern Indian states with eastern parts of Myanmar.
- It will open sea routes and promote economic development in the North-eastern region.
- It will reduce the dependence on the narrow Siliguri corridor, also known as Chicken's Neck for connectivity of mainland India to the north eastern states.
- The new route through Sittwe would significantly lower the cost and distance of movement from Kolkata to Mizoram and beyond.

**Operation Sankalp**

Indian Navy launched Operation Sankalp in the Persian Gulf and the Gulf of Oman to reassure Indian flagged vessels transiting through the area. The operation has been launched in the wake of escalating tension in the Gulf of Oman, where two oil tankers were attacked recently.

## Defence Space Research Agency (DSRA)

### News Excerpt

The Cabinet Committee on Security has cleared the way for setting up of the Defence Space Research Agency (DSRA).

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### Pre-Connect

- After Outer space emerged as the fourth domain of warfare, India for its national security purpose in 2001 adopted a space-based surveillance program.



- A further impetus was provided when an Integrated Space Cell (ISC) was constituted in 2009 under the Headquarters Integrated Defence Staff (HQ IDS) to coordinate the space-related aspects of the three defense forces.

### About DSRA

- DSRA has been entrusted with the task of creating space warfare weapon systems and technologies.
- The agency would be provided with a team of scientists which would be working in close coordination with the tri-services integrated Defence staff officers.
- It would be providing the research and development support to the Defence Space Agency (DSA) which comprises of the members of the three services.
- The Defence Space Agency is being set up in Bengaluru under an Air Vice Marshal-rank officer and will gradually take over the space-related capabilities of the three forces.

### Significance

- ISRO carries a civilian character, which enables it to access key technologies from other countries.
- ISRO is also committed to various international treaties that promote the peaceful or non-military use of outer space.
- Changing ISRO's character to an overtly military one may not be in the best interest of the organization's progress and India's national interest. Hence, there is a need for a military counterpart of ISRO.

**Way-Forward**

- With ASAT capability on board, India now needs to weaponize the technology and, at the same time, harness all possible space-related military technologies to put in place an effective deterrent against potential adversaries.
- It needs a comprehensive space security architecture consisting of a dedicated Space Command for operational aspects of space weaponry.

**New Start Treaty**

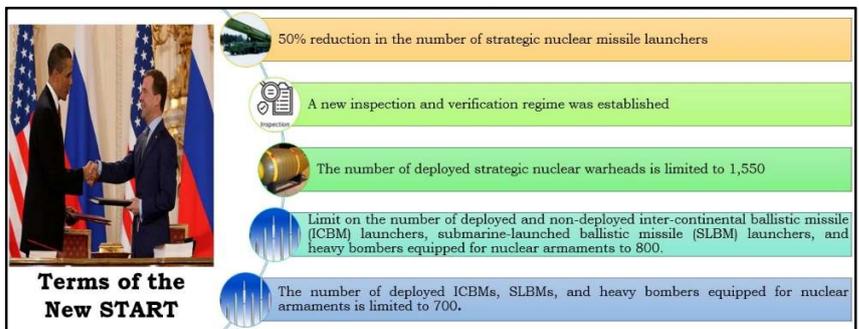
**Perspective**

Russia had threatened to walk out of the New START treaty with the US. It blamed the US for dismantling global arms control regime as it had shown no genuine interest in conducting talks on extending the New START treaty. The Treaty caps the number of nuclear warheads well below Cold War limits.

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**About the Treaty**

- It was formally known as Measures for the Further Reduction and Limitation of Strategic Offensive Arms. It came into force in February 2011.
- It replaced-
  - The Treaty of Moscow (SORT)- which expired in 2012
  - START I treaty which expired in 2009
  - START II treaty which never entered into force
  - START III treaty for which negotiation never concluded
- Obligations must be met within seven years from the date the treaty enters into force. The treaty will be operational for ten years, with an option to renew it further for up to five years upon agreement of both parties.



**Terms of the New START**

- 50% reduction in the number of strategic nuclear missile launchers
- A new inspection and verification regime was established
- The number of deployed strategic nuclear warheads is limited to 1,550
- Limit on the number of deployed and non-deployed inter-continental ballistic missile (ICBM) launchers, submarine-launched ballistic missile (SLBM) launchers, and heavy bombers equipped for nuclear armaments to 800.
- The number of deployed ICBMs, SLBMs, and heavy bombers equipped for nuclear armaments is limited to 700.

**Defence Technology and Military Exercise**

**National Advanced Surface to Air Missile System-II**



**The US** had approved the sale of NASAMS-II air defense systems to India.

**Quickly detect,** track and shoot down multiple airborne threats Such as Cruise Missile, aircraft, drones.

**Already Deployed** in US, Israel, Russia and in some NATO Countries

**Act as India's own Shield** and will be deployed to protect Delhi, Mumbai.

**Armed with new 3D** mobile surveillance radars and 12 missile launchers, 3D Sentinel radars, short and medium-range missiles, launchers, fire-distribution centers, and command and control units.

**Hypersonic Technology Demonstrator Vehicle (HSTDV)**

**All About HSTDV**

India successfully Tested **Indigenously built HSTDV. It has been developed under the Integrated Missile Development Program.** It is an unmanned scramjet (allowing supersonic combustion) demonstration vehicle that can cruise up to a speed of Mach 6 (or six times the speed of sound) and rise up to an altitude of 32. km in 20 seconds.

It has a number of advantages, including missiles of the future, and **energy-efficient, low cost and reusable satellite-launch vehicle.** The only other countries that possess this technology are the **US, Russia and China.**

The **HSTDV cruise vehicle is mounted on a solid rocket motor, which will take it to a required altitude,** and once it attains certain Mach numbers for speed, the cruise vehicle will be ejected out of the launch vehicle

In **scram-jet, combustion of fuel takes place in a chamber in the missile at supersonic speeds.** This is different from a ram jet system where the **system collects the air it needs from the atmosphere during the flight at subsonic speeds and the propellants burn in the combustion chamber.**

**Kharga Prahar-Joint Military Exercise**



**About** Joint exercise conducted by the Indian Army and Air Force in Punjab

**II Corps** II Corps is a corps of the Indian Army, based in Ambala and known as Kharga Corps.

**Significance** Improves Inter-operability of forces

- Reduces reaction Time
- Increase mutual cooperation and trust
- Sends strong message to adversaries

### Workshops Organized by the Sea Guardians of India



**ReCAAP**

- By Coast Guard

**IFC-IOR**

- By Indian Navy

**ReCAAP**

**IFC-IOR**

- It was a 12th Capacity Building workshop organized with Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP) Information Sharing Centre (ISC) by ICG.
- It is the first regional government-to-government agreement to promote and enhance cooperation against piracy and armed robbery of ships in Asia.
- Presently 20 countries are the members of ReCAAP. India played an active role in the setting up and functioning of ReCAAPISC along with Japan and Singapore.
- Union Government has designated ICG as the nodal point within India for ReCAAP.
- Information sharing, capacity building and mutual legal assistance are the three pillars of co-operation under the ReCAAP agreement.
- The ReCAAP Information Sharing Centre (ReCAAP ISC) was established in Singapore in 2006 to collate and disseminate the information among the contracting parties and the maritime community.

- A maritime information sharing workshop under the aegis of the Information Fusion Centre — Indian Ocean Region (IFC-IOR)
- It aims to acquaint participants about IFC-IOR and its information sharing mechanisms and promote sharing of best practices.
- It discussed issues ranging from maritime terrorism, piracy, human and drug trafficking to humanitarian assistance and disaster relief.
- Indian ocean region is important as it has both crucial natural and mineral resources

**JUNETEENTH**

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**JUNETEENTH**

- It is a celebration to mark the end of slavery in the United States. Celebrated on **19<sup>th</sup> June**, it is also called 'Freedom Day'.
- **Texas and Oklahoma** are the only states that recognize Juneteenth as a legal holiday. But more than 200 cities across the nation celebrate Juneteenth in some way, ranging from daylong festivals to longer events.
- The June 19 announcement came more than two and a half years after Abraham Lincoln issued the Emancipation Proclamation.
- According to historian **James Smallwood**, many enslavers deliberately suppressed the information until after the harvest, and some beyond that.
- When freed slaves tried to celebrate the first anniversary of the announcement a year later, they were faced with a problem: Segregation laws were expanding rapidly, and there were no public places or parks they were permitted to use.

**American Civil War**

The American Civil War (1861-65) was a war between Northern & Southern states of America (the Southern part was enslaved by the former).  
The bloodiest battle of the Civil War was the **Battle of Gettysburg, Pennsylvania**.



Juneteenth flag designer L.J. Graf; The star in the middle pays homage to Texas, while the bursting "new star" on the "horizon" of the red and blue fields represents a new freedom and a new people.

**NOT A NATIONAL HOLIDAY**

As a senator, Barack Obama co-sponsored legislation to make Juneteenth a national holiday, though it didn't pass then or while he was president.



**Celebration of Juneteenth is important because racism has not completely disappeared from the world.**

**Emancipation Proclamation**

-US President Lincoln had issued the **Emancipation Proclamation** on September 22, 1862, demanding that the Confederate states return to the Union or their slaves would be permanently freed.

-But it took close to three more years before the full emancipation of America's slaves was completed because this order was ignored.

-Although the Proclamation initially freed only the slaves in the rebellious states, by the end of the war the Proclamation had influenced and prepared citizens to advocate and accept abolition for all slaves in both the North and South. **The 13th Amendment**, which abolished slavery in the United States, was passed on December 6th, 1865.

**13<sup>th</sup> Amendment to the US Constitution:**  
*"Neither slavery nor involuntary servitude, except as a punishment for crime whereof the party shall have been duly convicted, shall exist within the United States, or any place subject to their jurisdiction"*

**Ambubachi Mela**

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**Ambubachi Mela**

- It is a 4-day festival celebrated to mark the annual menstruation of the goddess at Kamakhya temple in Guwahati .
- Goddess Kamakhya or Sati, who was one of the numerous incarnations of Goddess Durga or Goddess Shakti.
- The temple’s sanctum sanctorum houses the yoni — female genital — symbolised by a rock.
- Devotees make a beeline for Kamakhya during Ambubachi Mela.
- The only ones that avoid the temple are the descendants of the medieval Koch royalty, who had reconstructed the Kamakhya temple in 1565.



**About Kamakhya Temple**

- It is situated high aloft a hill called Neelachal Parbat or Kamagiri
- King Nara Narayana of Cooch Behar rebuilt the temple in 1665 after it had suffered destruction at the hands of foreign invaders.
- The temple consists of seven oval spires, each topped by three golden pitchers, and the entrance spirals down to a curvy path of some distance, which specially links the main road to the temple.

**Contrasting with Sabarimala**

This festival is significant as it challenges the taboo against menstruation. Indian women & men living in the 21<sup>st</sup> century still cannot talk openly about menstruation because of the taboos associated with it that it is unclean & impure. One can relate it with the case of Sabarimala where women between the age of 10-50 years were not allowed to enter the temple of Lord Ayappa in Kerala. Ambubachi Mela counters the tradition of Sabarimala in the following way:

- It upholds Article 14, 15, 17, 21, 25 of the Indian Constitution.
- The Ambubachi festival goes way beyond the notion of the ‘rights of the deity’ (which was being used by those opposing the Sabarimala verdict), that even the deities & legends show how pure menstruation is.
- It upholds the sanctity of women and their dignity which is also mentioned in Directive Principles of State Policy under Article 51 A (e)

**Forest as a living entity in El-Salvador**

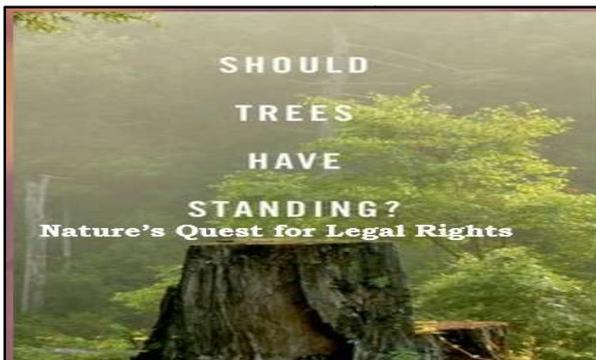
**News Excerpt**

**El Salvador has recognized forests as living entities.** Its citizens will now be required to preserve forests.

**Pre-Connect**

El Salvador **has lost about 85 percent of its native forests since the 1960s,**

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Rights for nature were first proposed by **Christopher Stone** in his 1972 article “Should trees have standing?”. They were supported by the judgement in US court which held that trees should be granted personhood and have the ability to sue for their own protection. Stone Suggested that leaving behind the enlightenment view of nature as a collection of “**useful senseless objects**” would not only help to solve the planet’s material problems but would encourage a heightened awareness of nature.

**Why Give Legal Rights?**

There is growing urgency of the need to protect the environment from Climate Change.

Legal System treats nature as property making the living world invisible to law

Codifying the rights of nature would expand their collective rights as that of Indigenous people.

Nature as an ancestral living being with right to life, puts onus on traditional owners to protect it for current and future generations.

**Some Examples**

In 2008 Ecuador became the first country to enshrine the rights of nature in its constitution.

New Zealand granted legal personhood to the Te Uruwera forest in 2014, and to the Whanganui river and Mount Taranaki in 2017.

Uttarakhand High Court granted legal personhood to the Ganges and Yamuna rivers in 2017, citing the Whanganui Act

Attempts were also made in Colombia which awarded rights to the Atrato river and in Australia which is exploring legal frameworks for nature rights.

while Earth has lost about 80 percent of its native forests.

**About**

- Law states that each **person must commit to caring, preserving, and respecting forests.**
- People should also promote concrete actions **that expand forests in the country.**
- A coalition of environmental and social leaders "Yes for the Rights of Nature" (Síporlos Derechos de la Naturaleza), ran a campaign in the country in order to recognize forests as living entities.

**PEPPER IT WITH**  
 Article 21, Fundamental Duties,  
 The Rights of Living Things

**Hong-Kong & China**

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### ONE COUNTRY-TWO SYSTEMS- HONG-KONG

#### Background

After loosing to British Forces in Opium Wars in the 19<sup>th</sup> Century, Chinese handed over the territory to British on 99-year lease





British gave Hong-Kong back to China in 1997 With Certain **Conditions**

China agreed to such conditions because Hong-Kong accounted for **27% of GDP in 1997.**

It will have safeguards like, **freedom of speech, Right to Vote, free press etc.**

Hong-Kong will be governed as **Semi-Autonomous region** for the Next 50 years i.e. till 2047.

#### Unique Democracy



People in Hong Kong **do not elect their leader.** He/she is elected by a **committee headed by China.**



**No universal adult suffrage-** Out of 70 seats elections **are conducted for 40 only, rest 30 are represented by business communities** such as finance, medical etc. Despite bound by an agreement, China Still denies universal adult suffrage to Hong-Kong.

**ASIA MEDIA SUMMIT**

**News Excerpt**

The 16<sup>th</sup> Asia Media summit was recently held in **Cambodia.**

**Highlights**

- **Focus:** The summit called for regulation with the aim to fight against fake news and cyber-crimes.
- Discussion on **4k technology:** equipping traditional media with the latest 4K UHD

**AIBD**

**The Asia-Pacific Institute for Broadcasting Development (AIBD)** was established in **1977** under the auspices of **UNESCO.** The AIBD is mandated to achieve a *vibrant and cohesive electronic media* environment in the Asia-Pacific region through **policy and resource development.**

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technology (ultra-high definition).

- Broadcasters to deal with the digital revolution by investing more in research, innovation, and training.
- Discussion on Role of partnership in media monetization process.

**What is 4K?**

It is technology means 4,000 pixels in various digital formats mainly used for the purpose of shooting motion pictures. As the name implies, 4K UHD has a considerably higher resolution than 1080P HD video. 4K resolution is exactly 3840 x 2160 pixels

**Abujh Maria Tribe of Chhattisgarh**

**News Excerpt**

The Chhattisgarh government is processing **habitat rights for Abujh Marias**, a **Particularly Vulnerable Tribal Group (PVTG)**.

**About Abujh Maria Tribe**

- This tribe **has its own governance structure**. **Abujhmarh** where this tribe lives, is **strongholds of Left-wing extremism**.
- They live in **isolation** and inhabit the **secluded enclaves of Bastar (Chhattisgarh)**.
- They are one of the few tribes that have many to keep their quintessential culture alive and unaffected by the vestiges of time.

**Pre-Connect**

- ✓ In 1973, the **Dhebar Commission** created Primitive Tribal Groups (PTGs) as a separate category, who are less developed among the tribal groups.
- ✓ In 1975, the Government of India initiated to identify the most vulnerable tribal groups as a separate category and declared 52 such groups.
- ✓ Again in 1993 an additional 23 groups were added to the category, making it a total of 75 PTGs out of 705 Scheduled Tribes, **spread over 17 states and one Union Territory (UT), in the country (2011 census)**.
- In 2006, the Government of India **renamed the PTGs as Particularly Vulnerable Tribal Groups (PVTGs)**.

**How are they identified?**

According to the procedure for identification, the state governments or UT governments submit proposals to the Central Ministry of Tribal Welfare for identification of PVTGs. After ensuring the fulfilment of criteria, the Central Ministry selects those groups as PVTGs.

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**'Habitat'**, as defined under Section 2 (h) of the Forest Rights Act (FRA), includes the area comprising the customary habitat and such other habitats in reserved forests and protected forests of primitive tribal groups and pre-agricultural communities and other forest dwelling Scheduled Tribes. The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (FRA) recognizes the forest and habitat rights of all PVTGs.

**Particularly Vulnerable Tribal Groups**  
PVTGs have some **specific features** such as dependency on **hunting, gathering for food, having pre-agriculture level of technology, zero or negative growth of population and extremely low level of literacy**. These are additional to general tribal specific signs such as primitive traits, distinctive culture, geographical isolation, shyness to contact with the community at large and backwardness.

**Steps Taken**  
Tribal Affairs Ministry administered scheme - **'Development of Particularly Vulnerable Tribal Groups'**.  
Odisha government's **Jiban Sampark project** in partnership with UNICEF India to generate awareness about the development and welfare initiatives of state government among the Particularly Vulnerable Tribal Groups of the state.

**PEPPER IT WITH**  
Koraga, Sentinelese, Adivasi Mella

## National Freight Index

### News Excerpt

Technology enabled **Logistics Firm Rivigo** launched the National freight index (NFI) with an aim to bring transparency and boost efficiency in the market.

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### Details

- NFI Is the **barometer of the road freight market in India** and is based on **Rivigo Rate exchange**, which gives a live spot rate on over 7 million lane and vehicle type combinations in the country.
- NFI offers **an aggregated picture** of both live rates and historical trends of spot price movements in the road freight industry.

### Thematic Concerns

- \$150 billion is the size of Indian road freight market** out of which the size of Full truck load market (FTL) is \$ 130 million but the market is facing a growing shortage of truck drivers and added to this is the problem of price asymmetry.
- Logistics **sector contributes 14 % to GDP and 70% out of it comes from road transportation**, But the working condition of the drivers is deplorable and there **is no price transparency**.
- In the existing logistics market structure, there is high inefficiency due to information asymmetry which leads to great loss of value.

## Back to Village Programme (B2V)

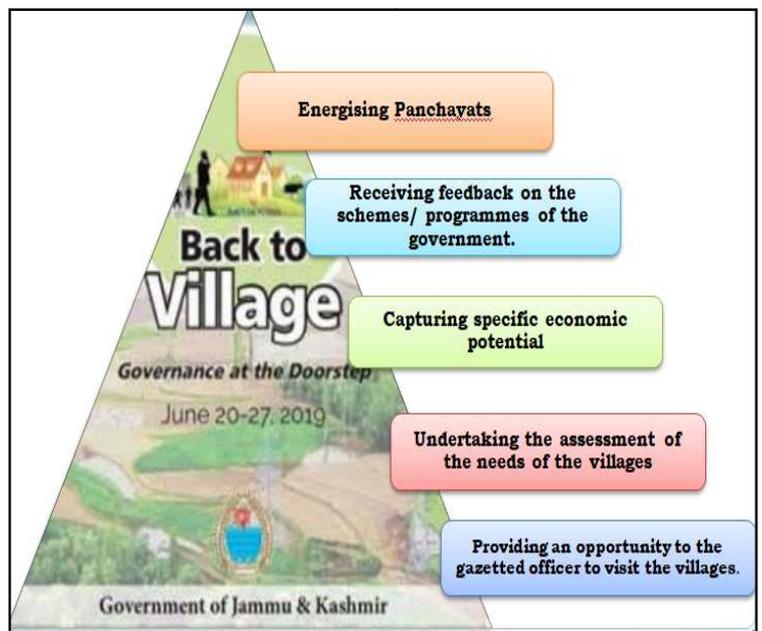
### News Excerpts

Back to Village Programme was recently launched by the Jammu and Kashmir government, to connect with the rural people of the state from 20<sup>th</sup> to 27 June.

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### Key features of the programme

- It aims to energize the 4,483 panchayats by putting development efforts in rural areas through community participation and creating in the rural masses the desire for decent standard of living.
- Each **gazetted officer will be assigned a gram panchayat**, where he would interact and **obtain feedback** about their concerns, developmental needs and economic potential of the area.
- The feedback would help the government tailoring the various central and state government schemes/programmes in improving delivery of village-specific services.



### Significance

The programme will involve the people of the state and government officials in a joint effort to deliver the mission of equitable development across all our rural areas.

### PEPPER IT WITH

Sher-e-Kashmir Employment and Welfare Programme, Trade Facilitation Centre, Article 370, Article 35A

**Miscellaneous**

**Indian Navy Environment Conservation Roadmap (INECR)**

The Indian Navy has come up with the **Indian Navy Environment Conservation Roadmap (INECR)** that comprises specific action plans covering broad areas of operations, maintenance, administration, infrastructure and community living. Aiming reduction in energy consumption and diversification of energy supply for the navy, INECR is part of **Green Initiatives Programme** aimed at taking social responsibility.

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Indian Navy has pledged **1.5% of its 'Works' budget** towards **renewable energy generation** to reduce the carbon footprint and achieve self-sustenance in energy security to promote use of biodiesel, the Navy is set to replace **High Speed Diesel (HSD)** with **B5 blend of HS**, resulting in direct savings of 5% of HSD translated to approximately 315 kl annual savings of HSD.

Other measures of INECR include afforestation drives at Naval stations, promoting renewable energy usage on all bases and ships, running biogas plants using bio-degradable waste and organic waste converters, segregated waste collection and improved waste management techniques.

**Sheath Blight Disease**

Delhi based scientists have unravelled the genomic diversity associated with aggressiveness of two Indian strains of **Rhizoctonia solani**, the fungal pathogen that causes Sheath Blight disease in rice. This genomic insight is expected to help develop rice varieties resistant to sheath blight disease. **Sheath Blight Disease** is a major issue in rice cultivation. It can cause up to 60 per cent reduction in rice yield. It is difficult to breed disease resistant rice varieties, as there is lack of natural source of disease resistance. Hitherto, controlling the disease in a sustainable manner has remained a challenge.

**Ministry of Jal Shakti**

A new umbrella ministry with focus on Water Sustainability is created under name of **Ministry of Jal Shakti**. It aims to tackle water conservation and replenish water sources by integrating all water-related ministries. For this Ministry of Water Resources, River Development and Ganga Rejuvenation is merged with the former Ministry of Drinking Water and Sanitation.

**Normalized Difference Vegetation Index (NDVI)** The Normalized Difference Vegetation Index (NDVI) is a simple indicator which ranges between -1 to +1, which tells how much of the ground is covered with vegetation. It basically calculates the difference between the red and near infrared components of light reflected by objects. Since healthy vegetation strongly absorbs red and reflects near infrared light, this difference can indicate the presence of healthy vegetation and map it into a colour code. **NDVI informs about the amount of food abundance available to herbivorous animals and help conservation agencies in their decision making.**

**Asiatic Golden Cat**

Scientists have discovered **new colour morphs** other than golden colour in **Arunachal Pradesh**. These colours are cinnamon, melanistic, gray, golden, and ocelot and tightly-rosette types.

Scientists from the **Zoological Society of London (ZSL)**, an international conservation charity, and **University College London (UCL)** have discovered these colours in **Dibang valley of Arunachal Pradesh**.

Colour morphs are basically occurrence of two or more discrete colour forms of the animal within a population, due to a genetic mutation. Colour morphs are thought to arise from random genetic mutations and take hold in the population through natural selection. Several ecological benefits such as occupying different habitats at different elevations — from wet tropical lowland forests to alpine scrubs — and providing camouflage while preying on pheasants and rabbits.

Asiatic Golden cat is a medium-sized wild cat that is found across eastern Nepal through north-eastern India to Indonesia and is listed as 'Near Threatened' on the IUCN Red List of Threatened Species.

**US Visa Now Requires Social media Profile**

USA from **now on** will seek from the visa applicants **the details of their social media usernames, address and phone numbers used in the last five years.**

It will impact more than **15 million applicants worldwide**. Almost 20% of applicants are from India. Most of those who have got a visa through **“family preference” will be impacted**.

### Per- and Polyfluoroalkyl

- According to the United States Food and Drug Administration, Per- and Polyfluoroalkyl (PFAs), **a chemical on non-stick cookware among many other things, has made its way into the human food chain**, according to the United States Food and Drug Administration (FDA).
- PFAs, currently unregulated in India, **are a group of artificial chemicals used in many items of daily use apart from cookware**, they are found in **resistant fabrics used for cleaning, paints and food packaging**.
- The chemicals can be fatal for human beings, traveling **through bloodstreams and collecting in the kidney and liver. Continuous deposition can lead to dysfunction of organs or cancer after a period**.

### Brazil's Dirty List

- Brazil's “dirty list”, a registry of employers that have engaged in **slave labour** is considered as one of the world's best tools **to end slave labour**.
- Created in 2004, it has been **hailed by the United Nations** as a key tool in Brazil's anti-slavery drive.
- Government guidelines state it can be updated at any time, but it must be published at **least every six months**.

## Concept Clearing Assignment

- Q.1. “Global Peace Index individually ranks the countries according to their peacefulness but collectively countries are doing little to maintain global peace”. Elucidate.
- Q.2. Recent Windrush crisis in Britain reflects the glimpse of a New Britain after the Brexit. Comment. Also, discuss the impact of new immigration laws of Britain on India-UK relations.
- Q.3. Slavery is not a horror of the past, it continues to exist throughout the world, even in the developed countries through means such as Human Trafficking. In the context of the statement highlight the reasons for prevalence of human trafficking in India. Discuss the possible ways to curb the incidence of rising human trafficking in the country.
- Q.4. What is 5G technology and how it is different from its predecessor - 4G technology? Discuss the challenges in its adaptation in India.
- Q.5. Albeit two third of our planet is composed of water there is an acute water shortage. The water crisis is the most pervasive, most severe, and most invisible dimension of the ecological devastation of the earth. In the context of the statement discuss the current status water crisis in the country. Do you think is it possible to achieve drinking water for all by 2024? Substantiate your views.
- Q.6. With the test of Anti-Satellite Weapon (ASAT) in recent times, India has shown visible signs that it also sees Outer-Space as an emerging theatre of War. In the context of the statement, list out the objectives behind the setting up of a Defence Space Research Agency. Discuss the areas it should focus upon to provide India with credible outer space defence capability.
- Q.7. Discuss the utility of Health index released by NITI Aayog. How far do you think it can help in bridging the regional health divide?
- Q.8. In the recent times data has been touted as the new oil, which makes access to data as a crucial aspect for future development. In context of the statement discuss India's quest for data localization. Highlight the shortfalls of data localization and suggest some alternatives.
- Q.9. A direct violation of an agreement by any party destroys the trust of other, but a disguised violation of an agreement by any party creates disgruntlement in the other. Critically analyze the statement in the context of recent Hong-Kong crisis.
- Q.10. Examine the declining Labour force participation in India in the light of recently published Periodic Labour Force Survey?

- Q.11. Do you think that government is approaching in right direction in empowering the disabled people? Suggest ways to strengthen the favorable ecosystem for persons with disabilities.
- Q.12. Discuss the challenges in the path of country's ambitious \$5 trillion mark by 2024 and areas needed to be strengthened in order to achieve the target?
- Q.13. Going digital is no longer an option, it is the default. In the context of the statement discuss the key recommendations of Nandan Nilekani Committee on digital Payments. Highlight the challenges associated with India's aspirations of becoming a digital economy.
- Q.14. Nutritional value of food is gained by body only when it is appropriately cooked, similarly internet values of a policy is achieved when it is conceived appropriately. In the light of the statement highlight the shortfalls of the draft of the New Education policy. Suggest some measures to address these shortfalls in the policy.
- Q.15. What do you understand by Interest Free Banking? Is it feasible adopt an Interest Free Banking in such a competitive banking ecosystem of India?

### P.T Oriented Questions

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| <p>Q1. Consider the following statements with respect to the "Ring of Fire":</p> <ol style="list-style-type: none"> <li>1. It resulted from subduction of continental tectonic plates beneath lighter oceanic plates.</li> <li>2. It has the world's biggest concentration of subduction zones.</li> <li>3. It stretches along the coastline of Atlantic Ocean.</li> </ol> <p>Which of the above statements is/are correct?</p> <p>(a) 1 only<br/>(b) 1 and 3 only<br/>(c) 2 only<br/>(d) 2 and 3 only</p> <p>Q2. Consider the following statements with reference to the Hidden Hunger:</p> <ol style="list-style-type: none"> <li>1. It refers to a more insidious type of deficiency caused by eating food that is cheap and filling but deficient in essential vitamins and micronutrients.</li> <li>2. In India, according to NFHSIII data, 63% of children below 5 years in urban areas (72% in rural area) are found to be anaemic.</li> </ol> <p>Which of the statements given above is/are correct?</p> <p>(a) 1 only<br/>(b) 2 only<br/>(c) Both 1 and 2<br/>(d) Neither 1 nor 2</p> <p>Q3. Consider the following statements with respect to the Plastic Park recently in news:</p> <ol style="list-style-type: none"> <li>1. It is primarily an awareness park highlighting the dangers of using plastics and also innovative</li> </ol> | <p>methods of reusing and recycling the plastics.</p> <ol style="list-style-type: none"> <li>2. Under phase-I of the scheme, four Plastic parks in the States of Assam (Tinsukia), Madhya Pradesh (Raisen), Odisha (Jagatsinghpur) &amp; Tamil Nadu (Thiruvallur) are approved for implementation till 2019-20.</li> <li>3. As per the Scheme guidelines, a Special Purpose Vehicle will be set up by the concerned State government, which will be the implementing agency, and responsible for all statutory approvals.</li> </ol> <p>Which of the statements given above is/are correct?</p> <p>(a) 1 and 3 only<br/>(b) 2 only<br/>(c) 3 only<br/>(d) 2 and 3 only</p> <p>Q4. Consider the following statements with reference to the Reciprocal Trade Agreement:</p> <ol style="list-style-type: none"> <li>1. It aims to give the President the tools necessary to pressure other nations to lower their tariffs and stop taking advantage.</li> <li>2. It violates the MFN status.</li> </ol> <p>Which of the statements given above is/are correct?</p> <p>(a) 1 only<br/>(b) 2 only<br/>(c) Both 1 and 2<br/>(d) Neither 1 nor 2</p> |
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- Q5. Consider the following statements with reference to the Asiatic Golden Cats
1. It is characterized as an endangered under IUCN.
  2. Golden is the only colour associated with this species of wild cat found in Arunachal Pradesh.

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
- Q6. Which of the following statements about Kelps is/are correct?
1. These are large brown algae seaweeds.
  2. These cool water species have special strategies to survive freezing temperatures and long periods of darkness.
  3. They currently occur on rocky coasts throughout the Arctic and the longest kelp recorded in the Arctic in Canada.

Select the correct option given below.

- (a) 1 and 2 only
  - (b) 2 and 3 only
  - (c) 1 and 3 only
  - (d) 1, 2 and 3
- Q7. Consider the following statements with reference to the Bishkek Declaration of SCO:
1. The member states call on the international community to promote global cooperation in combating terrorism with the central role of UN.
  2. It urged the global community to work towards a consensus on adopting the Comprehensive Convention on International Terrorism (CCIT).
  3. Member countries signed 14 decisions at the summit, including cooperation in sports, healthcare and environment.

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
- Q8. Recently Windrush Scandal was in news, consider the following statements:
1. The migrants were named after the Empire Windrush ship which first

- brought families from African countries between 1948 to 1971 to help rebuild post-war Britain.
2. The Windrush Generation faces deportation threat for being considered as illegal migrants.

Which of the above statements is/are true?

- (a) 1 only
  - (b) 2 only
  - (c) Both 1 and 2
  - (d) Neither 1 nor 2
- Q9. Consider the following statements with reference to the Kimberley Process intercessional meeting:
1. It is a tri-partite mechanism that unites participating governments, diamond industry and civil society.
  2. It is an international mechanism mandated by UN to reduce the flow of conflict diamonds which were being used to finance wars against legitimate governments.

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
- Q10. Consider the following statements with reference to the Per and Polyfluoroalkyl (PFAs) substances:
1. They are human-made chemicals that are found in a wide range of products used by consumers and industry.
  2. They have the ability to remain intact in the environment and bioaccumulation of certain PFAS may cause serious health conditions.

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
- Q11. Nandan Nilekani is associated with which of the following?
- (a) Railways Reforms
  - (b) Digital Payment
  - (c) Non-Performing Assets
  - (d) Non

Q12. Consider the following statements with reference to the Spectrum Roentgen Gamma:

1. It is an international space research and technology demonstration mission of Roskosmos (Russia).
2. The overall objective of the mission is to conduct the first all-sky survey with an imaging telescope to discover the hidden population of several hundred thousand obscured supermassive black holes.

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

Q13. Consider the following statements with reference to the Jal Hi Jeevan Hai scheme:

1. It is a crop diversification scheme with the objective to reduce the area of water guzzling crops in Rajasthan.
2. It promotes alternate crops like maize to replace rice and wheat, for sustainable agriculture.
3. It is intended to preserve nature, soil & water and promote sustainable farming.

Which of the statements given above is/are correct?

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

Q14. Consider the following statements with reference to the NitiAayog's health Index:

1. The report has been developed by NITI Aayog, with technical assistance from the WHO.
2. Kerala has emerged as the top-ranking state in terms of overall health performance.

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

Q15. Consider the following statements with respect to the Normalized Difference Vegetation Index (NDVI):

1. It quantifies vegetation by measuring the difference between near-infrared and red light.
2. It is used by farmers for precision farming and to measure biomass.
3. It has a negative correlation with graminoids.

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

Q16. Consider the following statements with reference to the e-cigarettes:

1. It produces an aerosolized mixture of the flavoured liquids and nicotine.
2. It can cause molecular and immunological toxicity and poses risk to foetaldevelopment and pregnancy.

Which of the above statements is/are correct?

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

Q17. Consider the following statements with reference to the Ambubachimela:

1. It is an annual Hindu mela held at Sabarimala Temple.
2. It is celebrated during the monsoon season.

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

Q18. What is Mudarabah?

- (a) It is associated with Mughal style of architecture.
- (b) Revenue collector during Mughal period.
- (c) It is associated with Islamic banking.
- (d) None

Q19. Consider the following statements with reference to the Fiscal Performance Index:

1. It is launched by Niti Aayog
2. The Index incorporates qualitative assessments of revenue expenditure, capital expenditure,

- revenues, fiscal prudence and the level of public debt.  
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
- Q20. Consider the following statements with reference to the DNA Technology Bill:  
1. Consent of individual for collecting DNA samples is compulsory in every case.  
2. It establishes a DNA Regulatory Board, and Minister of Science and Technology is the ex-officio chairman of the board.  
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
- Q21. Consider the following with reference to the Rule-49MA  
1. It is mentioned in RPA-1951.  
2. It restricts the political parties from making religiously toned slogans.  
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
- Q22. Consider the following statements with respect to the National Policy on Bio-fuels, 2018:  
1. It encourages setting up of supply chain mechanisms for biodiesel production from non-edible oilseeds, used cooking oil, short gestation crops.  
2. It categorizes Municipal Solid Waste (MSW) as Drop-in fuels and bio-CNG as Third Generation (3G) bio-fuels.  
3. It will provide additional income to the farmers.  
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
- Q23. Consider the following statements with reference to Furlough:  
1. It is granted to prisoners who are serving sentences less than 2 years.  
2. Prisoners can avail 14 days of furlough each year.  
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
- Q24. Consider the following statements with reference to the lapsing of bills in the Parliament:  
1. A bill originated in the Lok Sabha but pending in the Lok Sabha lapses on dissolution of the Lok Sabha.  
2. A bill pending in the Rajya Sabha but not passed by the Lok Sabha lapses on the dissolution of the Lok Sabha.  
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
- Q25. Consider the following statements about National Anti-Profitteering Authority:  
1. It has been constituted under Section 171 of the Central Goods and Services Tax Act, 2017.  
2. Its core function is to ensure that the benefits of the reduction in GST rates on goods and services passed on to the ultimate consumers.  
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
- Q 26. In the context of proposals to the use of hydrogen-enriched CNG (H-CNG) as fuel for buses in public transport, consider the following statements:  
1. The main advantage of the use of H-CNG is the elimination of carbon monoxide emissions.  
2. H-CNG as fuel reduces carbon dioxide and hydrocarbon emissions.

3. Hydrogen up to one-fifth by volume can be blended with CNG as fuel for buses.
4. H-CNG makes the fuel less expensive than CNG.

Which of the statements given above is / are correct?

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

Q27. Consider the following statements:

1. The- motion to impeach a Judge of the Supreme Court of India cannot be rejected by the Speaker of the Lok Sabha as per the Judges (Inquiry) Act, 1968.
2. The Constitution of India defines and gives details of what Constitutes 'incapacity and proved misbehaviour' of the Judges of the Supreme Court of India.
3. The details of the process of impeachment of the Judges of the Supreme Court of India are given in the Judges (Inquiry) Act, 1968.
4. If the motion for the impeachment of a Judge is taken up for voting, the law requires the motion to be backed by each House of the Parliament and supported by a majority of total membership of that House and by not less than two-thirds of total members of that House present and voting.

Which of the statements given above is/are correct?

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

Q28. Consider the following statements:

1. Coal sector was nationalized by the Government of India under Indira Gandhi.
2. Now, coal blocks are allocated on lottery basis.
3. Till recently, India imported coal to meet the shortages of domestic supply, but now India is self-sufficient in coal production.

Which of the statements given above is/are correct?

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

Q29. Consider the following States:

1. Chhattisgarh
2. Madhya Pradesh
3. Maharashtra
4. Odisha

With reference to the States mentioned above, in terms of percentage of forest cover to the total area of State, which one of the following is the correct ascending order?

- (a) 2-3-1-4
- (b) 2-3-4-1
- (c) 3-2-4-1
- (d) 3-2-1-4

Q30. In India, the use of carbofuran, methyl parathion, phorate and triazophos is viewed with apprehension. These chemicals are used as

- (a) pesticides in agriculture
- (b) preservatives in processed foods
- (c) fruit-ripening agents
- (d) moisturising agents in cosmetic