

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 - 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 and – accountability	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.	Environment; government initiatives, various judgments, pollution, degradation and conservation efforts		
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 land- land 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, POI and other important aspects of S&T			
GS - IV	Ethical issues related to family society, education, Corruption etc.	Ethics in public and private administration	Issues	Related laws and rules	Governance/ e-Governance	Ethics in international issues	Personalities and their teachings	Other important topics			
Misc.											

POLITY

Right to Protest

News Excerpt

The farmers' agitation was there for a long time. The farmers have democratic right to protest but no one can be allowed to take law into their hands.

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Protest- a fundamental right

- When a group, community or even a person goes up to protest, it is usually to showcase their disapproval or demur against any action, policy, statement, etc. of state or government or any organisation.
- Mostly the flow of protest is driven through political waves that also demonstrate the collective organisation of people to make the government or state address their issues and take steps to overcome them. Protests generally work in two ways, first, it helps a particular community or group or person to show their disagreement with the policy in question and second, it helps the government to identify the loopholes in their policy or action and work towards its betterment.

Tracing the history of protests back to the pre-independence period

- Protests in India has a long and eminent history. Until 72 years ago, India was a colony ruled by Britishers. In the post-independence era, its people became free citizens because of a long series of protests done by our freedom fighters.
- Mohandas Karamchand Gandhi aka Mahatma Gandhi, who is also known as the father of India taught the Indians citizens, the power of peaceful protest.
- So, be it the Swadeshi Movement of 1905 or Satyagraha in 1930 (Salt Satyagraha) these movements have shaped the history of the nation that was the peaceful protest against the colonial rule.
- Indians fought hard every battle to publicly express their views on colonial policies and to show dissent towards British colonization and to speak to and against the government.
- While exercising or enjoying the right to peaceful protest, one must adhere to their duties or responsibilities in a democratic country.

Constitutional Protections available to Right to Protest

- ✓ Article 51A makes it a fundamental duty for every person to safeguard public property and to avoid violence during the protests and resorting to violence during public protests results in infringement of key fundamental duty of citizens.
- ✓ Article 19(1)(a) of the Constitution elucidates right to free speech and expression. It includes that every person has the right to express their personal opinions but subjected to reasonable restrictions.
- ✓ Article 19(1)(b) states about the right to assemble peaceably and without arms. Thereby, the right to peaceful protest is bestowed to Indian citizens by our Constitution.
- ✓ Article 19(2) imposes reasonable restrictions on the right to assemble peaceably and without arms and to freedom of speech and expression as none of these rights are absolute in nature.
- ✓ The reasonable restrictions are imposed in the interests of the sovereignty & integrity of India, the security of the State, friendly relations with foreign States, public order, decency or morality or in relation to contempt of court, defamation or incitement to an offence.

Public as Watchdog of the Government

- Public acts as a watchdog and monitors every movement of the government. There have been many instances where the public acted as watchdog and number of protests were conducted as a response to injustice or misuse of power.

- Chipko movement (1973) in the upper Alaknanda valley which was a forest conservation movement in India too created a precedent for commencing non-violent protest in India followed by Andhra and Telangana movements in India and many more.
- In *Ramlila Maidan Incident v. Home Secretary, Union of India & Others (2012)*, the Supreme Court had ruled that “Citizens have a fundamental right to assembly and peaceful protest that cannot be taken away by an arbitrary executive or legislative action”. Even the 2012 Delhi gang rape agitated every fraction of society that led to tremendous public outrage and people were very clear on expressing that they have had enough.
- In 2011, when anti-corruption activist Anna Hazare began a hunger strike at Jantar Mantar in New Delhi, the movement led to the resignation of the then Agriculture Minister from the group of ministers that had been charged with reviewing the draft Jan Lokpal bill.

Why is it essential for upholding democracy?

- ✚ It is natural that the government comes up with many policies from time to time in the interest of the citizens and overall betterment of the country. These policies are monitored by the people of the country and it is through them that the opinions on these policies could be made. Since the citizen is more like a watchdog of these policies, any mistake or shortcoming that these policies have can be addressed by them and it can be solved by peaceful demonstration.
- ✚ Even during the colonial rule, various communities organized public meetings, dharnas, protests, etc. that were a sign of protest as to the elimination of the British rule and demand for independent India. The state is on the other hand required to respect and address the protests because the Constitution also makes it necessary for the state to ensure the Fundamental Right to Freedom of speech and expression. However, the motive of the protest shouldn't be inspired by interrupting the regular functioning of the state deliberately.
- ✚ When the protest is inspired by such political waves, it becomes unethical and unfair in its overall substance.

Conclusion

Protesting is not only a fundamental right granted by the Indian Constitution but protesting against injustice is also a moral duty. By now, we are pretty much clear with the fact that the constitution safeguards the existence of Right to protest. In some instances, it is considered to be ‘treasure’ in respect to ensure the right of free speech and peaceful protest and it should be protected in every situation.

PEPPER IT WITH
 Fundamental Right to Speech and Expression, Right to Movement and Settle

However, the twist is that these rights are not absolute in nature and should be subjected to reasonable restrictions as provided under Article 19(2) which is important in the interest of sovereignty and integrity of the country. The Fundamental rights do not exist in isolation and there should be a mutual balance between the right of protestor and commuter.

India Internet Governance Forum

News Excerpt

Soon, India will be hosting the India Internet Governance Forum (IIGF or India IGF), under the aegis of the United Nations Internet Governance Forum (or UN IGF). This is a good time to pause and evaluate a new universe that was created a few decades ago, and transformed how humanity interacts, works, lives and fights.

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Pre-Connect

IGF is a multi stakeholder platform bringing together representatives from various groups, considering all to be at par to discuss public policy issues related to the Internet. India, with around

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1.4 billion citizens, 1.2 billion mobile users, and 800 million Internet users, demonstrates the growing Internet culture in the country.

E-Governance and National Security becomes of paramount importance in India, especially with enhanced cyber space. India IGF (IIGF) will provide the ability to facilitate discussions between intergovernmental organisations, private companies, technical community, academic community and civil society organisations who are involved in Internet governance-related public policy issues.

This policy dialogue is carried out on a co-equal basis through open and inclusive processes. This mode of engagement is referred to as the multistakeholder model of Internet Governance, which has been one of the key reasons for the Internet's success.

The need of the Cyber Security

- We developed a parallel cyber universe for almost everything we do in the physical dimension from love to war, we replicated everything to the cyber universe and accelerated it all. Life has become easier, better, more convenient and healthier. Life has also become polarised, hateful, misinformed and dangerous. These are the contradictory aspects of the new universe that was created from bits and bytes and wires and chips.
- So, how did we end up having an UN IGF as a place of discussion for guiding the internet? It started in pretty much the same way that the Indian National Congress was formed as a pressure releaser for the murmurings and discontent from the existing regime. But what was the issue with the then existing internet regime in 2006?
- The root of the problem lies in many things, including the root of the internet the 13 root servers and who controls them. In a very simplistic way, the internet is primarily run by ICANN (Internet Corporation for Assigned Names and Numbers) and Internet Engineering Taskforce (IETF).
- ICANN (formerly IANA) defines the domain names that we use and helps us find the servers where these domain names hold the information that we aim to seek. So, in a way, it is the postal service of the internet, without which, one would not be able to access information on the internet in the easy manner that we access it today.

Internet Corporation for Assigned Names and Numbers (ICANN)

It is a US-based not-for-profit public-benefit corporation whose role is to coordinate, at the overall level, the global Internet's systems of unique identifiers, and to ensure the stable and secure operation of these systems.

ICANN's main responsibility is to coordinate the allocation and assignment of the three sets of unique identifiers for the Internet (also known as 'critical Internet resources': domain names, Internet protocol (IP) addresses and autonomous system numbers, and protocol port and parameter numbers), as well as to facilitate the coordination of the operation and evolution of the Domain Name System (DNS) root name server system.

The history of ICANN traces back to the creation and the evolution of the Internet itself. In 1969, the first message was sent via the Arpanet, a U.S. Department of Defense network and precursor to the global Internet. Three years later, Jon Postel started to record socket numbers for the Arpanet in his notebook. His registry eventually became the IANA, which manages the coordination of the Domain Name System (DNS).

ICANN was founded in 1998 and grew out of a U.S. Government commitment to transfer the policy and technical management of the DNS to a non-profit corporation based in the U.S. with global participation. The IANA Stewardship Transition was completed in October 2016 thanks to the work and dedication of the Internet community worldwide.

- And where are these “addresses” or DNS (Domain Name System) stored? They are kept in a redundant manner in the 13 root servers across the USA, Europe and a lone one in Japan. So, if someone goes and deletes the “.in” Top Level Domain (TLD) for India from these root servers, then none of the websites that end with “.in” will be accessible. In a world that is increasingly dependent on the internet for business and for how we live, the consequences would be catastrophic. And therefore, it became pertinent to ask who controls these servers.
- The answer obviously is that ICANN controls them. And so, in 2006, who controlled ICANN? ICANN was operating under a contract from the Department of Commerce of the USA government. So, in essence, the internet was being controlled by the USA.
- In addition, the ultimate control of the DNS root zone was under the National Telecommunications and Information Administration (NTIA), an agency of the US Department of Commerce. Considering that the US Department of Commerce could unilaterally terminate the Affirmation of Commitments with ICANN, the authority of DNS administration was controlled by a single state, namely the United States.

United Nations Internet Governance Forum (UN IGF)

- Imagine our military is preparing to meet a contingent situation at the borders and the internet is brought down for India. Our e-commerce, logistics, supply-chain and pretty much the entire economy will come crashing down. How will our military be able to secure the supply lines required for meeting an operational requirement at the borders? Or for that matter, how will we supply grains to those who need it? If this still looks like science fiction, do pause and digest that automobile manufacturers could not manufacture enough vehicles in the last few months as there weren't enough semiconductor chips available. Every process is dependent on digital, semiconductors and the internet.

What is a Domain Name and How Does DNS work?

The Domain Name System (DNS) is the Internet's system for mapping alphabetic names to numeric Internet Protocol (IP) addresses like a phone book maps a person's name to a phone number. For example, when a Web address (URL) is typed into a browser, a DNS query is made to learn an IP address of a Web server associated with that name.

Using the www.example.com URL, example.com is the domain name, and www is the hostname. DNS resolution maps www.example.com into an IP address (such as 192.0.2.1). When a user needs to load a webpage, a conversion must occur between what a user types into their web browser (www.example.com) into an IP address required to locate the www.example.com site.

The DNS system is an open worldwide network of database name servers that include 13 authoritative name servers that serve the DNS root zone level, known as "root servers". A root server (also called a DNS root nameserver) receives a DNS query that includes a domain name (e.g., www.thousandeyes.com), and responds by directing that request to a top-level domain (TLD) name server, based on the TLD of that domain such as .com, .net, and .org. It directly responds to requests for DNS records in the root zone by returning an appropriate list of the authoritative TLD name servers for the appropriate TLD that can resolve the initial DNS lookup request for an IP address of that domain name.

Internet Protocol (IP)

IP addresses are the unique identifying numbers that all computers and devices connected to the Internet depend on to communicate with each other. When the pool of available unallocated addresses for IPv4, the original IP addressing system, completely depleted in 2011, the Internet began a transition to IPv6, a newer Internet Protocol system.

- In this context, when the comity of nations started questioning the hegemony of the USA on the internet, it led to the formation of the UN IGF, to let people discuss and let the steam out.
- When the involvement of NTIA started in 1998, it was supposed to be temporal. But it wasn't until April 2014 at an ICANN meeting held in Brazil, partly driven by the Snowden revelations of US snooping, that this situation changed, resulting in an important shift of control transitioning administrative duties of the DNS root zones from NTIA to the IANA during a period that ended in 2016. The control has apparently now shifted to an innovative governance mechanism termed as "Multistakeholderism".
- The idea of multistakeholderism sprouted from the spirited movement of trying to bring the Internet under the control of the International Telecommunication Union (ITU), which is under the UN. It was an innocuous movement as it was based on the unassailable premise that the internet belongs to all and hence it cannot be controlled by only one government and hence it should be brought under the UN.
- But as it turns out, the UN is no parable of democratic principles. It is pretty much controlled by the Security Council, which has, among others, nations such as China and Russia -- both of which are not usually known to play by the rule of law. Thus, there was a real danger of the internet slipping into the dark abyss of government controls and severe censorship. So, what could one do?
- Clearly, it is unacceptable to have one government control something as powerful as the internet, but then again, handing it over to an institution where rogue regimes have disproportionate say was also not an option. Under the circumstances, the concept of multistakeholderism was invented and it basically said: let the global society run the internet, bypassing the deadening hands of the various governments. And that is how the Internet is now supposedly being governed. And this concept got created at the UN IGF.
- To further this concept, each country started holding their own IGF under the aegis of the UN IGF. And that is how India will be hosting its first India Internet Governance forum in the second week of November, against the background of the fierce digital geopolitics that the platform was a part of. India IGF.in will be graced by the Prime Minister and many of the drivers of policy making and captains of the industry, including Ratan Tata, Mukesh Ambani, Ajit Doval and so on.
- It would also highlight the stupendous progress made by India in setting up one of the largest internet networks in the world and in having one of the largest number of people connected to the internet.

PEPPER IT WITH
Salient features of the
Information and Technology Act

Conclusion

It is a time to celebrate the digital achievements of India as a nation and for Indians as a people and also to accept responsibility to ensure that the rest of the world benefits from innovations sprouting out of India, from the UPI payments system to all other Internet innovations that we have built at scale. It is the coming of age for the Indian Internet Ecosystem. And which better year to have IndiaIGF than the year of a record number of Internet startups becoming Unicorns.

Symbols of Political Parties

News Excerpt

An advocate at the Punjab and Haryana High Court has sent a legal notice to the State Election Commission (SEC) on the issue of allowing candidates to contest municipal elections on party symbols.

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Pre-Connect

- The Election Commission is a permanent and an independent constitutional body which ensures free and fair elections in the country. Article 324 of the Constitution provides that the power of superintendence, direction and control of elections to parliament, state legislatures, the office of

president of India and the office of vice-president of India shall be vested in the election commission.

- The election commission is not concerned with the elections to panchayats and municipalities in the states. For this, the Constitution of India provides for a separate State Election Commission (243K).
- Political parties are voluntary associations or organised groups of individuals who share the same political views and who try to gain political power through constitutional means and who desire to work for promoting the national interest.
- The Election Commission registers political parties for the purpose of elections and grants them recognition as national or state parties on the basis of their poll performance. The other parties are simply declared as registered-unrecognised parties.
- The recognition granted by the Commission to the parties determines their right to certain privileges like allocation of the party symbols, provision of time for political broadcasts on the state-owned television and radio stations and access to electoral rolls. The registration of all political parties is governed by the provisions of Section 29A of the Representation of the People Act, 1951.
- Every national party is allotted a symbol exclusively reserved for its use throughout the country. Similarly, every state party is allotted a symbol exclusively reserved for its use in the state or states in which it is so recognised.
- A registered-unrecognised party, on the other hand, can select a symbol from a list of free symbols. The Commission specifies certain symbols as ‘reserved symbols’ which are meant for the candidates set up by the recognised parties and others as ‘free symbols’ which are meant for other candidates.

Highlights

- Election symbols could be allotted to contesting candidates by the Returning Officer (RO) concerned from the list of free symbols but the reserved symbols of political parties such as lotus of BJP, hand of Congress, key of JJP and spectacles of INLD could not be allotted since there was no provision in existing state municipal laws.
- The elections to 52 urban local bodies in Haryana have to be conducted by the SEC soon. Meanwhile, it might appear highly surprising but the fact is that legally, the elections to all three types of urban local bodies in Haryana viz. municipal corporations/councils/ committees could not be conducted on the basis of political parties, including by allotment of reserved party symbols.
- The same is being done on the basis of Election Symbols (Reservation and Allotment) Order which was issued by the SEC from time to time usually before elections which also defined political parties. Petitioner has contended that such an order was not in consonance with either the Haryana Municipal Act, 1973 or the Haryana Municipal Corporation Act, 1994 since both laws have no provision for conduct of municipal elections on the basis of political parties.
- There is no mention in this regard in Haryana Municipal Election Rules, 1978 as well as Haryana Municipal Corporation Election Rules, 1994 framed by the state government for conduct of civil polls.
- Earlier this year, neighbouring Himachal Pradesh amended its Municipal Corporation Act, 1994 to make provision for elections of MCs in the state on symbols of political parties after which elections to four MCs in the state viz. Dharamsala, Palampur, Mandi and Solan were possible on party symbols of political parties.

PEPPER IT WITH
Conditions for Recognition as a National Party and the State Party, Rise and Dysfunctions of Regional Parties

Conclusion

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It is not mandatory to register with the Election Commission but registering as a political party with the EC has its advantage in terms of intending to avail itself of the provisions of the Representation of the People Act, 1951, (relating to registration of political parties).The candidates set up by a political party registered with the EC will get preference in the matter of allotment of free symbols vis-à-vis purely independent candidates. More importantly, these registered political parties, over course of time, can get recognition as a ‘state party’ or a ‘national party’ subject to the fulfilment of the conditions prescribed by the Commission in the Election Symbols (Reservation and Allotment) Order, 1968.

Jurisdiction of Border Security Force

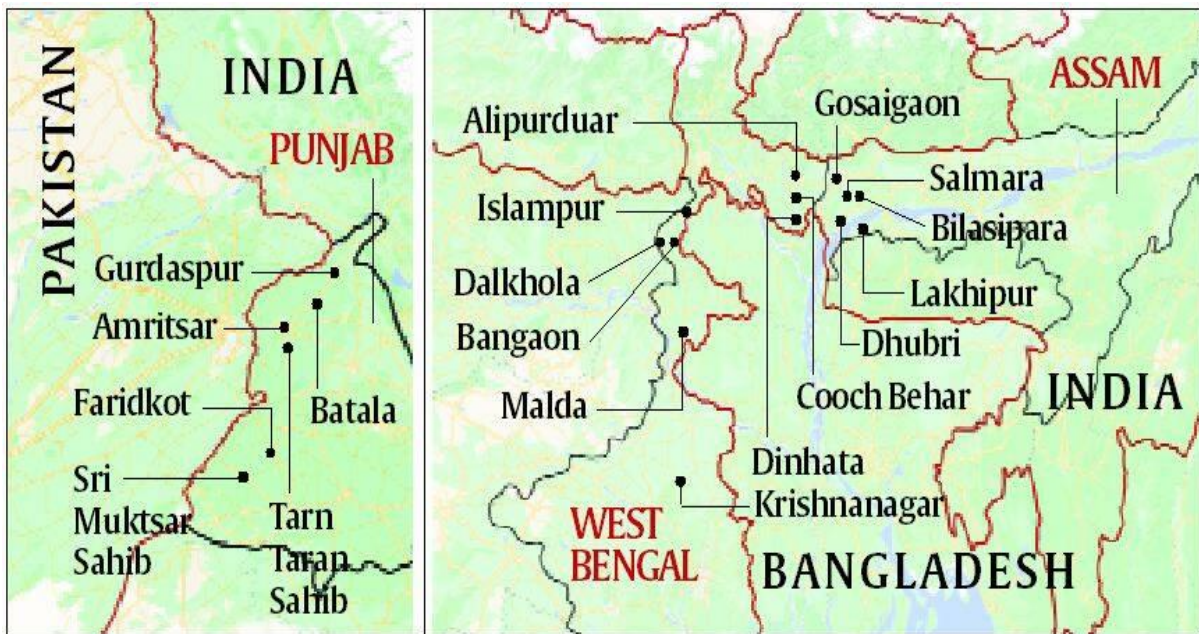
News Excerpt

The Ministry of Home Affairs recently extended the jurisdiction of the Border Security Force (BSF) in the states of West Bengal, Assam and Punjab- a move that has invited criticism from the states of Punjab and West Bengal Government for violating the federal structure and infringing the rights of the state police.

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Pre-Connect

- The recent decision to extend the operational jurisdiction of the Border Security Forces (BSF) in the three states that share international borders has triggered a fresh tussle between the Centre and the states in India. In the states of Assam, West Bengal, and Punjab where the BSF jurisdiction has been extended, Punjab and West Bengal are headed by opposition parties, who



have protested against this decision of the ruling party in the Centre, accusing it to be an act of centralisation of power.

- In the said order released by the Union Home Ministry under the Border Security Force Act of 1968, the BSF under the Centre, which is entrusted with guarding India’s international borders, will have a jurisdiction of up to 50 kms inside the international borders in these three states.
- The powers of the BSF, which include authority to arrest and search, were limited to up to 15 kms in these states up until now. In the same order, BSF’s area of operation in Gujarat has been reduced from 80 kms from the border to 50 kms. However, BSF’s jurisdiction of power has only been increased with regard to the authority they have under Criminal Procedure Code, Passport (Entry into India) Act of 1920, and the Passport Act of 1967.

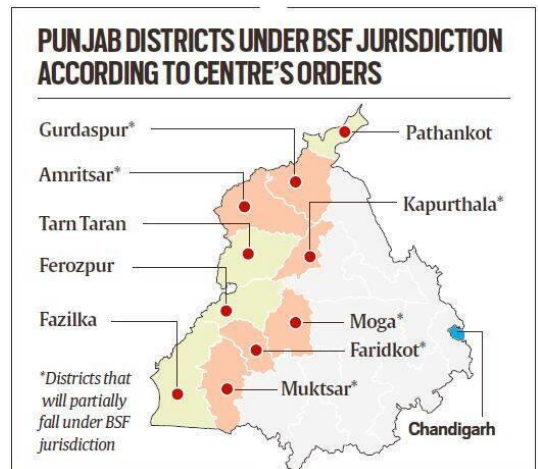
- Their power to arrest, search, and seize under other laws like NDPS (Narcotic Drugs and Psychotropic Substances) Act, Arms Act, and Customs Act remains unchanged.
- In 1969, the BSF first got powers to arrest and search under the CrPC with respect to certain laws such as the Foreigners Act, The Passport Act, forex laws and Customs Act. BSF sources said even before 2014, they had a jurisdiction of 15 km inside the border in several states.
- At that time, border areas were sparsely populated and there were hardly any police stations for miles. To prevent trans-border crimes, it was felt necessary that BSF is given powers to arrest. While police stations have now come up near the border, they continue to be short-staffed.

What kind of powers can the BSF exercise in this jurisdiction?

- Its jurisdiction has been extended only in respect of the powers it enjoys under Criminal Procedure Code (CrPC), Passport (Entry into India) Act, 1920 and the Passport Act, 1967. BSF currently has powers to arrest and search under these laws.
- It also has powers to arrest, search and seize under the NDPS Act, Arms Act, Customs Act and certain other laws. Its jurisdiction under these laws has not been changed, meaning its powers under these will continue to be only up to 15 km inside the border in Punjab, Assam and West Bengal, and will remain as far as 80 km in Gujarat.

Why has the government extended the jurisdiction?

- ✓ The objective of the move is to bring in uniformity and also to increase operational efficiency. Earlier we had different jurisdictions in different states. This has been done to bring uniformity to our jurisdiction.
- ✓ It is believed that BSF often gets information relating to crime scenes that may be out of their jurisdiction.
- ✓ It is also said that the move was also necessitated due to increasing instances of drones dropping weapons and drugs in Jammu and Kashmir and Punjab. However, the kind of drones spotted so far does not have a range beyond 20 km.
- ✓ There has been no official explanation for why BSF's jurisdiction has not been increased under the Arms Act, Customs Act and NDPS Act, which cover most of the smuggling offences on the border and deal with far greater offences. If BSF catches drugs beyond its jurisdiction, it can always involve the Narcotics Control Bureau, or in case of arms, the National Investigation Agency. In other matters, there may be issues with the local police.



Will it impact police jurisdiction?

- At a basic level, the states can argue that law and order is a state subject and enhancing BSF's jurisdiction infringes upon powers of the state government. This is not an attack on the federal structure. Rather this is going to complement the efforts of the local police. It is an enabling provision. It's not that the local police can't act within the jurisdiction of the BSF. It's just that sometimes we don't have enough time and so BSF has been empowered to act till a greater distance and in turn strengthen the hands of the state police.
- BSF do everything in coordination with sister agencies. BSF will inform the local police even now. The state police have better knowledge of the ground. There is no conflict with the state police. In coming days, the state police will feel happy about these changes as they will find their state is more secure.
- It was also pointed out that BSF cannot prosecute offenders in any case. BSF can't file chargesheets. BSF have to hand over every arrested individual and every seized item to the state police or Customs. There have been instances when people have been caught and the defence has argued it was outside the jurisdiction of BSF, and the accused have been let off.

National Security versus State Autonomy Debate

- While the Punjab and West Bengal governments have accused the Centre of undermining the federal distribution of powers, the Centre defended the new order by asserting that strengthening the BSF's capacity to protect India's international borders from illegal encroachments and cross-border crimes "which includes checking smuggling of drugs, ammunition, busting the cattle smuggling and fake currency rackets" is necessary. The aim of the recent amendment is said to adopt a uniform approach towards the BSF's jurisdiction in the border states of Punjab, West Bengal, Gujarat, Rajasthan, and Assam where it can now operate within 50 kms area from the border.
- The Central government attributed the step to the increased instances of drones dropping weapons and drug trafficking in the border areas of Jammu and Kashmir and Punjab. It is also argued that the earlier limited jurisdiction of the BSF restricted its capacity to operate effectively in the "points of origin" in the deeper areas within these states, where the smuggling of goods and involved networks thrive beyond its reach. It has been emphasised as an assurance against apprehensions of increase in police powers as this decision does not give BSF the power to investigate crimes and the suspects held will be handed over to the local authorities of the respective state governments.

Conclusion

It is undeniably true that a country of India's size and importance with multiple porous and sensitive international borders in a region as volatile as South Asia needs to be cautious about its border security. This is more crucial as cross-border terrorism and other crimes have the potential to adversely impact

PEPPER IT WITH
National Emergency, President's Rule, Financial Emergency, Criticism of the Emergency Provisions

India's national security concerns. But at the same time, as states in India's federal polity are entrusted with the primary responsibility of managing the law and order within its jurisdiction, all decisions regarding the security architecture that impacts states' domain of authority must be discussed adequately with the concerned state governments.

Enhancing police capacity and facilitating grounds for greater cooperation between BSF and state police should be initiated jointly by the Centre and states. Institutional channels of federal communication, like the Inter-State Council, should be rejuvenated for much-needed dialogue and consultation between the Centre and the states, transcending compulsions of political partisanship. Only a consultative federal structure can further strengthen India's democratic polity.

India to host 'Gen Next' Leaders

News Excerpt

Chairman of Indian Council for Cultural Relations (ICCR) has said that as part of Azadi ka Amrit Mahotsav, India will host young leaders from 75 democracies under the initiative Gen-Next Democratic Network.

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Pre-Connect

- Azadi Ka Amrit Mahotsav is an initiative of the Government of India to celebrate and commemorate 75 years of progressive India and the glorious history of its people, culture and achievements.
- This Mahotsav is dedicated to the people of India who have not only been instrumental in bringing India thus far in its evolutionary journey but also hold within them the power and potential to enable government's vision of activating India 2.0, fuelled by the spirit of Atmanirbhar Bharat.
- Azadi ka Amrit Mahotsav is an embodiment of all that is progressive about India's socio-cultural, political and economic identity. The official journey of "Azadi ka Amrit Mahotsav" commences on

PEPPER IT WITH
Youth Parliament, National Youth Policy, Rashtriya Yuva Sashaktikaran Karyakram

12th March, 2021 which starts a 75-week countdown to our 75th anniversary of Independence and will end post a year on 15th August, 2023.

- ICCR is all about exchange of cultures, creating mutual understanding, not a one-way street.

Gen-Next Democratic Network

- Young leaders below the age of 35 from the ruling party, opposition party and other key parties are being invited and the first batch will include leaders from Bhutan, Sri Lanka, Bangladesh, Japan, Indonesia, Chile and Zambia.
- The objective behind the event is to give the young leaders a comprehensive idea about India's rich democratic culture.
- India will be hosting young leaders under the age of 35, in November, as a part of a new initiative called "Gen Next democratic network". The event is planned by ICCR, which happens to be an autonomous body under the Ministry of External Affairs, which deals with policies relating to India's external cultural relations.
- India will be celebrating Azadi ka Amrut Mahotsav by emphasising on India's rich democratic traditions. India is establishing, one of the major events, Gen next democratic network.
- It is a program in which India is inviting young leaders below the age of 35 from 75 different democracies. The structure includes countries representing regions and continents like South East Asia and Africa. These people are going to be future leaders of those countries. So, they get a comprehensive idea of India's rich democratic culture.
- The speaker of the Lok Sabha will inaugurate the event. They will be staying in India for a week. They will stay in Delhi for 3 days, where they will be hosted by the Indian parliament. These young leaders will go one state at least with ICCR approaching the state government.

Conclusion

The initiative comes as India has been taking a lead role in terms of geo politics of democracies. From quad grouping, where leaders from India, US, Japan and Australia, met in person at Washington to Prime Minister referring to India's democratic credentials at his United Nations General Assembly speech calling the country as "Mother of democracy", India's role is increasing. It will laud India's approach towards democracy.

Indian Telegraph Right of Way (Amendment) Rules, 2021

News Excerpt

The Government has notified the Indian Telegraph Right of Way (Amendment) Rules, 2021 to incorporate the provisions related to nominal one-time compensation and uniform procedure for establishment of Overground Telegraph Line in the Indian Telegraph Right of Way Rules, 2016.

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Fixes one-time compensation at ₹1,000 per km

- There will also be no fee other than administrative fee and restoration charges for establishing, maintaining, working, repairing, transferring or shifting the underground and over ground telegraph infrastructure.
- These amendments will ease RoW related permission procedures for establishment and augmentation of digital communications infrastructure across the country.
- With a robust pan India digital infrastructure, the digital divide between rural-urban and rich-poor will be bridged.

PEPPER IT WITH
Overground Telegraph Line (OFC), Right of Way (RoW), Digital Infrastructure

E-governance and financial inclusion

- e-governance and financial inclusion will be strengthened, doing business will be easy, information and communication needs of citizens and enterprises will be fulfilled, and ultimately

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the dream of India’s transition to a digitally empowered economy and society will be translated into a reality.

- As part of the Gati Shakti National Master Plan, this directive stipulates that necessary infrastructure be built at the lowest logistical costs.
- The amount of one-time compensation for establishment of overground telegraph line will be maximum one thousand rupees per kms. Documentation for the Right of Way application for overground telegraph line has been made simple.

Conclusion

According to industry veterans, the desired clarity for laying overhead OFC is also available with this amendment in place now, which will go a long way in creating necessary infrastructure to cater to forthcoming 5G rollouts in the country.

National Human Rights Commission

News Excerpt

The National Human Rights Commission (NHRC) has received massive criticism over a topic for its annual debate competition. The topic for the debate was, "Are human rights a stumbling block in fighting evils like terrorism and Naxalism"?

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Pre-Connect

- The National Human Rights Commission is a statutory (and not a constitutional) body. It was established in 1993 under a legislation enacted by the Parliament, namely, the Protection of Human Rights Act, 1993.
- The commission is the watchdog of human rights in the country, that is, the rights relating to life, liberty, equality and dignity of the individual guaranteed by the Constitution or embodied in the international covenants and enforceable by courts in India.

Highlights

The competition which, has been going for the past 25 years, is co-hosted with one CAPF every year, but the topic of discussion is finalised by the NHRC. This year, the debate was co-hosted by the NHRC and the Assam Rifles, whose team won the “best team rolling trophy” after winning the final round.

Historical Background

The NHRC has conducted annual debates on human rights for forces since the 1990s. In 2019, participants held spirited debates on "Terrorism & militancy in the country can be tackled effectively while observing human rights". That was the year when a member of the CRPF courted controversy with a fiery speech on how "terrorism could not be fought by maintaining human rights".

Law students to help prisoners with bail applications, appeals: NHRC

- NHRC announced a pilot project for improving access to justice for prisoners of 16 Delhi jails by allowing law students to help them in filing bail applications and appeals.
- The NHRC signed an MoU with Delhi Prisons, the National Law University, Delhi and the Delhi State Legal Services Authority. The project would also help in fostering a sense of public service in the students of NLU.
- The aim of this collaborative exercise is also to promote and protect the human rights of prisoners besides inculcating professionalism among the law students. The students from NLU Delhi now may assist the prisoners in filing bail applications and appeals and other research work that may help the court with factual information and ensure early justice of the inmates under the supervision of the DSLSA.

Payment of stipend

- ✓ The NHRC would monitor the project and provide the payment of stipend to the students. The NLU would nominate 48 third-year and above students. The students would visit the prisons under the DSLSA legal aid counsels’ supervision for one week every month for a year.

- ✓ The students will assist the DSLSA in spreading legal awareness, legal research, drafting, representation of cases before the court of law under the DSLSA empaneled lawyers.
- ✓ The DSLSA, besides the supervision of students for conducting survey of jail inmates, will appoint an advocate in each of the 16 jails of Delhi for this purpose. After the certification of the services of the students, they will be paid ₹300 per day conveyance allowance.

PEPPER IT WITH
Election Commission, Union
Public Service Commission,
Finance Commission

Conclusion

The arguments given by the security personnel for and against the motion in the debate were of very high standard and indicated their sensibility and understanding of the respect human rights required to be given during their operations. A balance was required to be observed to ensure proportionate use of force, if the situation demanded so, but there was no room for fake encounters and instant justice.



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SOCIAL ISSUES

Swachh Bharat Mission-Urban 2.0 and AMRUT 2.0

News Excerpt

Prime Minister recently has launched Second Phase of flagship programme Swachh Bharat Mission-Urban (Swachh Bharat Mission-Urban 2.0) and Atal Mission for Rejuvenation and Urban Transformation (AMRUT 2.0) to mark Mahatma Gandhi Jayanti on October 2.

The Swachh Bharat Mission 2.0 (SBM 2.0) aims to make India's cities garbage-free and the aim of AMRUT 2.0 is to improve sewage and septic management, ensuring that no sewage drains anywhere in rivers.

Pre-Connect

About Swachh Bharat Mission-Urban:

- The Swachh Bharat Mission - Urban (SBM-U), a centrally sponsored scheme, launched on 2nd October 2014 aims at making urban India free from open defecation and achieving 100% scientific management of municipal solid waste in 4,041 statutory towns in the country.
- The Swachh Bharat Mission-U 2.0 is being implemented under the **Ministry of Home and Urban Affairs**.

The objectives of the mission

- Elimination of **open defecation**
- Eradication of **Manual Scavenging**
- Modern and Scientific **Municipal Solid Waste Management**
- To effect behavioral change regarding healthy sanitation practices
- Generate awareness about **sanitation** and its linkage with **public health** Capacity Augmentation for ULB's.
- To create an enabling environment for private sector participation in **Capex** (capital expenditure) **and Opex** (operation and maintenance)

Components of the Mission

The Mission has the following components:

Household toilets, including conversion of insanitary latrines into pour-flush latrines; **Community toilets, Public toilets, Solid waste management, IEC & Public Awareness** Capacity building and **Administrative & Office Expenses (A&OE)**

Funding pattern

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Swachh Bharat Mission (Urban)

- > Cabinet approves the continuation of **Swachh Bharat Mission (Urban) [SBM U] till 2025-26** for sustainable outcomes
- > Financial outlay of **₹1,41,600 crores for SBM-U 2.0, 2.5 times more** than the first phase of the mission
- > **Targets Complete elimination of Open Defecation**, including fecal sludge management in all cities with **less than 1 lakh population**
- > All cities to achieve at least **3-star Garbage Free certification**

Benefits:

- > Eradication of hazardous entry into sewers and septic tanks
- > No untreated wastewater to pollute water bodies
- > Achievement of the vision of a **"Garbage Free" Urban India**

The funding pattern between the Central Government and the State Government/ Urban Local Bodies (ULBs) is **75:25**. In case of North Eastern States and the states with **Special Category**, the **funding pattern** is **90:10**.

About Atal Mission for Rejuvenation and Urban Transformation (AMRUT)

<p><u>SBM 2.0</u></p> <ul style="list-style-type: none">➤ It has been made continue for five years till 2025-26. The outlay of SBM-U 2.0 is around ₹1.41 lakh crore.➤ It envisions to make all cities total ‘Garbage free’ and water secure and ensures ‘grey’ and ‘Black’ water management in all cities other than those covered under AMRUT.➤ Ensuring complete access to sanitation facilities to serve additional population migrating from rural to urban areas in search of employment over the next 5 years➤ It ensures to make all urban local bodies as ODF+ (focuses on toilets with water, maintenance and hygiene) and those with a population of less than 1 lakh as ODF++ (toilets with sludge and septage management), thereby achieving the vision of safe sanitation in urban areas.➤ It ensures to facilitates Complete liquid waste management in cities in less than 1 lakh population.SBM-Urban 2.0 will ensure that all wastewater is safely contained, collected, transported and treated .➤ Ensuring 50 per cent of cities to make ‘WaterPlus’ aims to sustain toilets by treating and reuse of water . It contributes water conservation and reuse under the Jal Shakti Abhiyan and is in alignment with United Nations-mandated Sustainable Development Goal No 6 on clean water and sanitation.➤ Under this Mission, waste processing facilities will be set up, with a focus on phasing out single use plastic.➤ Construction & demolition waste processing facilities will be set up and mechanical sweepers deployed in National Clean Air Programme cities and in cities with more than 5 lakh population.➤ Under this scheme, it is expected that all cities will achieve at least 3-star Garbage Free certification.➤ The Mission will focus on source segregation of solid waste, utilizing the principles of 3Rs (reduce, reuse, recycle)	<p><u>Amrut 2.0</u></p> <ul style="list-style-type: none">➤ It has been made continued till the years of 2-25-26. The outlay of AMRUT 2.0 is around ₹2.87 lakh crore.➤ AMRUT 2.0 aims to provide 100% coverage of water supply to all households.➤ Around 4,700 urban local bodies by providing about 2.68 crore tap connections and 100% coverage of sewerage and septage in 500 AMRUT cities by providing around 2.64 crore sewer/ septage connections.➤ It will promote circular economy of water through formulation of City Water Balance Plan for each city, focusing on recycle/reuse of treated sewage, rejuvenation of water bodies and water conservation..➤ ‘Pey Jal Survekshan’ will be conducted in cities to ascertain equitable distribution of water, reuse of wastewater and mapping of water bodies .➤ Rejuvenation of water bodies and urban aquifer management will be undertaken to augment sustainable fresh water supply.➤ Recycle and reuse of treated wastewater is expected to cater to 20% of total water needs of the cities and 40% of industrial demand.➤ Digital economy will be promoted through being a Paperless Mission.➤ Technology Sub-Mission for water will leverage latest global technologies in the field of water.➤ The Mission seeks to promote AatmaNirbhar Bharat through encouraging Startups and Entrepreneurs.➤ It will lead to promotion of GIG economy and on-boarding of youth & women.Urban Water Information System through NRSC will be developed, leading to Aquifer Management system.➤ The AMRUT-2.0 Mission will promote Public Private Partnership (PPP). It has been mandated for cities having million plus population to take up PPP projects worth minimum of 10 percent of their total project fund allocation which could be on Annuity/ Hybrid Annuity / BOT Model.
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- AMRUT was launched as the first **water focused Mission in 2015**, with a total Mission outlay of ₹1,00,000 crore.
 - The Mission caters to **500 major cities covering 60% of the urban population**.

Objectives of the scheme

- Ensuring every household has access to a tap with the **assured supply of water** and a **sewerage connection**.
- Increasing the **amenity value of cities by developing greenery** and well maintained open spaces and
- **Reducing pollution** by switching to public transport or constructing facilities for non-motorized transport.

The key Highlights of the Schemes:

With launching second phase of SBM and AMRUT, the government has paved the way of better implementation of the schemes, in context of this the following has comprised of objectives to be accomplished.

Impact of SBM-U and AMRUT

- ✓ SBM-U and AMRUT have contributed significantly to improve urban landscape during the last seven years.
- ✓ The two flagship Missions have augmented the capacity to deliver basic services of water supply and sanitation to the citizens.
- ✓ Swachhta has become a Jan Andolan today.
- ✓ All urban local bodies have been declared Open Defecation Free (ODF) and 70% solid waste is being scientifically processed now.
- ✓ AMRUT has been ensuring water security by adding 1.1 crore household water tap connections and 85 lakh sewer connections, thus benefiting more than 4 crore people.

CABINET DECISIONS
12 OCTOBER 2021

Atal Mission for Rejuvenation and Urban Transformation - AMRUT 2.0

- Cabinet approves** the Atal Mission for Rejuvenation and Urban Transformation - **AMRUT 2.0 till 2025-26**
- Total indicative outlay of **₹2,77,000 crore**
- Targets universal coverage of water supply by providing **household tap connections in all 4,378 statutory towns**
- 100% coverage** of household **sewerage/septage** management in **500 AMRUT cities**
- Provide **2.68 crore tap connections** and **2.64 crore sewer/septage connections**

Challenges associated with implementations of first tier of the SBM-U and AMRUT Mission

- According to report- released by the Lok Sabha Standing Committee in 2020, Less than 30% of cities certified as ODF+ under Phase 2 of the Swachh Bharat Mission (Urban-2).
- The progress of work on **Open Defecation-Free Plus (ODF+)** and **ODF++ under Phase 2** of the Swachh Bharat Mission (Urban) has been slow.
- Despite the fact that work on three protocols under the next phase of Swachh Bharat Mission (Urban-2), **ODF+, ODF++ and Water Plus** is to be completed by 2024, the ground situation was not matching with the assigned timeline.
- **ODF+ and ODF++ were launched in August 2018** to further scale up and sustain the work undertaken by the cities after achieving the ODF status under Phase I of the Swachh Bharat Mission- Urban (SBM-Urban).

- ODF+ and ODF++ are aimed towards proper maintenance of toilet facilities and safe collection, conveyance, treatment/disposal of all faecal sludge and sewage. **While ODF+ focuses on toilets with water, maintenance and hygiene, ODF++ focuses on toilets with sludge and septage management.**
- AMRUT Mission is lagging behind in the implementation of AMRUT schemes among the nine civic bodies in the state.
- Main challenges in implementing the three schemes lie under sewerage and septage management.
- According to progress report of the Ministry of Households and Urban Affairs (MoHUA), the scheme is lagging behind in Credit Rating and Municipal Bonds, Energy audit of water pumps, Replacement of streetlights with LED lights, Online Building Permission System (OBPS), and Capacity Building.

Way Forward

Governments have always focused on designing the right policies and development schemes. However, over the years, many such well-designed schemes failed to make a significant dent on the lack of access to basic services that a large proportion of our population faced. Hence the government can adopt following approach for achieving the target.

- + Swachh Bharat Mission is a Behavioural Change Programme- hence it is necessary to communicate at all levels above and below the line. Mass and Inter-personal ways are the fundamental to the SBM.
- + **Alignment and robust coordination** and continuation of engagement of Prime Minister(PM) to Chief Minister (CM) and CM to PM should be established for better implementation of the Swachh Bharat Mission. Hence the **PM-CM-DM model** can work and bring rapid change in the implementation of the Swachh Bahrat Mission-Urban Programme.
- + Better tracking of the work being implemented in the urban areas will bring the transparency in the implementation.
- + Subsuming of the schemes under AMRUT: Subsuming of the schemes such as Jal Jeevan Mission which provides water connections to all AMRUT cities brought the economical utilization of the fund disbursed by the central government.
- + **Better sewage Treatment Plants** should be established. It can curb the water pollution in the cities.
- + **Robotic Fenboat technology** that is capable of collecting around 60 samples of pollutants from a river in one minute.
- + **Improvement of Water Management Regime:** Through better improvement in water management regime can pave the way of better water reusable approach.

Conclusion

Swachh Bharat Mission is a behavioral change programme which have infused a Jan andolan directed towards sanitation in the urban areas. It has nudged the people of realize for better life styles which is to be achieved through sanitation and toilet building in the households. In context of behavioral change **Mahatma Gandhi** quoted over **“Sanitation is more important than independence”** and further added, **“So long as you do not take the broom and the bucket in your hands, you cannot make your towns and cities clean.”** **Cleanliness and sanitation was an integral part of the Gandhian way of living”**

AMRUT mission, a flagship programme is being implemented which needs to be implemented drastically in cities of India and AMRUT 2.0 is now made continue to fulfil the targets into a set time of the implementation. Implementation is challenge which can overcome by adopting PM-CM-DM model which envisaged the need of better coordinations.

The Poshan Scheme (PM's Overarching Scheme for Holistic Nutrition)

News Excerpt

Recently Ministry of Women and Child Development has inaugurated the Mission Poshan 2.0 and urged all aspirational districts of the country to make a commitment to establish a Poshan Vatika (nutrition Malnourished (SAM) garden) during the nutrition month starting from September 1 for the protection of Severe Actual children.

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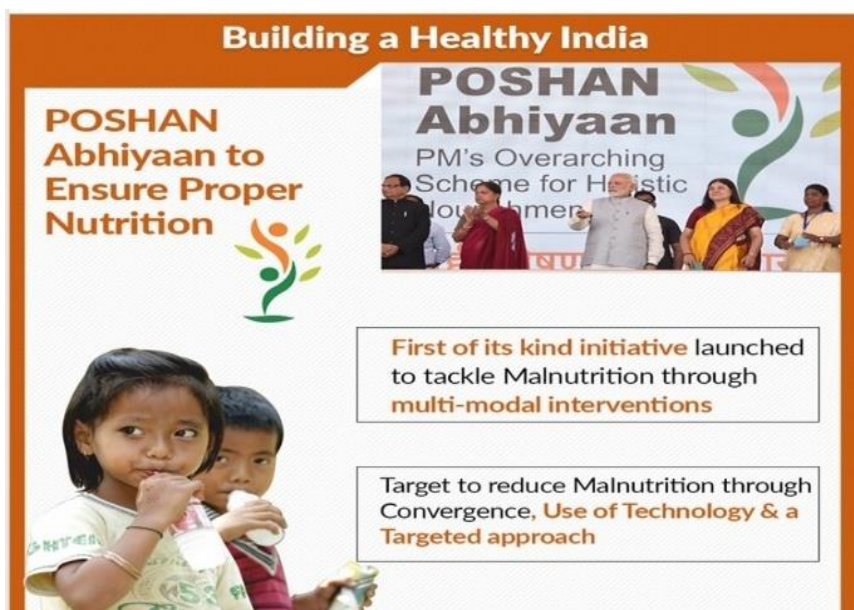
- National Nutrition Mission named as the Hon'ble Prime Minister's overarching scheme for Holistic Nutrition-POSHAN Abhiyaan was launched as a multi-ministerial convergence mission, with the overarching vision to make India malnutrition free by 2022
- POSHAN Abhiyaan is Government of India's flagship programme to **improve nutritional outcomes for children (0-6 years), adolescent Girls, pregnant women and lactating mothers.**
- It was launched on the occasion of **International Women's Day on 8 March, 2018**
- The POSHAN (Prime Minister's Overarching Scheme for Holistic Nutrition) Abhiyaan directs the attention of the country towards the problem of malnutrition and address it in a mission-mode.

The objective of Poshan Abhiyan

- Prevent and **reduce Stunting in children** (0- 6 years) by 2%
- Prevent and reduce **under-nutrition** (underweight prevalence) in children (0-6 years) by 2%
- Reduce the **prevalence of anaemia among young Children**(6-59 months) by and
- Reduce the **prevalence of anaemia among Women and Adolescent Girls** in the age group of 15-49 years **by 3 %.**
- **Reduce Low Birth Weight (LBW) by 2%.**
- Although the target to reduce Stunting is at least 2% p.a., Mission would strive to achieve reduction in Stunting from 38.4% (NFHS-4) to 25% by 2022 (Mission 25 by 2022).

Salient Features

- ✓ The POSHAN Abhiyan, as an apex body, will monitor, supervise, fix targets and guide the nutrition related interventions across the Ministries.
- ✓ Mapping of various Schemes contributing towards addressing malnutrition
- ✓ Incentivizing Anganwadi Workers (AWWs) for using IT based tools
- ✓ Eliminating registers used by AWWs
- ✓ Introducing measurement of height of children at the Anganwadi Centres (AWCs)
- ✓ Setting-up Nutrition Resource Centres, involving masses through Jan Andolan for their participation on nutrition through various activities, among others.



[Link to Sustainable Development Goal \(SDGs\)](#)

India is comprehensively and strategically doing efforts to achieve the target of objectives under Poshan Abhiyan so that the **Sustainable Development Goal-3** can be achieved.

Poshan Maah:

POSHAN Abhiyaan is a **Jan Andolan** or **“People’s Movement”** by incorporating inclusive participation of public representatives of local bodies, government departments of the States/UTs, social organizations and the public and private sector at large. In order to ensure community mobilization and bolster people’s participation, every year, the month of September is celebrated as POSHAN Maah across the country.

Mission Poshan 2.0 scheme:

Mission Poshan 2.0 was launched in February 2021 to prevent any further backsliding of nutrition indicators. Mission Poshan 2.0 has been announced in Budget 2021-22.

The announcement was made as the government decided to devote attention and resources towards integrating numerous nutrition schemes in the country.

Mission Poshan 2.0 brings together the Integrated Child Development Services (ICDS)—Anganwadi Services, Supplementary Nutrition Programme, Poshan Abhiyaan, Scheme for Adolescent Girls and National Crèche Scheme.

Implementation of the Scheme:

The government has identified 112 aspirational districts for the initial phase. Implementation of this programme will be done by the Ministry of Women and Child Development in collaboration with the Ministry of Health and Family Welfare and the Ministry of Education under the aegis of Early Childhood Care and Education (ECCE) within the National Education Policy (NEP).

Conclusions

It is evident that Mission Poshan 2.0 is a critical step towards solving the challenge of malnutrition in India.

However, its success depends largely on the way it is implemented. Conversion of multiple schemes and ministries is a mammoth task and can prove to be successful only if there is clarity in roles, objectives and targets for all stakeholders involved.

ICDS: The Integrated Child Development Services

Scheme is primarily designed to bridge the gap between the Recommended Dietary Allowance (RDA) and the Average Daily Intake (ADI). The ICDS Anganwadi Services or the Saksham Anganwadi Scheme was designed to upgrade the Anganwadi infrastructure and transform them into learning and healthcare centres for children.

The ICDS has been implemented by the Ministry of Women and Child Development. The role of the Scheme for Adolescent Girls and the National Crèche Scheme in Mission Poshan 2.0 is yet to be defined.

The Supplementary Nutrition Programme: is one of the six services provided under the ICDS Scheme to improve the health and nutrition status of pregnant & lactating women and children aged 6 months–6 years.

Sustainable Development Goal

(SDG)-3: seeks to ensure health and well-being for all, at every stage of life. The Goal addresses all major health priorities, including reproductive, maternal and child health; communicable, non-communicable and environmental diseases; universal health coverage; and access for all to safe, effective, quality and affordable medicines and vaccines.

Global Multidimensional Poverty Index -2021

News Excerpt

According to Global Multidimensional Poverty Index was released by the United Nations Development Programme and Oxford Poverty and Human Development Initiative (OPHI), **Five out of six multi-dimensionally poor people in India** are from lower tribes or castes,

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Global Multidimensional Poverty Index 2021:

According to Report titled as **“Global Multidimensional Poverty Index 2021: Unmasking disparities by ethnicity, caste and gender”**

- The Global Multidimensional Poverty Index 2021 compares acute multidimensional poverty for 109 countries in developing regions.
- These countries are home to 5.9 billion people, three-quarters of the world’s population.
- Out of these 5.9 billion people, **1.3 billion (21.7%) are identified by the 2021 global MPI as multidimensionally poor.**
- The 2021 global MPI shows both who is poor – in terms of **their age group, sub-national region**, and whether they live in an urban or rural area – and how they are poor – in terms of which overlapping deprivations they face.

Sustainable Development Goal 1: Aims to end poverty in all its forms everywhere

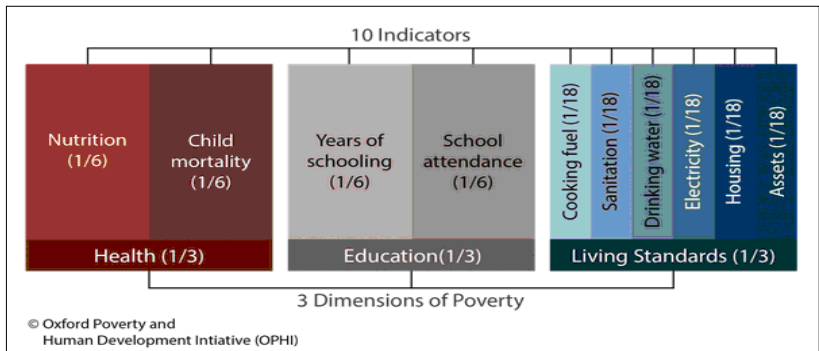
What is Global Multidimensional Poverty Report:

- ❖ It is an annual report released by United Nations Development Programme (UNDP) and Oxford Poverty and Human Development Initiative (OPHI) at University of Oxford.
- ❖ It measures the acute multidimensional poverty across more than 100 countries by measuring each persons’ deprivation in 10 different indicators in three equally weighted dimensions.

Dimensions and Indicators for Measuring GMPI

GMPI is measured based on three dimensions:

1. Health (weighted 1/3)
2. Education (weighted 1/3)
3. Standards of Living (weighted 1/3)



How Global Multidimensional Poverty is Determined

In the global MPI, **people are counted as multidimensionally poor if they are deprived in 1/3 or more of 10 indicators**, where each indicator is **equally weighted within its dimension**, so the health and Education indicators are **weighted 1/6 each**, and the standard of living indicators are **weighted 1/18 each**.

Key findings

Global Multidimensional Poverty Index and India

- NITI Aayog as the nodal agency has been assigned the responsibility of leveraging the monitoring mechanism of the Global Multidimensional Poverty Index (MPI) to drive reforms.
- Global MPI is part of Government of India’s decision to monitor the performance of the country in 29 select Global Indices.

Objective: “Global Indices to Drive Reforms and Growth (GIRG)” exercise is to fulfil the need to measure and monitor India’s performance on various important social and economic parameters and enable the utilisation of these Indices as tools for self-improvement, bring about reforms in policies, while improving last-mile implementation of government schemes.

GMPI 2021: India ranked 62nd Position out of 109 countries.

- It examines inequalities along the lines of ethnicity, case and gender across multidimensionally poor people globally.
- These **disparities are likely to have been further exacerbated by the COVID-19** pandemic.
- **2/3rd of multidimensionally poor people** – 836 million – live in households in which no girl or woman has completed at least six years of schooling.
- **1/6th of all multidimensionally poor people** (215 million) live in households in which at least one boy or man has completed at least six years of schooling, but no girl or woman has– in the rest, no one, male or female, has had that opportunity.
- **One in six multidimensionally poor people** live in **female-headed households**.

The report explores the data available for **ethnicity, race and caste in the global MPI** (41 countries and 291 groups **Indigenous peoples are among the poorest in all Latin American countries covered.**

Multidimensional Poverty Findings in India:

- ✓ **Five out of six** MDP people are from lower tribes or castes.
- ✓ Total **65 million of the 129 million** people living in MDP.
- ✓ They account for about **one-sixth of all people living in MDP in India.**
- ✓ 94 million of 283 million people -- living in multidimensional poverty.
- ✓ Overall, **five out of six multi-dimensionally poor people in India** live in households whose head is from a Scheduled Tribe, a Scheduled Caste or Other Backward Class.
 - In India, close to 12 per cent of the population -- 162 million people -- live in female-headed households.

GMPI 2021 at Global Scenario



- According to the report, **the top five countries with the largest number of people living in multidimensional poverty** are:
- **India (2015/16) at 381 millions, Nigeria (2018): 93 million, Pakistan (2017/18): 83 million, Ethiopia (2019):77 million, Democratic Republic of the Congo (2017/18): 56 million.**
- Nearly a **quarter of them live in India**, and the Democratic Republic of the Congo, Ethiopia, Nigeria, Pakistan and Uganda are together home to another quarter.

Global Hunger Index 2021

News Excerpt

Recently Global Hunger Index -2021(GHI-2021) report has been released, in which India slipped to 101st position in the Global Hunger Index (GHI) of 116 countries, from its 2020 position of 94th.

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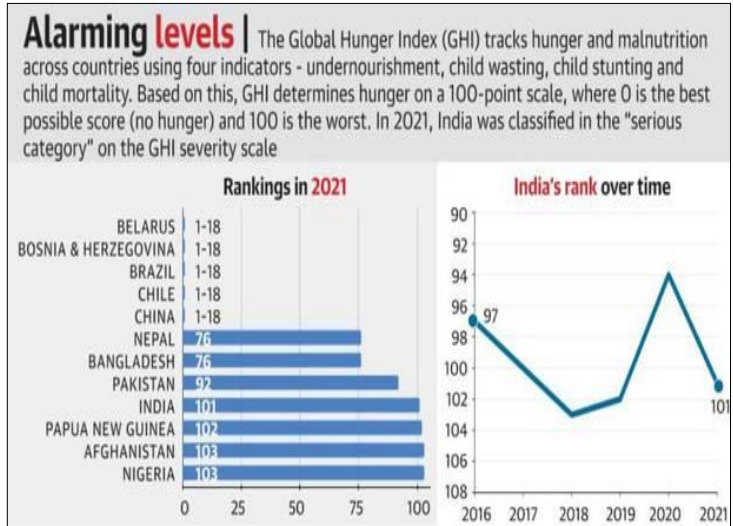
Pre-Connect

- The Global Hunger Index is a peer-reviewed annual report, jointly published by Concern Worldwide and Welthungerhilfe, designed to comprehensively measure and track hunger at the global, regional, and country levels.
- The aim of the GHI is to trigger action to reduce hunger around the world.

- **According to report- India slipped to 101st position in the Global Hunger Index (GHI) of 116 countries, from its 2020 position of 94th, and is behind its neighbours Pakistan, Bangladesh and Nepal.**

Key Findings

- India ranked at 101st position with (27.5 score) out of 116 countries.
- India ranked fourth position in South Asian Countries and trailing behind its neighbours Pakistan (92), Bangladesh (76) and Nepal (76).
- India is categorized as **‘Serious’** among other countries.
- According to report- wasting among children in India increased from 17.1% between 1998 and 2002 to 17.3% between 2016 and 2020.
- India showed improvement in indicators such as the **under-5 mortality rate, prevalence of stunting among children and prevalence of undernourishment** owing to **inadequate food remained high.**



PEPPER IT WITH
GHI Index, Child Stunting Undernourishment, Child wasting,

China at GHI

In the 2021 Global Hunger Index, China is one of 18 countries with a GHI score of less than 5. These countries are not assigned individual ranks, but rather are **collectively ranked 1-18** out of the 116 countries with sufficient data to calculate 2021 GHI scores. Differences between their scores are minimal. With a score of **under 5**, China has a level of hunger that is **low**.

How GHI is calculated?

- ✓ GHI scores are calculated on four Indicators using a three-step process that draws on available data from various sources to capture the multidimensional nature of hunger.
- ✓ **UNDERNOURISHMENT:** population whose caloric intake is insufficient.
- ✓ **CHILD WASTING:** people who have low weight for their height, **reflecting acute undernutrition.**
- ✓ **CHILD STUNTING:** Children who have low height for their age, reflecting chronic under-nutrition); and.

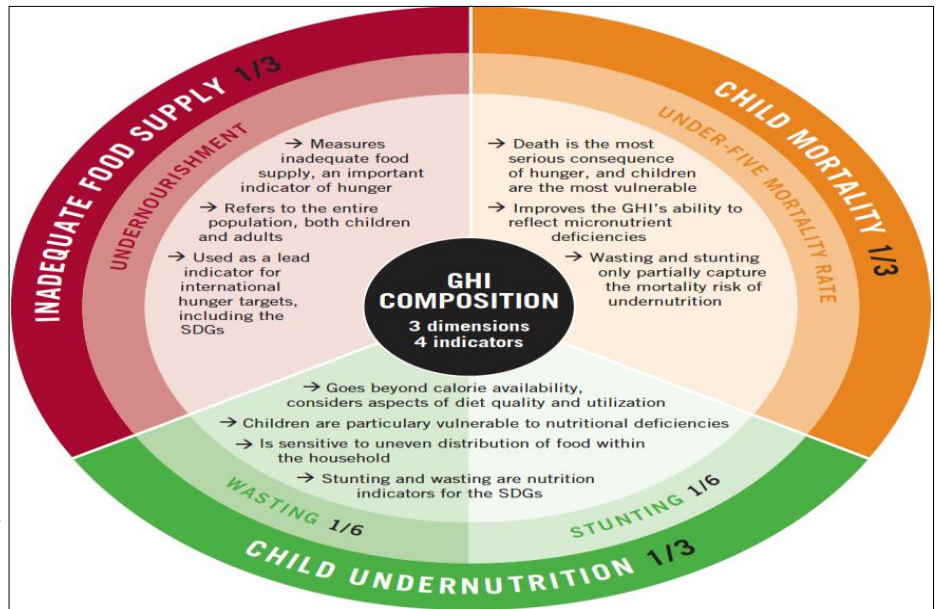
What is GHI?

The Global Hunger Index (GHI) is a tool designed to comprehensively measure and track hunger at the global, regional, and national levels. The GHI is designed to raise awareness and understanding of the struggle against hunger, provide a means to compare the levels of hunger between countries and regions, and call attention to the areas of the world in greatest need of additional resources to eliminate hunger. It was published first in 2006.

CHILD MORTALITY: the mortality rate of children under the age of five (in part, a reflection of the fatal mix of inadequate nutrition and unhealthy environments).

India’s reaction over GHI Report:

The Ministry of Women and Child Development had dismissed the report was “shocking” to find that the Global Hunger Report 2021 has lowered the rank of India on the basis of FAO estimate on proportion of undernourished population, which is found to be “**devoid** of ground reality and facts **and suffers from serious methodological issues**”



Science Technology and Innovation Hubs

News Excerpt

Recently the Government of India has announced that the government will be setting up 75 Science Technology and Innovation (STI) Hubs across the country exclusively for Scheduled Castes (SCs) and Scheduled Tribes (STs) to promote scientific talent and contribute to the socio-economic development of these communities.

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The Science, Technology and Innovation Hubs has three-fold objectives.

1. The first is to address the weakest linkages in the predominant livelihood systems through science and technology (S&T) interventions.
2. The second is the creation of social enterprises based on the strengths of livelihood systems.
3. The third one is to improve the Indigenous Knowledge Systems (IKS) through input from S&T to strengthen livelihoods.

The thrust areas for interventions though not restricted may focus on the following themes.

DigiSaksham

- ❖ DigiSaksham - a digital skills programme to enhance the employability of youth by imparting digital skills that are required in an increasingly technology driven era. This joint initiative with Microsoft india is an extension of the Government’s ongoing programs to support the youth from rural and semi-urban areas.
- ❖ **Objectives:** DigiSaksham initiative, free of cost training in digital skills including basic skills as well as advance computing, will be provided to more than 3 lakh youths in the first year.
- ❖ **Training Programme:**
- ❖ Under the DigiSaksham initiative, there will be basically **three types of training viz. Digital Skills- Self paced learning, VILT mode training (Virtual Instructor led) and ILT mode training (Instructor led)**
- ❖ The ILT training which is in person training would be conducted at the Model Career Centres (MCCs) and National Career Service Centres (NCSC) for SCs/STs across the country.

- Natural resource and human resource endowment for sustainable livelihood planning through science, know-how, and practices.
- **Promote research, development & adaptation** of appropriate and relevant technologies for socioeconomic development of target population.
- **Promotion and Documentation of Traditional & Indigenous Knowledge** and upgrade the skills, building on local innovation & local knowledge systems (including integration of high end technologies with traditional & indigenous skills)
- **Promotion, replication and scaling up of successful technologies** leading to socio economic empowerment.
- **Creation of micro-enterprises and forward linkages**
- Science and technology Capacity Building and Skill Development leading to sustainable livelihoods.

Conclusions

India is a country of many communities in which SCs/STs play their immense role in nation building at grassroots level but due to hurdle of lacking facilities and encouragement these castes or group still lagging back as compare to the mainstream people. Thus the initiative launched by the government is a step of giving them a technological and educational justices in pursuance of nation buildings. Today the job market is more competitive and employers are now looking for employability skills along with expertise in subject matter as essential traits in their potential employees. Employability skills are those skills that go beyond qualifications and experience.

**PEPPER IT WITH
SIT, DIGISAKSHAM,**

Pradhan Mantri Atmanirbhar Swasth Bharat Yojana (PMASBY)

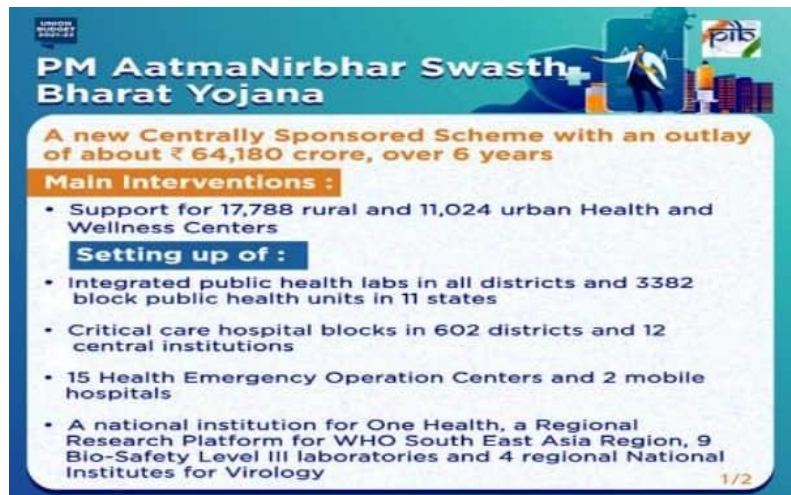
News Excerpt

On his visit to Uttar Pradesh, The Prime Minister of India launched the Pradhan Mantri Atmanirbhar Swasth Bharat Yojana (PMASBY) , pan-India scheme aimed at strengthening health care infrastructure across rural and urban areas of the country.

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Pre-Connect

- In the Budget speech of FY 21-22, 'Prime Minister Atmanirbhar Swasth Bharat Yojana' (PMASBY) scheme was announced for an outlay of about Rs.64,180 Cr over six years (till FY 25-26).
- This scheme was launched in addition to National Health Mission.



PM AatmaNirbhar Swasth Bharat Yojana

A new Centrally Sponsored Scheme with an outlay of about ₹ 64,180 crore, over 6 years

Main Interventions :

- Support for 17,788 rural and 11,024 urban Health and Wellness Centers

Setting up of :

- Integrated public health labs in all districts and 3382 block public health units in 11 states
- Critical care hospital blocks in 602 districts and 12 central institutions
- 15 Health Emergency Operation Centers and 2 mobile hospitals
- A national institution for One Health, a Regional Research Platform for WHO South East Asia Region, 9 Bio-Safety Level III laboratories and 4 regional National Institutes for Virology

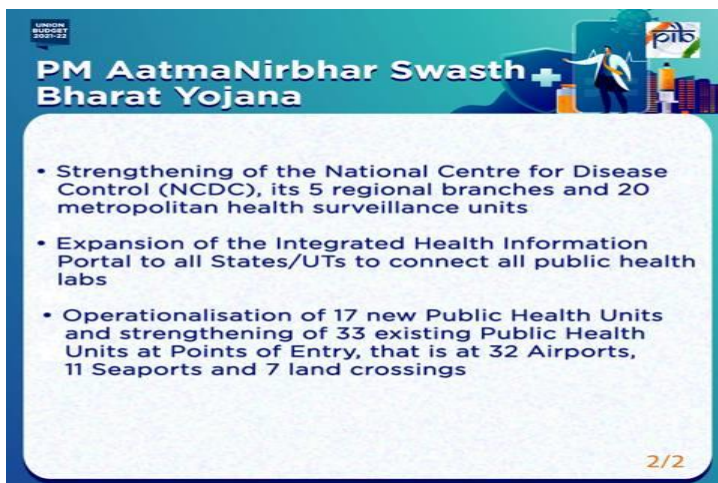
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Objectives

The main interventions envisaged under the scheme, to be achieved by FY 2025-26, are:

- Health and Wellness Centres in in 10 High Focus States

- Establishing **urban Health and Wellness Centres** in all the States.
- Setting up of **Integrated Public Health Labs** in all districts and **Block Public Health Units** in 11 High Focus states;
- Establishing **Critical Care Hospital Blocks** in districts and Central Institutions;
- Strengthening of the **National Centre for Disease Control (NCDC)**, its 5 regional branches and 20 **metropolitan health surveillance units**;
- Expansion of the **Integrated Health Information Portal (IHIP)** to all States/UTs to connect all public health labs;
- Operationalisation of 17 new **Public Health Units** and strengthening of 33 existing Public Health Units at Points of Entry.
- Setting up of **15 Health Emergency Operation Centres** and 2 mobile hospitals; and
- Setting up of a national institution for One Health, a Regional Research Platform for WHO South East Asia Region, 9 Bio-Safety Level III laboratories and 4 **regional National Institutes for Virology**.



Aim of the scheme

- ✓ The aim of the PMASBY is to build an IT enabled disease surveillance system by developing a network of surveillance laboratories at block, district, regional and national levels, in metropolitan areas.
- ✓ Integrated Health Information Portal will be expanded to all states and Union territories to connect all public health labs.

Significance

- People will have access to a full range of diagnostic services in the public healthcare system through a network of laboratories across the nation. **Integrated public health labs will be set up in all the districts.**
- The measures under the scheme focus on developing capacities of health systems and institutions across the continuum of care at all levels viz. **primary, secondary and tertiary and on preparing health systems** in responding effectively to the current and future pandemics/disasters.

National Health Mission (NHM)

The National Health Mission (NHM) aims for attainment of universal access to equitable, affordable and quality health care services, accountable and responsive to people’s needs, with effective inter-sectoral convergent action to address the wider social determinants of health.

It was launched in 2005.

Objectives:

- Reducing child and Maternal mortality.
- Prevention and control of Communicable and Non-communicable Disease.
- Access to Integrated Primary Health Care
- Population Stabilization and demographic balance.
- Revitalize local health traditions & mainstream AYUSH.
- Universal access to public services for food and nutrition, sanitation and hygiene
- Promotion of healthy life styles.

- The PMASBY targets to build an IT enabled disease surveillance system by developing a network of surveillance laboratories at block, district, regional and national levels, in Metropolitan areas & strengthening health units at the Points of Entry, for effectively detecting, investigating, preventing and combating **Public Health Emergencies** and Disease Outbreaks.

Conclusion

Ayushman Bharat Scheme is the biggest health centered scheme launched by the Government of India which facilitates insurances cover for secondary and tertiary care hospitalization, apart from this the Pradhan Mantri Swasth Bharat Yojana launched by the government will play its immense role in Primary, Secondary and Tertiary care hospital services which covers in a broader scale and confined many initiatives to be set up. By moving towards Health Infrastructural reforms Our country can achieve self-reliant in health infrastructure.

SAGE: Seniorcare Ageing Growth Engine

News Excerpt

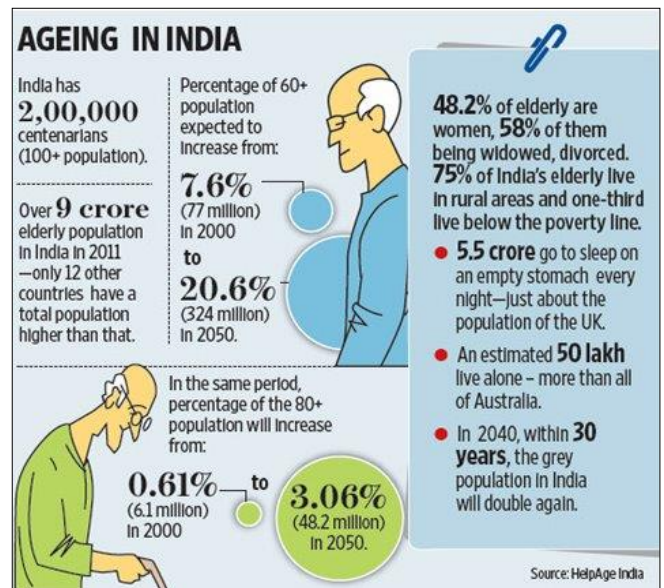
Recently Seniorcare Ageing Growth Portal (SAGE) was launched by the Ministry of Social Justice and Empowerment on the occasion of International Day of Older Persons observed at Vigyan Bhawan New Delhi.

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On this occasion another portal **SACRED (Senior Able Citizens for Re-Employment in Dignity)** was also launched by the Ministry of Social Justice and Empowerment.

Pre-Connect

- The SAGE Portal is especially designed by the Ministry of Social Justice and Empowerment with aims to encourage entrepreneurs in the area of elderly care.
- International Day of Older Persons is celebrated on October 1 for the cause of elderly persons.
- International Day of Older Persons was announced to observe by the United Nations.
- United Nations General Assembly had adopted a resolution to observe 1st October 1999 as the International Day of Older Persons and since then, the 1st day of October every year is celebrated as the International Day of Older Persons, worldwide.
- On this occasion, the Government of India confers **'National Award-Vayoshreshtha Samman'** on eminent senior citizens and institutions in recognition of their service towards elderly persons.
- The theme of International Day of Older Persons-2021 is: 'Digital Equity for All Ages' which emphasis over the the need for increasing digital literacy among our senior citizens.



Other Programmes launched by the government for Elderly Persons

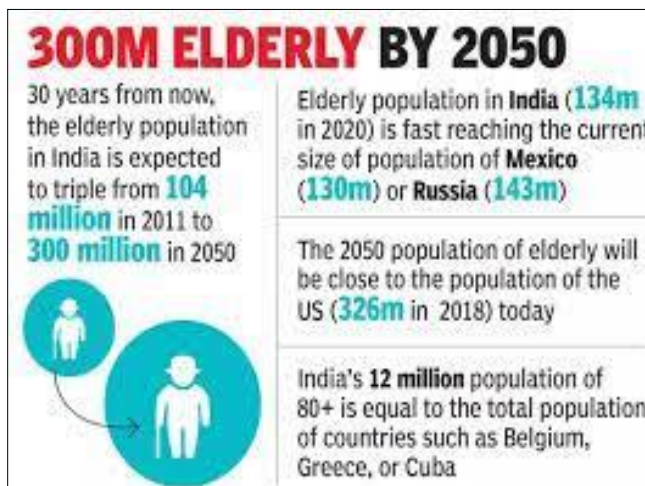
The programme has been implemented to further the welfare of senior citizens in the country. It is a value addition to the existing schemes that cater to this demographic—Integrated Programme for Older People (IPO), Rashtriya Vayoshri Yojana (RVY) 2016, Pradhan Mantri Vaya Vandana Yojana (PMVVY) 2017, Vayoshreshtha Samman 2019 and Maintenance & Welfare of Parents and Senior Citizens (MWPC) Act 2007.

Objectives of the SAGE:

- The key objective of the SAGE initiative is to promote the **‘Silver Economy’** by encouraging entrepreneurial ventures and start-ups to participate in this space.

What is ‘Silver Economy’:

- **‘Silver Economy’** is defined as the system of production, distribution and consumption of goods and services aimed at utilising the purchasing potential of the older and ageing populations, as well as satisfying their consumption requirements and living essentials and healthcare needs.
- The Silver Economy is described in the field of **social gerontology** as an instrument of the ageing policy towards forming a needs-oriented economic ecosystem for an ageing population.
- The SAGE project intends to identify, evaluate, verify and aggregate these needs to deliver products, solutions and services to the stakeholders.



Silver Economy in Budget 2021-22

The ministry has allocated an initial sum of **Rs. 100 crore (US \$13.7 million) for evaluating and promoting the Silver Economy in India**. Nearly one-fourth of this allocated budget, i.e., Rs. 25 crore (US \$ 3.4 million), has been assigned for use in FY2021-22.

Salient Features

- The government envisions elements of gerontechnology – enabling technologies to suit the requirement of the elderly population – to be vital for implementation of this scheme.
- Gerontechnology includes various technical systems and solutions to help the elderly and their caregivers perform basic daily activities.
- Gerontechnologies enable elders to maintain their autonomy and help compensate for functional impairments.
- To achieve this objective, the ministry has called upon entrepreneurs and start-ups to develop impactful and innovative solutions for the elderly.

Green Ribbon Initiative

- ❖ Green Ribbon Initiative has been launched with the aim to raise awareness on Mental Health. Mental Health is an essential component of *Holistic Health* and awareness.
- ❖ 10th October is observed around the world as World Mental Health Day.
- ❖ Mental Health Awareness Week was observed between 5th -10th October.

Conclusions

Initial estimations suggest that the Silver Economy is worth Rs. 73,082 crore (US \$ 10 billion) at present. To boost traction in this space, the ministry has pledged Rs. 1 crore (US \$140,000) as the initial equity funding for each start-up selected to commence operations under the SAGE initiative. It will also continue to participate in the initiative by playing the role of a facilitator between businesses and target populations once the start-ups deploy product and service solutions. In addition, the government has outlined a vision for ‘model senior care’ public-private partnership (PPP) projects, in which states will be allowed to allocate land and funds to build capacity and care facilities for senior citizens, including people from the weaker sections of society.

PEPPER IT WITH SAGE, SACRED, Silver, Economy, Gerontology

The State Nutrition Profile

News Excerpt

NITI Aayog, in a joint effort with IFPRI, IIPS, UNICEF and IEG launch 'The State Nutrition Profiles' for 19 States and Union Territories.

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Pre-Connect

- It is a joint effort of NITI Aayog, International Food Policy Research Institute (IFPRI), Indian Institute of Population Sciences (IIPS), UNICEF and Institute of Economic Growth (IEG).
- The 'State Nutrition Profiles' (SNPs) give insights on nutrition outcomes, immediate and underlying determinants and interventions based on NFHS-rounds 3, 4 and 5.

Salient Features:

- The SNPs include a comprehensive compilation of crucial data that can positively affect policy decisions and facilitate research in the area.
- The trend analysis of key indicators such as **wasting, stunting, anaemia, underweight and overweight and NCDs** (Diabetes and High blood pressure) showcase the variability of performance across districts.

Analytica

- ✓ The reports highlight the best and worst performing districts, highest burden districts and top coverage districts of the country.
- ✓ The SNPs are based on the **headcount-based analyses and use of data from NFHS-5** to provide evidence that helps identify priority districts and number of districts in the state with public health concern as per WHO guidelines.
- ✓ **Each SNP has incorporated key takeaways for children, women and men and identifies areas where the state has the potential to improve further.**

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ECONOMY

Industrial Park Rating System Report 2.0

News Excerpt

Recently, the Industrial Park Rating System (IPRS) Report was launched by the commerce and industry ministry.

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Pre-Connect

- The IPRS pilot exercise was launched in 2018 with support from the Asian Development Bank (ADB) to enhance industrial infrastructure competitiveness and support policy development to spur industrialisation.
- Based on the learning from the pilot stage, the Government started the IPRS 2.0 in 2020.
 - All the States of India and 51 SEZs, including 29 Private, have participated the IPRS 2.0 Report.
 - 24 Private Sector Industrial Parks have also been nominated.
- IPRS 2.0 framework takes forward is four pillar and sub-pillars model for assessment of industrial infrastructure in India:
 1. Internal infrastructure
 - a. (Sub pillars- Utilities, Common Infrastructure, Value added infrastructure)
 2. External infrastructure and connectivity,
 3. Business support services,
 4. Environment and safety management.

Key Highlights

- The Report is an extension of the India Industrial Land Bank (IILB) which features more than 4,400 industrial parks in a GIS-enabled database to help investors identify their preferred location for investment.
 - IILB is a GIS-based portal with all industrial infrastructure-related information such as connectivity, infra, natural resources and terrain, plot-level information on vacant plots, line of activity, and contact details.
 - It acts as a one-stop source of information on Industrial Infrastructure.
 - The portal is currently integrated with industry-based GIS system of 21 States and UTs and plot-wise information in these are updated on a real-time basis.
 - Budget 2020-21 had provided for pre-investment advisory and information related to land banks, besides facilitating clearances, in order to attract higher investment and increase ease of doing business in India.
- As per the IPRS 2.0 Report –
 - 41 Industrial Parks have been assessed as "Leaders",
 - 90 Industrial Parks have been rated as under Challenger category while 185 have been rated as under "Aspirers".
- IPRS 2.0 aims at enabling informed decision making for various stakeholders such as policymakers, investors and financing institutions for the development of strategies for future industrialisation; and to improve industrial infrastructure.
- It also aims to support the ease of doing business reform agenda of providing transparent information, enable states to showcase their strengths and promote investment in the state industrial ecosystem and identify gaps for interventions.

PEPPER IT WITH

Asian Development Bank (ADB), geographic information system (GIS), One District One Product (ODOP), and Production-Linked Incentive (PLI) Schemes

Analytica

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- ✓ The IPRS 2.0 Report will enhance India’s industrial competitiveness and attract investment. The investors can even remotely refer to this report to identify the suitable investable land area, as per the various parameters of infrastructure, connectivity, business support services and environment and safety standards and make informed investment decisions.
- ✓ It would help identify the best practices and gaps in industrial infrastructure that needs strengthening to enhance the competitiveness of industrial parks and zones in the country.
- ✓ IPRS 2.0 ratings will be instrumental to contribute to India’s growth story and to chart out the path of progress for both the industry and the country.
- ✓ Government initiatives to promote industry and boost exports, such as the One District One Product (ODOP) Initiative, Production-Linked Incentive (PLI) Schemes and the National Single Window System (NSWS).

Comprehensive Handicrafts Cluster Development Scheme (CHCDS)

News Excerpt

Ministry of Textiles has approved continuation of Comprehensive Handicrafts Cluster Development Scheme (CHCDS) with a total outlay of Rs 160crore. The scheme will continue up to March 2026.

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Highlights

- CHCDS aims to create world-class infrastructure that caters to the business needs of the local artisans & SMEs to boost production and export.
- The main objective of setting up these clusters is to assist the artisans & entrepreneurs to set up world-class units with modern infrastructure, latest technology, and adequate training and human resource development inputs, coupled with market linkages and production diversification.
- Under CHCDS key provisions are:
 - Soft interventions like Baseline Survey and Activity Mapping, Skill Training, Improved Tool Kits, Marketing events, Seminars, Publicity, Design workshops, Capacity Building, etc will be provided to SMEs.
 - Hard interventions like Common Facility Centers, Emporiums, Raw Material Banks, Trade Facilitation Centers, Common Production Centers, Design and Resource Centers will also be granted.
- The integrated projects will be taken up for development through Central/State Handicrafts Corporations/Autonomous, Body-Council-Institute/Registered Co- operatives/ Producer company of artisans/Registered SPV, having good experience in handicrafts sector
- The focus will be on integration of scattered artisans, building their grass root level enterprises and linking them to SMEs in the handicrafts sector to ensure economies of scale.
- The mega handicraft clusters having more than 10,000 artisans will be selected for overall development under this scheme.

Significance

- It would be beneficial particularly for artisans and micro-entrepreneurs based in small towns and rural areas to ultimately enhance their livelihood as well.
- With the extension of this scheme, these businesses are likely to expand and enhance production with the help of technology and market support.
- A cluster approach would certainly help them improve the quality of their products and sell more.

Analytica

- ✓ The Handicrafts Sector plays a significant & important role in the country’s economy. It provides employment to avast segment of crafts person in rural & semi urban areas and generates substantial foreign exchange for the country, while preserving its cultural heritage.
- ✓ Handicrafts have great potential, as they hold the key for sustaining not only the existing set of millions of artisans spread over length and breadth of the country, but also for the increasingly large number of new entrants in the crafts activity.
- ✓ As per Invest India, the domestic textiles and apparel sector has a 5 per cent share in India’s GDP and 12 per cent in export earnings. Textile handicraft products included bags, shawls, saris, home decor items, etc.
- ✓ It is the second largest employment generator after agriculture.
- ✓ Handicrafts is a labor intensive sector with high potential of employment for poorer section of the society in rural areas.
- ✓ It is economically important because of low capital investment, high value addition and negligible import content and high potential for export earnings.

The Export Promotion Council for Handicrafts (EPCH) is the apex Government body and operates under the administrative control of the Ministry of Textiles, Government of India. EPCH has the distinction of being considered a ‘model council’, a self-sustaining body that self-finances all its promotional activities.

Issues with Handicrafts:

- The Handicraft sector has, however, suffered due to its very nature of being unorganized, with the additional constraints of low capital, poor exposure to new technologies, absence of market intelligence, and a poor institutional framework.
- This scheme can also help boost exports of textile handicrafts as the demand for such products from India is worldwide but there is a lack of platforms that can enable these products to grow internationally.

PEPPER IT WITH
GI registered crafts, and Organized and unorganized sector.

Major Government Initiatives:

- ✚ **Production Linked Incentive (PLI) scheme:** The government in September this year had approved the Production Linked Incentive (PLI) scheme for the textile sector.
 - It will attract large investment in the sector to further boost domestic manufacturing, especially in the manmade fibre (MMF) segment and technical textiles.
 - It will make sector globally competitive, attract investment; ensure efficiencies; enhance exports and make India an integral part of the global supply chain.
- ✚ Scheme for Capacity Building in Textile Sector (SAMARTH) was approved towards addressing the skill gap in textile sector and also to supplement the efforts of textile industry in providing gainful and sustainable employment to the youth.

GI tags

About

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

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- In India, Geographical Indications registration is administered by the Geographical Indications of Goods (Registration and Protection) Act of 1999.
 - This Act is administered by the Controller General of Patents, Designs and Trade Marks, who is the Registrar of Geographical Indications.
 - The Geographical Indications Registry is located at Chennai.
- ‘Darjeeling tea’ was the first GI-tagged product in India, gaining its label in 2004.

Highlights

- A GI tag provides a better market for these products and prevents misuse of the name.
- A GI registration is given to an area, not a trader, but once a product gets the registration, traders dealing in the product can apply for selling it with the GI logo.
- Authorised traders are each assigned a unique GI number.
- GIs are also expected to boost or revive the items whose production has declined.
- GI tagging is a potential tool to drive food quality and safety, considering the scale of India’s unorganised food processing industry. It helps in the implementation of a better food system that can be traced back to the producer for its authenticity.

Analytica

- ✓ **Benefitslocal communities:** GI protection has wider positive benefits, especially for local communities. In particular, it encourages the preservation of biodiversity, local know-how and natural resources. And this is where India can do well.
- ✓ **Economic and soft power:** Multiple benefits flow from a strong GI ecosystem, which can be a wellspring of economic and soft power. It will automatically resolve the three fraught India issues of poor pay for talent, low female participation in the labour force, and urban migration.
- ✓ It will convert talent into entrepreneurship with gig workers, and create a “passion” economy, that is, a new way for individuals to monetise their skills and scale their businesses exponentially. It removes the hurdles associated with freelance work to earn a regular income from a source other than an employer.
- ✓ The labour-intensive nature of GI offers the best solution to boosting the employment-to-population ratio in India, an abysmal 43 per cent compared with the 55 per cent global average.
 - Monetising artisanal work done at home will increase India’s low female labour force participation rate, which at 21 per cent in 2019 was half the 47 per cent global average.
- ✓ **Reverse urban migration:** The hyper-localised nature of GI offers solutions to reverse urban migration and conserve India’s ancient crafts, culture and food.
 - A rejuvenation of MSMEs, which account for 31 per cent of India’s GDP and 45 per cent of exports, will follow.
 - An estimated 55.80 million MSMEs employ close to 130 million people; of this, 14 per cent are women-led enterprises and 59.5 per cent are rural.
 - Another revenue-earner, GI tourism, is typically a by-product of a strong GI ecosystem.

PEPPER IT WITH		
World	Intellectual	Property
Organisation, Trade Related Aspects of		
Intellectual Property Rights (TRIPS),		
and Human migration		

Way forward

- **Need to address some challenges:**Because GI businesses are micro, it is necessary to address the challenges of capacity-building, formal or easy access to credit, forming marketing linkages, research and development, product innovation and competitiveness in both domestic and international markets.The groundwork for MSME access to formal credit has already been done with the new Account Aggregator data-sharing framework.

- **Digital platforms:**With the shift to digital platforms, the distribution margins of these gate keepers or mandi agents must be competitive so they do not act as countervailing agents by getting into similar businesses or product lines which will erode GI producer incomes.
 - As seen from the experience of the new farm laws, this will be a task for the central and state governments; they must ensure the transition without breaking down too many existing linkages.
- **Establishment of local GI cooperative bodies or associations:** They can be nationally managed by a GI board under the auspices of the Department for the Promotion of Industry and Internal Trade (DPIIT), the Ministry of Commerce department which should be tasked with developing this new sector.
- **Digital literacy:**Finally, a required skill for GI producers is digital literacy.It is an opportunity for India to redefine the future of work using automation, technology and artificial intelligence while simultaneously enhancing and adorning the country’s talented local work force.

Conclusion

The Indian GI economy can be a platform for India to showcase to the world a model for ethical capitalism, social entrepreneurship, de-urbanisation, and bringing women to the workforce, on the back of a robust digital system.It encompasses the concept of trusteeship, as advocated by Mahatma Gandhi and more recently, by Prime Minister NarendraModi at the UN. It is truly Made in India.

PM MITRA Parks

News Excerpt

Recently, the Union Cabinet approved the setting up of seven Mega Integrated Textile Region and Apparel (PM MITRA) parks with a total outlay of Rs. 4,445 crore.

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Pre-Connect

- The MITRA parks, which aim to integrate the entire textile value chain from spinning, weaving, processing/dyeing, printing to garment manufacturing at one location, were first announced in the FY22 Budget.
- The scheme is inspired by the 5F vision, which encompasses - Farm to fibre; fibre to factory; factory to fashion; fashion to foreign.
- States will compete to be selected under the scheme, which is aimed at reducing logistics cost and strengthening the value chain of the textile sector to make it globally competitive.
 - States having ready availability of contiguous and encumbrance- free land parcel of 1000+ acres will be eligible to apply.
- The selection of sites will happen on a challenge method with parameters such as good connectivity, adequate quality power infrastructure, water and waste water disposal system, Industry Friendly labour laws, Single Window Clearances, Stable and Conducive industrial/textile policy of the state.

Highlights

- The PM MITRA park will be developed by a Special Purpose Vehicle (SPV), which will be owned by the State Government and the Government of India in a Public Private Partnership (PPP) Mode.

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- Each MITRA Park will have an incubation centre, common processing house and a common effluent treatment plant and other textile related facilities such as design centres and testing centres
- The Master Developer will not only develop the Industrial Park but also maintain it during the concession period.
 - Selection of this master developer will happen based on objective criteria developed jointly by state and central governments.
- Under the scheme, the centre will provide development capital support for the development of common infrastructure of Rs 500 crore for each greenfield MITRA park and uptoRs 200 crore for each brownfield park.
- An additional Rs 300 crore will be provided as Competitiveness Incentive Support for the early establishment of textiles manufacturing units in each of these parks.
- The investors who set up “anchor plants” that employ at least 100 people will be eligible for incentives of uptoRs 10 crore every year for upto three years.
 - The incentive would be given on a first come, first served basis.
- The SPV in which State Government has majority ownership will be entitled to receive part of the lease rental from developed industrial sites.
 - It will be able to use that for further expansion of textiles industry in the area by expanding the PM MITRA Park, providing Skill Development initiatives and other Welfare measures for workers.



PM MITRA
A LANDMARK DECISION TO EMPOWER TEXTILES SECTOR

Approves 7 Mega Integrated Textile Region & Apparel (MITRA) Parks

- MITRA Parks will be setup at Greenfield/Brownfield sites located in different willing states
- Support worth ₹500 crore to all Greenfield & ₹200 Crore to Brownfield MITRA Parks for development
- Support worth ₹300 crore to all MITRA Parks for competitiveness incentives to the manufacturing units

Analytica

- ✓ PM MITRA Parks is envisaged to help India in achieving the United Nations Sustainable Development Goal 9 ("Build resilient infrastructure, promote sustainable industrialization and foster innovation").

Greenfield vs. Brownfield projects

- ❖ Greenfield projects are the ones which are started from the scratch, while in case of brownfield, the company augments the capacity of the existing unit.
- ❖ A greenfield infrastructure project has higher risks involved than a brownfield project.

- ✓ The scheme is to develop integrated large scale and modern industrial infrastructure NSE 0.63 % facilities for the entire value-chain of the textile industry.
- ✓ The world-class industrial infrastructure will attract cutting-age technology and boost FDI and local investment in the sector.
 - It will give our domestic manufacturers a level-playing field in the international textiles market & pave the way for India to become a global champion of textiles exports across all segments.
- ✓ This integrated vision will help further the growth of the textile sector in the economy.
- ✓ Along with the Production Linked Incentive (PLI) scheme, MITRA will lead to increased investments and enhanced employment opportunities.

PEPPER IT WITH

Production Linked Incentive (PLI) scheme, foreign direct investment (FDI), and SDG Goals

- ✓ The scheme will help India in attracting investments, boosting employment generation and position itself strongly in the global textile market
 - It will reduce logistics costs and improve the competitiveness of Indian Textiles.
 - High logistics costs are considered a key hurdle to India’s goal of boosting textile exports.
 - Each MITRA park is expected to directly generate 1 lakh jobs and indirectly generate a further 2 lakh jobs.
 - It will attract substantial foreign direct investment (FDI).

PM Gati Shakti

News Excerpt

Recently, the Prime Minister has launched the ambitious PM Gati Shakti-National Master Plan for multi-modal connectivity, with the aim of coordinated planning and execution of infrastructure projects to bring down logistics costs.

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Highlights

- The Gati Shakti plan has three main components, all focused on domestic coordination.
 - It seeks to increase information sharing with a new technology platform between various ministries at the Union and state levels.
 - It focuses on giving impetus to multi-modal transportation to reduce logistics’ costs and strengthen last-mile connectivity in India’s hinterland or border regions.
 - An analytical decision-making tool to disseminate project-related information and prioritise key infrastructure projects. This aims to ensure transparency and time-bound commitments to investors.
- It will subsume the Rs 110 lakh crore National Infrastructure Pipeline (NIP), which was launched by the PM in 2019.
 - Its integration with the National Infrastructure Plan will help in resolving the historical problem of delay in project implementation and sporadic development and utilisation of national infrastructure.
- It will incorporate the infrastructure schemes of various Ministries and State Governments like Bharatmala, Sagarmala, inland waterways, dry/land ports, UDAN etc. Economic Zones like textile clusters, pharmaceutical clusters, defence corridors, electronic parks, industrial corridors, fishing clusters, agri zones will be covered to improve connectivity & make Indian businesses more competitive.
- It will also leverage technology extensively including spatial planning tools with ISRO imagery developed by BiSAG-N (Bhaskaracharya National Institute for Space Applications and Geoinformatics).

The Gati Shakti digital platform:

The plan involves the creation of a common umbrella platform through which infrastructure projects can be planned and implemented with coordination between various ministries/departments on a real-time basis.

- It will bring together 16 Ministries including Railways and Roadways for integrated planning and coordinated implementation of infrastructure connectivity projects.
- It will help in removing long-standing issues such as disjointed planning, lack of standardisation, problems with clearances, and timely creation and utilisation of infrastructure capacities.

PM Gati Shakti Master Plan is based on six pillars:

1. **Comprehensiveness** by including all the existing and planned activities of various Ministries and departments under one umbrella.

2. **Prioritization** by cutting across sectoral interactions
3. **Optimisation** with a focus on ensuring optimum usage of resources and removing overlapping expenditure/plans.
4. **Synchronization** so that the work of various Ministries does not happen in standalone silos.
5. **Analytical** with all data available of plans /schemes in one place for a proper analysis and
6. **Dynamic** with all Ministries and departments able to visualize and monitor progress across projects.

PEPPER IT WITH
National Infrastructure Pipeline (NIP), BiSAG-N, ease of doing business index, and JAM.

Expected Outcomes

- The scheme will help map the existing and proposed connectivity projects. In addition, there will be a great deal of transparency about how the country's many regions and industrial centres are connected, particularly in terms of last-mile connection.
- Make in India will benefit tremendously from a comprehensive and integrated transportation connectivity plan that integrates various forms of transportation.
- It will assist India in becoming the world's business capital.

Challenges related to PM Gati Shakti:

State government participation:

- ✓ In taking the Gati Shakti initiative forward, it is important to make the states of India full stakeholders since most development activity takes place at the level of states.
 - The Centre will need to devise political interventions and ways to coax and incentivise state government participation and cooperation.

Credit concerns:

- ✓ Although the government had taken up 'strong' banking sector reforms and the Insolvency and Bankruptcy Code had yielded about Rs. 2.4 lakh crore of recoveries on bad loans, there are concern about tepid credit offtake trends.
 - Banks give credit off-takes to help businesses acquire financing for future projects through the promise of future income and proof of an existing market.

Lack of Demand:

- ✓ There is a lack of private and investor demand in the post-Covid-19 scenario.

Structural Difficulties:

- ✓ Project execution is extremely sluggish by global standards due to land acquisition delays and legal issues. In terms of land access and environmental clearances, obtaining permissions is very complex; also, current litigation in court slows infrastructure development.

Analytica

- It will build Next Generation Infrastructure which improves Ease of Living as well as Ease of Doing Business.
- It will create multiple employment opportunities and give a boost to the economy. Also, it will boost India's self-confidence to move towards the goal of self-reliance or 'Atm Nirbhar Bharat'.
- This investment initiative will boost the post-pandemic economy and improve the country's indigenous production of technologies to reduce dependency on other nations.
- It will improve the global competitiveness of local products by cutting down the logistics costs and improving the supply chains, and also ensure proper linkages for local industry & consumers.
- It will provide the public and business community information regarding the upcoming connectivity projects, other business hubs, industrial areas and surrounding environment.
 - This will enable the investors to plan their businesses at suitable locations leading to enhanced synergies.

- It will address the past issues through institutionalizing holistic planning for stakeholders for major infrastructure projects. Instead of planning & designing separately in silos, the projects will be designed and executed with a common vision.
- As JAM [Jan Dhan, Aadhar, Mobile] trinity revolutionised the access of government facilities to the people, PM Gati Shakti will do the same for the field of Infrastructure.
- The use of digital technologies to map infrastructure facilities has been lacking in India, and with the availability now of relevant data and satellite information, the launch of such a portal catapults the country towards a modern infrastructure process system.

Way Forward

PM Gati Shakti is a positive step forward. However, it must address structural and macroeconomic stability problems that have arisen as a result of excessive government spending. Thus, it is imperative that this initiative is underpinned by a stable and predictable regulatory and institutional framework.

What is the ULCC (ultra low cost carriers) model?

In the ULCC (ultra low cost carriers) airline business model, the company focuses on keeping operating costs even lower than typical budget airlines like IndiGo and SpiceJet.

In the low-cost model, airlines unbundle certain amenities that are usually associated with the full-service airline experience — like seat selection, food and beverages, etc. In the ultra low-cost model, there is an even further unbundling of services like checked-in baggage, cabin baggage, etc.

Traditionally, while LCCs operate with significantly lower fares and only somewhat lower costs than full-service carriers, ULCCs operate with minimal costs to ensure profitability.

Geospatial Energy Map of India

News Excerpt

Recently, NITI Aayog launched the Geospatial Energy Map of India.

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Highlights

- NITI Aayog in collaboration with Indian Space Research Organisation (ISRO) has developed a comprehensive Geographic Information System (GIS) Energy Map of India with the support of Energy Ministries.
- It provides a holistic picture of all energy resources of the country.
- It enables visualisation of energy installations such as conventional power plants, oil and gas wells, petroleum refineries, coal fields and coal blocks, district-wise data on renewable energy power plants and renewable energy resource potential, etc through 27 thematic layers.

Geographic Information System(GIS)

A geographic information system (GIS) is a computer system for capturing, storing, checking, and displaying data related to positions on Earth’s surface.

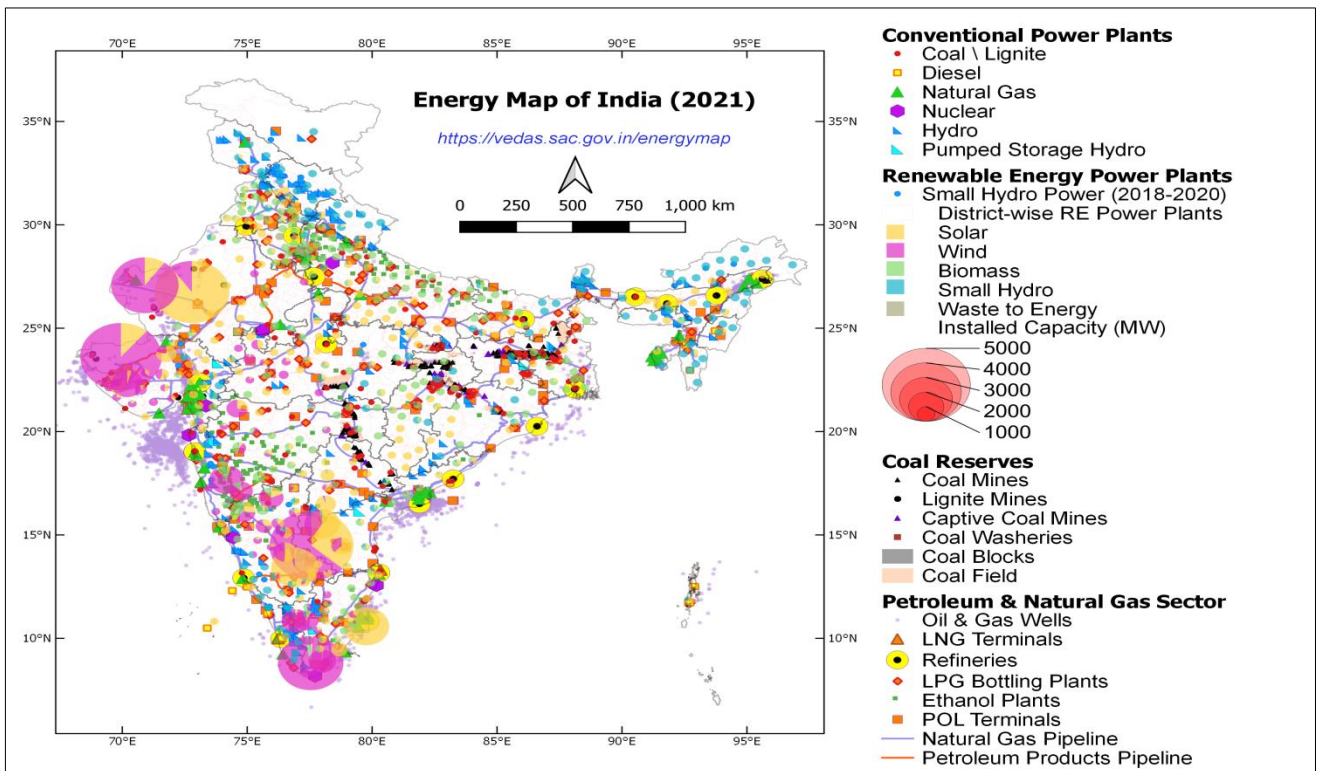
Geospatial mapping

Geospatial mapping is a type of spatial analysis techniques that typically employs software capable of rendering maps processing spatial data, and applying analytical methods to terrestrial or geographic datasets, including the use of geographic information systems.

Analytica

- The map attempts to identify and locate all primary and secondary sources of energy and their transportation/transmission networks to provide a comprehensive view of energy production and distribution in a country.

- It aimed at integrating energy data scattered across multiple organizations and to present it in a consolidated, visually appealing graphical manner.
- It leverages latest advancements in web-GIS technology and open-source software to make it interactive and user friendly.
- GIS-mapping of energy assets will be useful for ensuring real-time and integrated planning of energy sector of India, given its large geographical distribution and interdependence.
 - It will be advantageous to all concerned stakeholders and will help in accelerating the policy-making process.
 - It will be useful in planning and making investment decisions.
 - It will also aid in disaster management using available energy assets.



Conclusion

The GIS Energy map has the potential to facilitate India's achievement of Sustainable Development Goal (SDG) 7 which is to ensure access to affordable, reliable, sustainable, and modern energy for all. It can thereby help build energy Swaraj, and a foundation for sustainable development in the country.

PEPPER IT WITH

Indian Space Research Organisation (ISRO), Geographic Information System(GIS), and NITI Aayog

Small Finance Bank

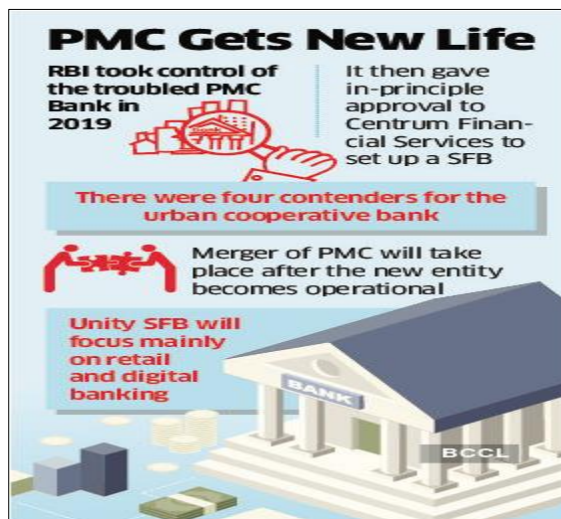
News Excerpt

The Reserve Bank of India has issued a small finance bank (SFB) licence to a consortium of fintech company BharatPe and Centrum Financial Services Ltd. The new SFB has been incorporated as 'Unity Small Finance Bank'.

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Pre-Connect

- The RBI had already given an in-principle approval to Centrum Financial Services to set up a small finance bank, and along with BharatPe, it took over the Punjab and Maharashtra Co-operative Bank, the assets and liabilities of which will be taken over by the new entity.
- In September 2019, the RBI had superseded the board of PMC Bank and placed it under regulatory restrictions, including cap on withdrawals by customers, after detection of certain financial irregularities, hiding and misreporting of loans given to real estate developer HDIL.



Highlights

Small Finance Bank (SFB)

Small Finance Banks is a specific segment of banking created by RBI under the guidance of Government of India with an objective of furthering financial inclusion by primarily undertaking basic banking activities to un-served and underserved sections. Like other commercial banks, these banks can undertake all basic banking activities including lending and taking deposits.

They registered as a public limited company under the Companies Act, 2013.

Objectives

The objectives of setting up of small finance banks will be for furthering financial inclusion by -

- (a) provision of savings vehicles primarily to unserved and underserved sections of the population, and
- (b) supply of credit to small business units; small and marginal farmers; micro and small industries; and other unorganised sector entities, through high technology-low cost operations.

Regulations

- Small Finance Banks are governed by the provisions of the Banking Regulation Act, 1949; Reserve Bank of India Act, 1934; Foreign Exchange Management Act, 1999; Payment and Settlement Systems Act, 2007; Credit Information Companies (Regulation) Act, 2005; Deposit Insurance and Credit Guarantee Corporation Act, 1961; other relevant Statutes and the Directives, Prudential Regulations and other Guidelines/Instructions issued by RBI and other regulators from time to time.
- The small finance banks will be given scheduled bank status once they commence their operations, and found suitable as per Section 42 (6) (a) of the Reserve Bank of India Act, 1934.

Eligible promoters

(a) Eligibility Criteria:

- Resident individuals/professionals (Indian citizens), singly or jointly, each having at least 10 years of experience in banking and finance at a senior level; and Companies and Societies in the private sector and having successful track record of running their businesses for at least a period of five years, will be eligible as promoters to set up small finance banks.
- Existing Non-Banking Finance Companies (NBFCs), Micro Finance Institutions (MFIs), and Local Area Banks (LABs) in the private sector, that are controlled by residents, and having successful track record of running their businesses for at least a period of five years, can also opt for conversion into small finance banks. However, joint ventures by different promoter groups for the purpose of setting up small finance banks would not be permitted.

- Primary (Urban) Co-operative Banks (UCBs), which are desirous of voluntarily converting into small finance bank, may voluntary transform from Urban Co-operative Bank into a Small Finance Bank.
 - UCBs applying for transiting to small finance bank or obtaining in-principle approval for such transition, will be required to ensure compliance with these 'on tap' licensing guidelines from the date of commencement of business as small finance bank except the guideline on minimum capital.

(b) 'Fit and Proper' criteria

- Promoters / Promoter Groups should be 'fit and proper' in order to be eligible to promote small finance banks.
 - RBI would assess the 'fit and proper' status of the applicants on the basis of their past record of sound credentials and integrity; financial soundness and successful track record of professional experience or of running their businesses, etc. for at least a period of five years.

Scope of activities

- **Basic banking Services:** Acceptance of deposits and lending to unserved and underserved sections including small business units, small and marginal farmers, micro and small industries and unorganized sector entities.
- **Other Services**
 - I. Non-risk sharing simple financial services activities not requiring any commitment of own fund, such as distribution of mutual fund units, insurance products, pension products, etc. with the prior approval of the RBI.
 - After three years from the date of commencement of operations of the bank, requirement for prior approval from the Reserve Bank will no longer apply and the bank will be governed by the extant norms as applicable to scheduled commercial banks.
 - II. The Small Finance Bank can also become a Category II Authorized Dealer in foreign exchange business for its clients' requirements.
- The other financial and non-financial services activities of the promoters, if any, should be kept distinctly ring-fenced and not comingled with the banking business.

Capital requirement

- The minimum paid-up equity capital for small finance banks shall be Rs. 100 crore.
- In view of the inherent risk of a small finance bank, it shall be required to maintain a minimum capital adequacy ratio of 15 per cent of its risk weighted assets (RWA) on a continuous basis, subject to any higher percentage as may be prescribed by RBI from time to time.

Foreign shareholding

- The foreign shareholding in the small finance bank would be as per the Foreign Direct Investment (FDI) policy for private sector banks as amended from time to time.
- Foreign shareholding in the Small Finance Bank to be as per existing FDI policy for private sector banks i.e. up to 74% (49% under automatic route and 25% under approval).
- In the case of Foreign Institutional Investors (FIIs) / Foreign Portfolio Investors (FPIs), individual FII / FPI holding is restricted to below 10 per cent of the total paid-up capital, aggregate limit for all FIIs / FPIs / Qualified Foreign Investors (QFIs) cannot exceed 24 per cent of the total paid-up capital, which can be raised to 49 per cent of the total paid-up capital by the bank concerned through a resolution by its Board of Directors followed by a special resolution to that effect by its General Body.

- Individual NRI holding (both on repatriation and non-repatriation basis) restricted to 5% and aggregate limit of 10%, which can be allowed upto 24% through a Special resolution of General body.

Prudential norms

- ✓ The Small Finance Bank will be subject to all prudential norms and regulations of RBI as applicable to existing commercial banks including requirement of maintenance of CRR and SLR.
- ✓ The small finance banks will be required to extend 75 per cent of its Adjusted Net Bank Credit (ANBC) to the sectors eligible for classification as priority sector lending (PSL) by the Reserve Bank.
- ✓ At least 50 per cent of its loan portfolio should constitute loans and advances of upto Rs. 25 lakh.
- ✓ The small finance bank cannot be a Business Correspondent (BC) for another bank. However, it can have its own BC network.

PEPPER IT WITH

Business Correspondent (BC), Foreign Portfolio Investors (FPIs), RBI's quantitative and qualitative Instruments and priority sector lending (PSL).

Global Minimum Tax Deal

News Excerpt

Recently, a global deal to ensure big companies pay a minimum tax rate of 15% and make it harder for them to avoid taxation has been agreed by 136 countries. The deal would cover 90% of the global economy.

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Pre-Connect

- The deal aims to prevent large firms from booking profits in low-tax countries like Ireland regardless of where their clients are, an issue that has become ever more pressing with the rise of “Big Tech” giants that can easily do business across borders.
 - Apart from low-tax jurisdictions, the proposals are tailored to address the low effective rates of tax shelled out by some of the world’s biggest corporations, including Big Tech majors such as Apple, Alphabet and Facebook, as well as those such as Nike and Starbucks.
 - These companies typically rely on complex webs of subsidiaries to Hoover profits out of major markets into low-tax countries such as Ireland, the British Virgin Islands, the Bahamas, or Panama.
- Out of the 140 countries involved, 136 supported the deal, with Kenya, Nigeria, Pakistan and Sri Lanka abstaining for now.

Highlights

- The global minimum tax rate would apply to overseas profits. Governments could still set whatever local corporate tax rate they want, but if companies pay lower rates in a particular country, their home governments could “top-up” their taxes to the minimum rate, eliminating the advantage of shifting profits.
- The global minimum tax rate would apply to overseas profits of multinational firms with 750 million euros (\$868 million) in sales globally.
- The decisions effectively ratify the OECD’s two-pillar package that aims to ensure that large multinational enterprises (MNEs) “pay tax where they operate and earn profits”.

- **Pillar One** aims to ensure a fairer distribution of profits and taxing rights among countries with respect to the largest MNEs, including digital companies. This would entail reallocation of some taxing rights over MNEs from their home countries to markets where they have business and earn profits, regardless of whether firms have a physical presence there.
 - **Pillar Two** seeks to put a floor on competition over corporate income tax, through a global minimum corporate tax rate that countries can use to protect their tax bases.
- The agreement calls for countries to bring it into law in 2022 so that it can take effect by 2023. Countries that have in recent years created national digital services taxes will have to repeal them.
- This implies that India will have to withdraw its equalisation levy (introduced in 2016) that it imposes on overseas digital companies.

PEPPER IT WITH
Organisation for Economic Cooperation and Development (OECD) and equalisation levy.

Analytica

- ✓ India was “proactively engaging” with foreign governments with a view to facilitating and enhancing exchange of information under Double Taxation Avoidance Agreements, Tax Information Exchange Agreements and Multilateral Conventions to plug loopholes.
- ✓ The minimum tax and other provisions aim to put an end to decades of tax competition between governments to attract foreign investment.
 - The economists expect that the deal will encourage multinationals to repatriate capital to their country of headquarters, giving a boost to those economies.

Why a global minimum tax?

- ✓ With budgets strained after the COVID-19 crisis, many governments want more than ever to discourage multinationals from shifting profits – and tax revenues – to low-tax countries regardless of where their sales are made.
 - The OECD estimates the minimum tax will generate \$150 billion in additional global tax revenues annually.
 - According to the Tax Justice Network report, India’s annual loss due to corporate tax abuse is estimated at over \$10 billion.
- ✓ Increasingly, income from intangible sources such as drug patents, software and royalties on intellectual property has migrated to these jurisdictions, allowing companies to avoid paying higher taxes in their traditional home countries.

Challenges

- ✓ The plan impinges on the right of the sovereign to decide a nation’s tax policy. A global minimum rate would essentially take away a tool countries use to push policies that suit them.
- ✓ Also, bringing in laws by next year so that it can take effect from 2023 is a tough task.
- ✓ The deal has also been criticised for lacking teeth: Groups such as Oxfam said the deal would not put an end to tax havens.

Conclusion

The two-pillar solution will ensure that once again, the world will be global, at least in following the principles of taxation rather than following territorial laws.

INTERNATIONAL RELATIONS

India-Sri Lanka

News Excerpt

Indian foreign secretary visited Sri Lanka to discuss ways to further advance the comprehensive bilateral partnership at all levels.

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Key Points

- This visit is being seen as an opportunity to get bilateral ties back on track after recent problems such as the scrapping of the MoU (Memorandum of Understanding) on the East Container Terminal.
- It was also aimed at assessing Sri Lanka’s development assistance requirements.
- Foreign secretary dedicated 1,235 houses as part of the **Indian Housing Project** in the central hill country.

Significance of Container Terminal Deal

East container Terminal Policy:

- In February 2021, Sri Lanka reneged on 2019 deal with India and Japan to operate the East Container Terminal.
- Many experts believed that the China had played a role in instigating port union’s protest against India’s interest which ultimately led to cancellation of the project.
- Hence, current deal to develop West Container Terminal assumes significance.

Greater Indian stake:

- ✓ Indian side will have 85% stake in the West Container Terminal.
- ✓ In East Container Terminal deal, India and Japan together held 49% stake.
- ✓ This would give India a much-needed strategic presence at Colombo port, where almost 70% of operations involve shipments bound for India.

OPCW Conference on Disarmament

News Excerpt

Recently, in a High-level for the Total Elimination of Nuclear Weapons India reiterated that nuclear weapons should be abolished in a step-by-step non-discriminatory process.

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Key Highlights

- At the conference, India expressed deep concern over the proliferation of weapons of mass destruction and their delivery systems that could endanger peace and security, saying the possibility of terrorists acquiring such weapons necessitates the global community to work together to address this grave danger.

About OPCW

- ❖ It is an international organisation established by the Chemical Weapons Convention, 1997 to implement and enforce the terms of the non-proliferation treaty, which prohibits the use, stockpiling, or transfer of chemical weapons by signatory states.
- ❖ The OPCW is authorised to perform inspections to verify that signatory states are complying with the convention.
- ❖ By the 2001 Relationship Agreement between the OPCW and the United Nations, the OPCW reports on its inspections and other activities to the UN through the office of the Secretary General.
- ❖ The organisation was awarded the 2013 Nobel Peace Prize “for its extensive efforts to eliminate chemical weapons”.

- India has said that it supports the full and effective implementation of the Chemical Weapons Convention and emphasizes the strengthening of the OPCW (Organization for the Prohibition of Chemical Weapons) to fulfill its important mandate.
- The Conference on Disarmament (CD) is a multilateral disarmament forum established by the international community to negotiate arms control and disarmament agreements based in Geneva. The Conference meets annually in three separate sessions in Geneva.
- The Conference was first established in 1979 as the Committee on Disarmament as the single multilateral disarmament negotiating forum of the international community.
- The OPCW’s mission is to implement the provisions of the Chemical Weapons Convention to achieve our vision of a world free of chemical weapons and the threat of their use, and in which chemistry is used for peace, progress, and prosperity.

Seychelles' Tax Inspectors without Borders (TIWB)

News Excerpt

The programme has been launched in partnership with India.

Key Highlights

- It is expected to be of 12-month duration.
- It aims to aid Seychelles in strengthening its tax administration by transferring technical know-how and skills.
- To its tax auditors through sharing of best audit practices. The focus of the programme will be on Transfer Pricing cases of tourism and financial services sector.
- This programme is the 6th TIWB programme which has been supported by India by providing Tax Expert.

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Tax Inspectors Without Borders (TIWB), a joint initiative of the United Nations Development Programme (UNDP) and the Organisation for Economic Cooperation and Development (OECD), launched its programme in Seychelles on 4th October, 2021. India was chosen as the Partner Administration and has provided Tax Expert for this programme.

INDIA-NEPAL Relations

News Excerpt

India has handed over the 34.9km-long cross-border rail link connecting Jaynagar in Bihar to Kurtha in Nepal to the Nepal government.

About India-Nepal Relations

- The partnership with India in the areas of trade and transit is a matter of utmost importance to Nepal. India is Nepal’s largest trading partner.
- India has provided transit facility to Nepal for the third country trade. Both public and private sectors of India have invested in Nepal. The trade statistics reveals phenomenal increase in the volume of bilateral trade over the years between the two countries.
- However, Nepal has escalating trade deficit with India. India and Nepal have concluded bilateral Treaty of Transit, Treaty of Trade and the Agreement of Cooperation to Control Unauthorized Trade.
- India has handed over the 34.9km-long cross-border rail link connecting Jaynagar in Bihar to Kurtha in Nepal to the Nepal government. Jaynagar-Kurtha section is part of the 68.7km Jaynagar-Bijalpura-Bardidas rail link built under India’s grant assistance of NPR 8.77 billion. This will enhance trade and commerce activities as well as people to people linkages between the two countries.

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Indo-Pacific Regional Dialogue 2021

News Excerpt

Recently, the Indo-Pacific Regional Dialogue was conducted.

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Pre-Connect

- It was first conducted in 2018, the Indo-Pacific Regional Dialogue (IPRD) is the apex international annual conference of the Indian Navy, and is the principal manifestation of the navy’s engagement at the strategic-level.
- The National Maritime Foundation is the navy’s knowledge partner and chief organiser of each edition of this annual event. The aim of IPRD is to review both opportunities and challenges that arise within the Indo-Pacific.
- IPRD-2018 focused on four main sub-themes: maritime trade; regional connectivity; pan-regional challenges such as those of persistent maritime surveillance, the increasing digitisation of the maritime space, and cyber-malevolence within the maritime domain; and, the role of industry in enhancing holistic maritime security.
- IPRD 2019 built upon the excellent foundation laid by the inaugural edition and examined five themes: practical solutions for achieving cohesion in the region through maritime connectivity; measures to attain and maintain a free and open Indo-Pacific; examining a regional approach to Blue Economy; opportunities from Maritime-Industry 4.0; and, regional opportunities arising from SAGAR and SAGARMALA.
- This year’s IPRD will focus on eight specific sub-themes under the broad theme of “Evolution in Maritime Strategy during the 21st Century: Imperatives, Challenges, and, Way Ahead”. The aim is to encourage a free flow of ideas and views. The eight sub-themes are—
 - Evolving Maritime Strategies within the Indo-Pacific: Convergences, Divergences, Expectations and Apprehensions.
 - Adaptive Strategies to Address the Impact of Climate Change upon Maritime Security.
 - Port-led Regional Maritime Connectivity and Development Strategies.
 - Cooperative Maritime Domain Awareness Strategies.
 - Impact of the Increasing Recourse to Law fare upon a Rules-based Indo-Pacific Maritime Order.
 - Strategies to Promote Regional Public-Private Maritime Partnerships.
 - Energy-Insecurity and Mitigating Strategies.
 - Strategies to Address the Manned-Unmanned Conundrum at Sea.
- Through this annual dialogue, the Indian Navy and the National Maritime Foundation, continue to provide a platform for incisive discussions pertaining to the geopolitical developments affecting the maritime domain of the Indo-Pacific.

UN Peacekeeping Operations & India

News Excerpt

The United Nations Security Council (UNSC) organised a high-level open debate on United Nations Peacekeeping Operations under Indian Presidency.

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About

Indian Proposed 4 Point Framework for Protection of UN Peacekeepers:

- Deployment of proven, cost-effective, field-serviceable technologies
- Consistent training and capacity building of peacekeepers in field of technology
- Ensure regular technological improvements for peacekeepers
- Establish a sound information and intelligence foundation for ensuring early warning and mobilising a coherent and early response.

Conference on Interaction and Confidence-Building Measures in Asia (CICA)

News Excerpt

Recently, the Meeting of the Foreign Ministers of the Conference on Interaction and Confidence-Building Measures in Asia (CICA) was held in Kazakhstan’s capital Nur Sultan.

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Pre-Connect

- It was established in 1999 and is an inter-governmental forum for enhancing cooperation towards promoting peace, security and stability in Asia.
- It was proposed by NursultanNazarbayev, first president of Kazakhstan in the 47th session of UN General Assembly in October 1992.
- Currently it has 27 member states and 9 observer states and 5 observer organisations. Its Secretariat is at Nur-Sultan, Kazakhstan.

Key Points

- Issues of security
- Further development of regional economic cooperation
- Situation in Afghanistan, including the possibility of providing assistance to the Afghan people in an attempt to stop formation of humanitarian crisis

India status in CICA

India has been a member of CICA since its inception. India also co-chairs two CICA Confidence-Building Measures (CBMs) on Development of Secure and Effective Systems of Transportation Corridors, and Energy Security.

Quadrilateral Economic forum launched

News Excerpt

India, Israel, the United Arab Emirates (UAE) and the United States decided to launch a new Quadrilateral economic forum. The grouping had decided to establish an international forum for economic cooperation.

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Key points

- The quadrilateral, builds on ongoing cooperation between the U.S.-Israel-the UAE after the Abraham Accords last year that saw the UAE and Israel establish diplomatic ties, and the India-Israel-the UAE cooperation that has been launched since then.
- The first quadrilateral meeting between India, Israel, the UAE and the US decided to ensure:
 - Closer cooperation on increasing trade,
 - Enhancing cooperation in maritime security and global public health,
 - Joint infrastructure projects in transportation and technology

Benefits for India-

- India has always supported peace and stability in West Asia which is considered as India’s extended neighbourhood. The new “Quad” will give India the flexibility to engage more freely with Israel and India’s partners in the Gulf region.
- This platform strengthens India’s strategic desire to adopt a regional foreign policy strategy towards West Asia, transcending its bilateralism.

Challenges for India

- As part of US’ plan to tackle China in East Asia, it is reducing its presence in West Asian region. This is leading to redrawing of the West Asia’s traditional equations.

- It is believed that many conflicts of West Asia could intensify amid growing regional rivalries. Hence, India should be careful not to get sucked into these conflicts.
- Iran has a very good relation with India while it shares hostile relation with the US, UAE and Israel. In this context, the current groping might be seen as an anti-Iran bloc.



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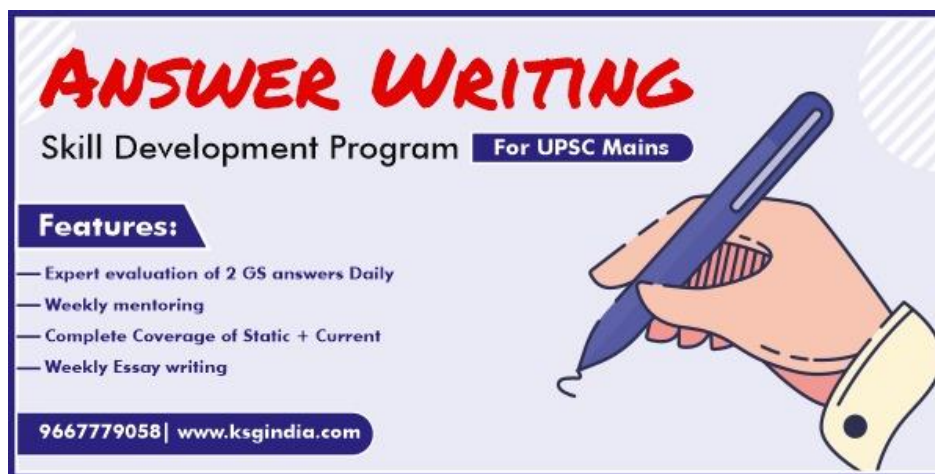
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ENVIRONMENT

New Tiger Reserve

News Excerpt

The National Tiger Conservation Authority (NTCA) approved the Chhattisgarh government’s proposal to declare the combined areas of the Guru Ghasidas National Park and TamorPingla Wildlife Sanctuary as a Tiger Reserve.

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Pre-Connect

- The National Tiger Conservation Authority (NTCA) is a statutory body under the Ministry of Environment, Forests and Climate Change and constituted under the Wildlife (Protection) Act, 1972.
- The authority consists of the Minister in charge of the Ministry of Environment and Forests (as Chairperson), the Minister of State in the Ministry of Environment and Forests (as Vice-Chairperson), three members of Parliament, Secretary, Ministry of Environment and Forests and other members.
- The ‘Project Tiger’ is a Centrally Sponsored Scheme (CSS) to provide fund support for in-situ conservation of tigers in designated tiger reserves.
- The approval of Tiger reserve is granted under Section 38V(1) of The Wildlife (Protection) Act, 1972. The State Government shall, on the recommendation of the Tiger Conservation Authority, notify an area as a tiger reserve.

About New Tiger Reserve

- The areas of the Guru Ghasidas National Park and TamorPingla Wildlife Sanctuary would be designated as a New Tiger Reserve.
- The new Reserve is bordering with Madhya Pradesh and Jharkhand. This will be the fourth Tiger Reserve in Chhattisgarh, after the Udanti-Sitanadi, Achanakmar, and Indravati Reserves.
- The TamorPingla Wildlife Sanctuary was identified as part of the SargujaJashpur Elephant Reserve in 2011. The Guru Ghasidas National Park used to be part of the Sanjay National Park in undivided Madhya Pradesh. Both were identified as reserve forests, and had been in line to be notified as Tiger Reserve since 2011.
- The constituent units of the new Tiger Reserve, Guru Ghasidas National Park and TamorPingla Wildlife Sanctuary, are spread over area around 2000 Sq. Km.

Significance of such move

- ✓ Guru Ghasidas a Tiger Reserve is important because it connects Jharkhand and Madhya Pradesh and provides a corridor for tigers to move between the Bandhavgarh and Palamau Tiger Reserves.
- ✓ New Tiger reserves would provide intangible and tangible benefits, factors like generation of employment, fodder, timber, fuelwood, non-timber forest produce and bamboo are considered tangible benefits. Moreover, factors such as carbon sequestration, water provisioning, sediment retention/soil conservation, nutrient retention, biological control, pollination, climate regulation, gene pool protection, habitat for species, carbon storage, cultural heritage, recreation and spiritual tourism are intangible benefits.

PEPPER IT WITH
M-STriPES, Project Tiger, Eco-Bridges, WWF, WPA, 1972

Concerns regarding Tiger Conservations

The government's Management Effectiveness Evaluation of Tiger Reserves 2018 report shows that at least half of India's 50 tiger reserves are facing threats from infrastructure development like construction id highways and railway lines, fragmented forest corridors, poaching, pressure of human-wildlife conflict, mining and unsustainable activities.

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Way Forward

- There is more need to build capacity in range states.
- The human-tiger conflict has to reduce and scientific research should be carried out on tigers to help inform conservation strategies.
- Government should focus Promote tiger-friendly policies and Monitor tiger numbers, population trends, and threats to tigers and their habitats.

Generation of Hydrogen from Agricultural Residue

News Excerpt

Indian researchers have developed a unique technology for direct generation of Hydrogen from agricultural residue.

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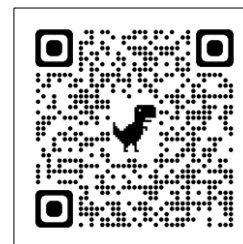
- This technology is developed at lab-scale to extract hydrogen from agricultural residues.
- This new technology is 25% more efficient as compared to conventional anaerobic digestion processes used today.
- The two-stage process eliminates the pretreatment of biomass, thus making the process economical and environment friendly. This process generates a digestate that is rich in nutrients which can be used as an organic fertilizer.
- The hydrogen fuel generation process comprises the use of a specially developed microbial consortium that facilitates biodegradation.
- The technology uses agricultural residue rich in cellulose and hemicellulose content – in likes of paddy, wheat, or maize residue. The process uses microbial culture for the direct generation of hydrogen from agricultural residues.
- It then generates methane which is utilised for producing additional hydrogen by steam methane reformation. The benefit of this process helps avoid the burning of bio-mass generated in large measure.
- The process generates Hydrogen in the first stage and Methane in the second. The methane generated in the process can also be used to generate additional hydrogen.

Outcomes

- This breakthrough of generating hydrogen from unutilized agricultural residue will help our country to become self-reliant on energy resources. It will also add a major stream of revenue to the farmer community.
- Agricultural waste, which faces a great challenge for disposal, could be one of the sources of hydrogen production, and this could solve the dual problem of energy generation and waste disposal.
- Presently, the northern India especially Delhi is facing the insurmountable issue of Bad Air quality. Air is being gotpolluted due to the stubble burning. By using this technologythe farmers can look forward to not just earning from this agri-waste but also help in the generation of hydrogen.
- This innovation can promote eco-friendly hydrogen fuel-cell electric vehicles by overcoming the challenge of hydrogen availability.

Methanol Economy

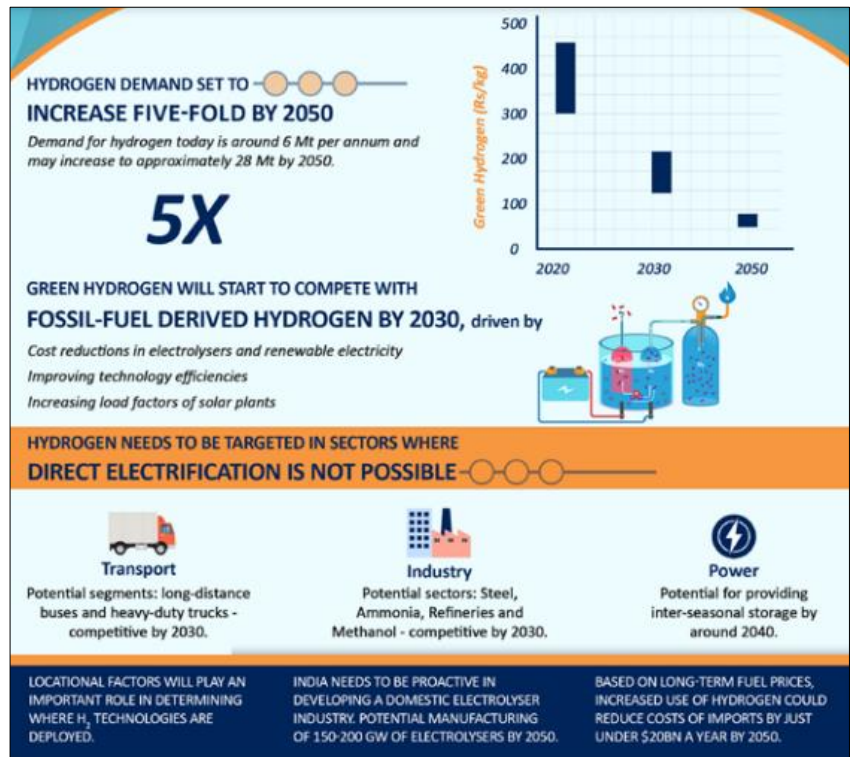
- ✓ Methanol is a low carbon, hydrogen carrier fuel produced from high ash coal, agricultural residue, CO2 from thermal power plants and natural gas.



- ✓ NITI Aayog's 'Methanol Economy' programme is aimed at reducing India's oil import bill, greenhouse gas (GHG) emissions, and converting coal reserves and municipal solid waste into methanol.
- ✓ Although slightly lower in energy content than petrol and diesel, methanol can replace both these fuels in the transport sector (road, rail and marine), energy sector (comprising DG sets, boilers, process heating modules, tractors and commercial vehicles) and retail cooking (replacing LPG [partially], kerosene and wood charcoal). Blending of 15% methanol in gasoline can result in at least 15% reduction in the import of gasoline/crude oil.
- ✓ In addition, this would bring down GHG emissions by 20% in terms of particulate matter, NOx, and SOx, thereby improving the urban air quality.

Hydrogen Generation from Bio Mass (Stubble)

- Hydrogen production using biomass is possible through biochemical and thermochemical processes.
- Biochemical routes use either microorganisms on organic material to produce biogas (anaerobic digestion) or a combination of acids, alcohols, and gases (fermentation).
- The thermochemical gasification process is similar to coal gasification, as it converts biomass to a mix of carbon monoxide, CO₂, hydrogen, and methane through a high temperature heat process.
- Although anaerobic digestion is the most technically mature process, it can only process sewage sludge, agricultural, food processing and household waste, and some energy crops.
- The main challenge for deploying biomass technologies at scale will be the limited availability of sustainably sourced biomass. The optimal biomass sources on a life cycle emissions basis include agricultural residues and organic municipal waste, both of which are relatively limited. Nonetheless, maximizing reuse of this waste in biohydrogen production routes could be a cost-effective way of meeting a portion of hydrogen demand. The Government of India is exploring hydrogen production using anaerobic digestion. The programme aims to produce biogas from agricultural residues.



PEPPER IT WITH
 Hydrogen Fuel Cell, Blue Hydrogen, Green Hydrogen, Brown Hydrogen, Electrolysis

Conclusion

It is important that India should remain ahead of the curve on clean energy technology development, investing early in research and manufacturing capability to maximize domestic benefits. Development of alternative research for cleaner fuel would led to the sustainability.

High Ambition Coalition (HAC) for Nature and People

News Excerpt

Recently in an event at CoP-26, India becomes the first among BRICS countries to join the High Ambition Coalition (HAC) for Nature and People.

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Pre-Connect

- The High Ambition Coalition for Nature and People (HAC) is an intergovernmental group, co-chaired by France and Costa Rica.
- Its objective is to support the adoption of a target aiming to protect 30% of the planet’s land and 30% of its oceans by 2030 (30x30 target), within the future global framework of the Convention on Biological Diversity (CDB) for the protection of biodiversity, which is to be adopted at the next COP in China this autumn.

About HAC

- The Coalition was officially launched at the One Planet Summit in 2021. It currently has more than seventy members.
- HAC members currently include a mix of countries in the global north and south; European, Latin American, Africa and Asia countries are among the members. India is the first of the BRICS bloc of major emerging economies (Brazil, Russia, India, China and South Africa) to join the HAC.
- The High Ambition Coalition for Nature and People aims to reach an ambitious agreement on biodiversity conservation at the 15th Conference of the Parties to the UN Convention on Biological Diversity.
- The aim of the coalition is to gather as many governments as possible, targeting in priority those that can influence current negotiations on the adoption of the target.
- India’s announcement comes in the lead up to a high-level biodiversity meeting, hosted by China. The virtual meeting to take place October 11-15 will tackle key aspects of the biodiversity treaty to be finalized in 2022. The global 30x30 goal is currently a centrepiece of the treaty.
- HAC further works for promotion of international agreement and to protect at least 30% of the world’s land and ocean by 2030 (Global 30x30 target). Moreover, it works for the management of the planet sustainably with no net loss of natural habitats, supported by a circular economy, and strives for the sustainable and equitable sharing of benefits from nature.

Way Forward

In the Absence of post 2020 biodiversity conservation, Growing impacts of human activity on global biodiversity have led scientists to predict catastrophic and potentially irreversible devastation and ‘a sixth mass extinction event in Earth’s history’. There is urgent need to halt the drastic biodiversity losses. Moreover, HAC is aimed to streamline the global effort, many countries must converse into mainstreaming of this new global initiative. Global strategy on biodiversity would works and could halt the damage which being done on biodiversity at difference scale.

Renewable Energy Industry in India

News Excerpt

India had more than 100 GW of renewable energy capacity, and represents 25.2% of the overall installed power capacity.

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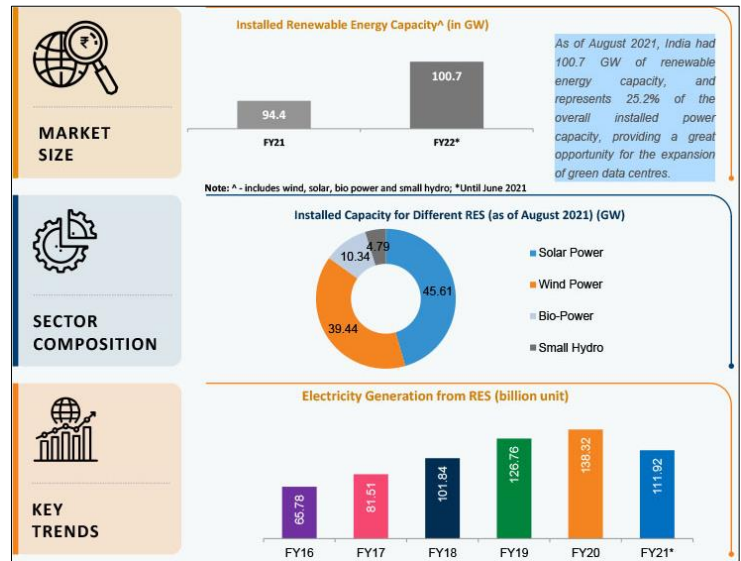
Pre-Connect

- According to Renewable Energy Country Attractiveness index, Indian renewable energy sector is the fourth most attractive renewable energy market in the world.
- India was ranked fourth in wind power, fifth in solar power and fourth in renewable power installed capacity, as of 2020.
- The government is aiming to achieve 227 GW of renewable energy capacity (including 114 GW of solar capacity addition and 67 GW of wind power capacity) by 2022, more than its 175 GW

target as per the Paris Agreement. The government plans to establish renewable energy capacity of more than 500 GW (including 73 GW from Hydro) by 2030.

Key Points regarding Indian renewable energy sector

- In August 2021, installed capacity of hydro projects in India reached to 46.41 GW, while capacity of small hydro plants reached to 4.8 GW.
- As per data from the Economic Survey, by December 2019, 15,100 megawatts (MW) of wind power projects were issued, of which, projects of 12,162.50 MW capacities have already been awarded.
- Power generation from renewable energy sources in India reached 127.01 billion units (BU) in FY20.
- With a potential capacity of 363 GW and with policies focused on the renewable energy sector, Northern India is expected to become the hub for renewable energy in India.
- According to the data released by Department for Promotion of Industry and Internal Trade (DPIIT), FDI inflow in the Indian non-conventional energy sector stood at US\$ 9.83 billion between April 2000 and December 2020. More than US\$ 42 billion has been invested in India's renewable energy sector since 2014.

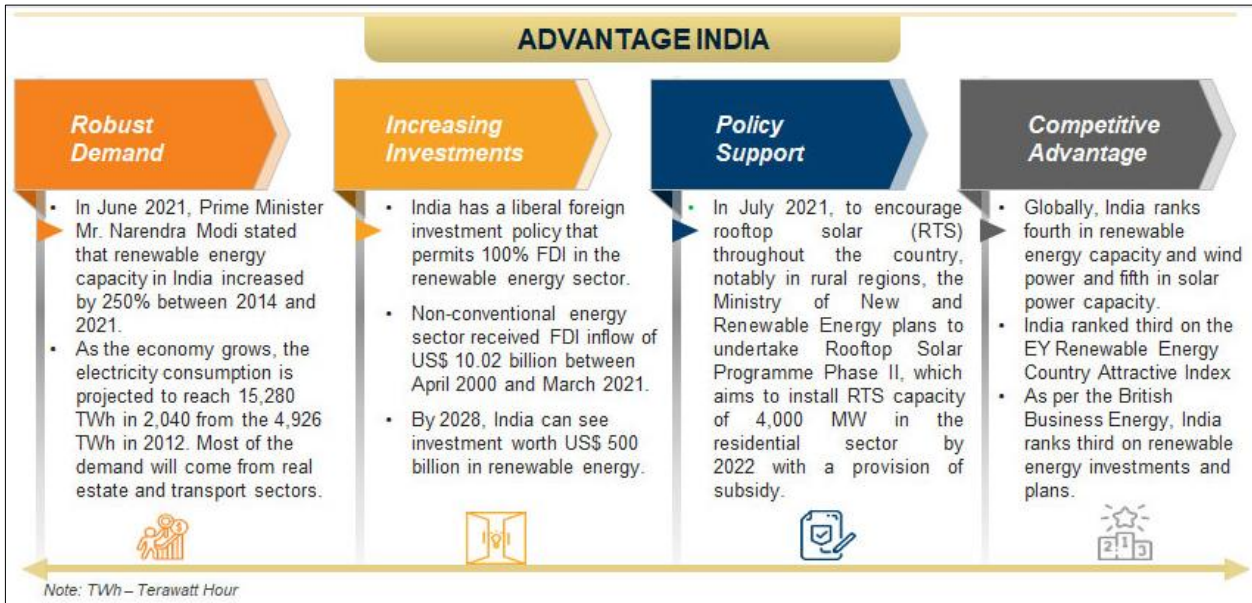


Government initiatives

Some initiatives by Government of India to boost India's renewable energy sector are—

- ✓ In August 2021, the Indian government proposed new rules for the purchase and consumption of green energy. The latest rules are a part of government measures to encourage large-scale energy consumers, including industries, to leverage renewable energy sources for regular operations.
- ✓ In July 2021, to encourage rooftop solar (RTS) throughout the country, notably in rural regions, the Ministry of New and Renewable Energy plans to undertake Rooftop Solar Programme Phase II, which aims to install RTS capacity of 4,000 MW in the residential sector by 2022 with a provision of subsidy.
- ✓ The Ministry of New and Renewable Energy (MNRE) gave the go ahead to NTPC Renewable Energy Ltd., a 100% subsidiary of NTPC, to build a 4,750 MW renewable energy park at the Rann of Kutch in Khavada, Gujarat. This will be India's largest solar park to be developed by the country's leading power producer.
- ✓ Indian Renewable Energy Development Agency Ltd. (IREDA) has invited bids from solar module manufacturers for setting up solar manufacturing units under the central government's Rs. 4,500 crore (US\$ 616.76 million) Production Linked Incentive (PLI) scheme.
- ✓ In June 2021, the Competition Commission of India (CCI) approved ReNew Power to exchange equity shareholding by its existing shareholders with shares of ReNew Global. Along with this, the CCI also approved a reverse triangular merger of ReNewGlobal's subsidiary with RMG II.
- ✓ In April 2021, the Central Electricity Authority (CEA) and CEEW's Centre for Energy Finance (CEEW-CEF) jointly launched the India Renewables Dashboard that provides detailed operational information on renewable energy (RE) projects in India.

Analytica



Conclusion

The Government is committed to increased use of clean energy sources and is already undertaking various large-scale sustainable power projects and promoting green energy heavily. In addition, renewable energy has the potential to create many employment opportunities at all levels, especially in rural areas. The Government of India could streamline the efforts to develop a ‘green city’ in every state of the country. The ‘green city’ will mainstream environment-friendly power through solar rooftop systems on all its houses, solar parks on the city’s outskirts, waste to energy plants and electric mobility-enabled public transport systems.

PEPPER IT WITH
ISA, OSOWOG initiative, Green Grid Initiative, Paris Declaration

National Digital Livestock Mission (NDLM)

News Excerpt

The Union Minister of State Fisheries, Animal Husbandry & Dairying unveiled the National Digital Livestock Mission(NDLM) Blueprint at the National Dairy Development Board.

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Pre-Connect

- The Dairy Board was created to promote, finance and support producer-owned and controlled organisations. NDDDB's programmes and activities seek to strengthen farmer owned institutions and support national policies that are favourable to the growth of such institutions. Fundamental to NDDDB's efforts are cooperative strategies and principles.
- National Livestock Mission is an initiative of the Ministry of Agriculture and Farmers’ Welfare, introduced in 2014-15, with the objective of sustainable development of the livestock sector.
- The livestock sector in the country has been growing at a compound annual growth rate of More than 8% from 2014-15 to 2019-20.

About National Digital Livestock Mission(NDLM)

- It is a digital platform jointly developed by the Department of Animal Husbandry and Dairying (DAHD) and National Dairy Development Board(NDDDB) on the foundation of the existing Information Network for Animal Productivity and Health (INAPH).

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- The bedrock of NDLM will be the unique identification of all livestock, which will be the foundation for all the state and national level programmes including domestic and international trade.
- It aims to create a farmer-centric, technology-enabled ecosystem where the farmers can realize better income through livestock activities with the right information.
- By this, farmers would also be effortlessly access the markets, irrespective of their location or holdings through this digital platform as a wide range of stakeholders will be connected in this ecosystem.
- This system will also include robust animal breeding systems, nutrition, disease surveillance, disease control programmes and a traceability mechanism for animals and animal products.

Expected Outcomes

This digital initiative would help in creation and promotion of rural entrepreneurship by engaging farmers in the sector. The scheme would also provide livelihood opportunities to the unemployed youth and livestock farmers in the cattle, dairy, poultry, sheep, goat, piggery, feed, and fodder sectors.

Fourth International Solar Alliance General Assembly

News Excerpt

The fourth general assembly of the International Solar Alliance (ISA) was conducted in October.

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Pre-Connect

- The ISA is an intergovernmental treaty-based organisation aimed to galvanize solar growth by helping to reduce the cost of financing and technology.
- ISA, was founded by India and France during the 2015 climate change conference in Paris has assumed Centre-stage for India’ attempts at a global climate leadership role.
- ISA is the nodal agency for implementing One Sun One World One Grid (OSOWOG) initiative, which intended to transfer solar power generated in one region to feed the electricity demands of others.
- India has allotted 5 acres of land to the ISA in National Institute of Solar Energy (NISE) campus, Gurugram and has released a sum of Rs. 160 crore for creating a corpus fund, building infrastructure and meeting day to day recurring expenditure of the ISA up to the year 2021-22.
- NISE is an autonomous institution of the Ministry of New and Renewable (MNRE) and is the apex National R&D institution in the field of Solar Energy.

Key Highlights

- Members countries promise to promote Solar Investments, Promise to achieve USD 1 trillion global investments in solar energy by 2030 have been made.
- A Solar Investment Action Agenda and a Solar Investment Roadmap will be launched at COP26 (United Nations (UN) Climate Change Conference).
- On One Sun One World One Grid (OSOWOG) and Green Grids Initiative-One Sun One World One Grid (GGI-OSOWOG) is likely to be launched at COP26.
- New ISA programmes launched on management of solar PV panels & battery usage waste and solar hydrogen programme.
- The new Hydrogen initiative is aimed at enabling the use of solar electricity to produce hydrogen at a more affordable rate than what is available currently (USD 5 per KG), by bringing it down to USD 2 per KG.

Kunming Declaration on Biodiversity

News Excerpt

Recently, over 100 countries sign Kunming Declaration on biodiversity conservation.

About Declaration

The delegate countries have committed to “ensuring the development, adoption, and implementation of an effective post-2020 global biodiversity framework, that includes the provision of the necessary means of implementation.

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Some of the commitments under the Kunming Declaration are—

- Developing and implementing a global biodiversity framework to reverse the course of biodiversity degradation and be on a “path of recovery” by 2030.
- Develop and implement an “Implementation Plan and Capacity Building Action Plan for the Cartagena Protocol on Biosafety” – an international agreement signed in 2003 that aims to protect biodiversity from the risks posed by biotechnology, such as genetically modified organisms (GMO).
- Adopting the ecosystem approach to increase resilience and help humans adapt to the adverse effects of biodiversity loss and climate change.
- Reduce negative effects of human activity on marine and coastal biodiversity.

What is Climate Finance?

The term climate finance has both broad and narrow uses. In its broad sense, it refers to an enterprise that uses financial institutions or technologies to advance the cause of environmental sustainability, such as by developing or deploying new solar panels or other renewable energy sources. In its narrow usage, climate finance refers to the transfer of capital from developed to developing nations in adherence to the recommendations laid out in international agreements such as the 2016 Paris Agreement.

What will the signatory nations do?

- Signatory nations will ensure that the post-pandemic recovery policies, programs, and plans contribute to the conservation and sustainable use of biodiversity, promoting sustainable and inclusive development.
- How effective is the Kunming Declaration expected to be?
- The Kunming Declaration does not hold members to any tangible or measurable biodiversity targets, leading some to cast doubt over how effective the document will be in inspiring real action.
- Many of the commitments outlined in the Kunming Declaration are basically a continuation of the 2011-2020 Strategic Plan for Biodiversity and the Aichi Biodiversity Targets.
- Which also included commitments to reducing incentives for activities that threaten biodiversity, integration of biodiversity with other government policies, and increasing resilience against climate.
- The Aichi Biodiversity Targets included some relatively concrete goals, such as specific reductions targets and commitments to increasing the area of protected land and sea.
- In the Kunming Declaration – the “30 by 30” goal, is a proposed commitment to protect 30 percent of land by 2030.
- The declaration does not expressly commit to this goal, stating only: “Noting the call of many countries to protect and conserve 30 percent of land and sea areas through well-connected systems of protected areas and other effective area-based conservation measures by 2030”.

Funding Mechanism

- ✓ As for supporting measures to protect biodiversity, China pledged RMB 1.5 billion (US\$232 billion) to support biodiversity in developing countries.
- ✓ Enterprises that can contribute to the conservation and sustainable use of biodiversity may be able to take advantage of emerging opportunities, such as enterprises focusing on digital sequence information of genetic resources, ecosystem restoration, clean energy, and sustainable food production, etc.

Lukha River

News Excerpt

The Lukha River was contamination due to acid mine drainage and run-off from the coal mines.

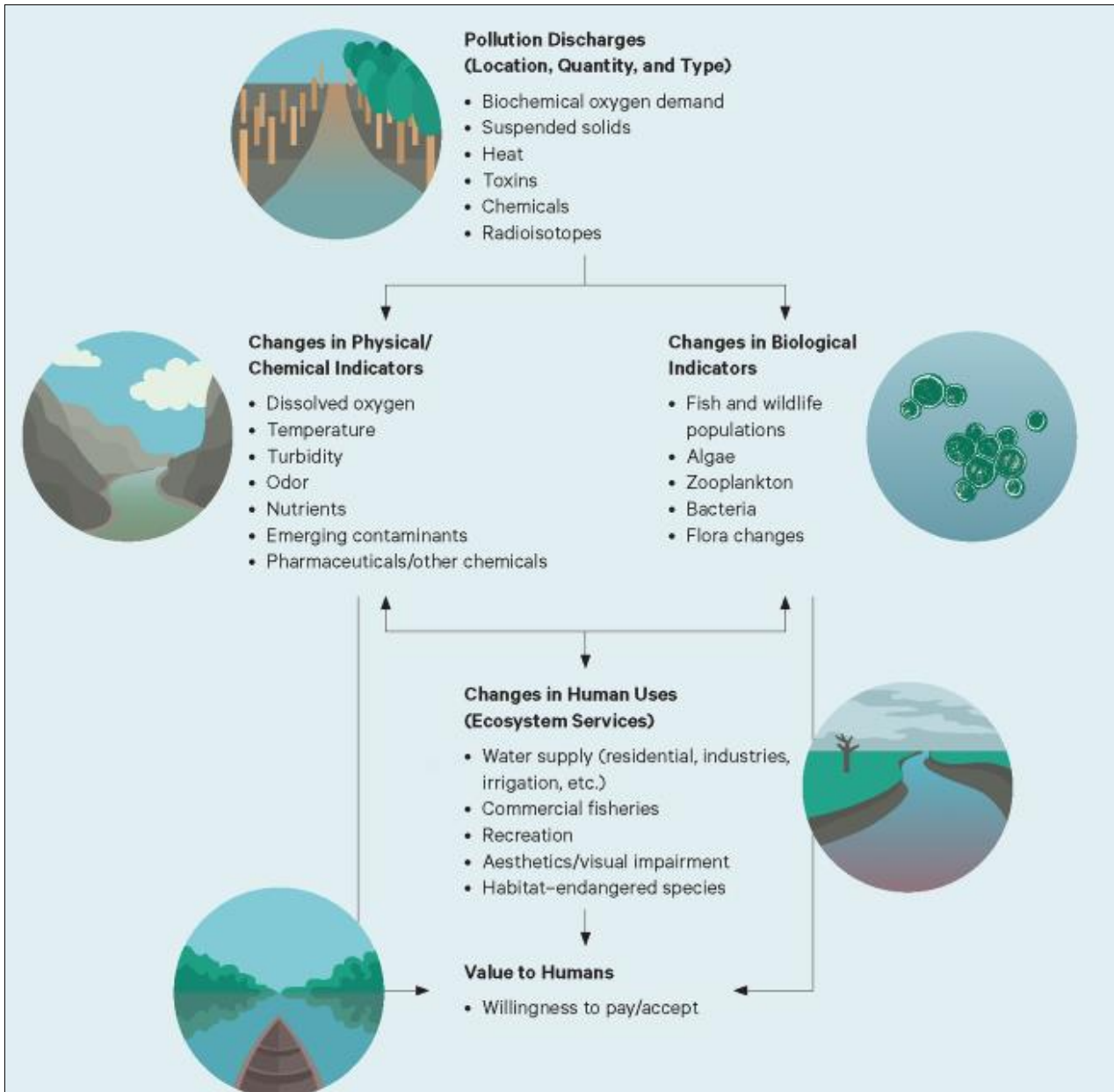
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Pre-Connect

- The Lukha River is located in the southern part of east Jaintia Hills of Meghalaya where most of Meghalaya’s rat-hole coal mines are located.
- This river becomes a victim of the unsustainable large-scale mining of coal and limestone.
- It receives water from the Lunar river (Wah Lunar) and small streams draining from the Narpuh Reserve Forest and the undulating hills of the area while flowing down.
- The river is mainly fed by monsoon rain and flows in the south-west direction and later takes a southern path after joining the Lunar river near the Gaddum village.
- The river passes via the Sonapur village and then into southern Assam’s Barak Valley and ends up in the floodplains of Bangladesh.

Detoxification of River

- Phytoremediation method was used to detoxify the river, where Algae was used to remove major toxic contents from the water.
- Recently, the pilot project was undertaken under the District Mineral Fund after reports of low pH levels affecting the aquatic life in the river.
- Most living organisms, especially aquatic life, function at the optimal pH range of 6.5 to 8.5. pH is a measure of how acidic/basic water is.
- The range goes from 0 to 14, with 7 being neutral. pHs of less than 7 indicate acidity, whereas a pH of more than 7 indicates a base. The pH of water is a very important measurement concerning water quality.



Heli-borne Survey for Ground Water management

News Excerpt

The Ministry of Jal Shakti has launched a Heli-Borne Survey for water management in the arid regions of Rajasthan.

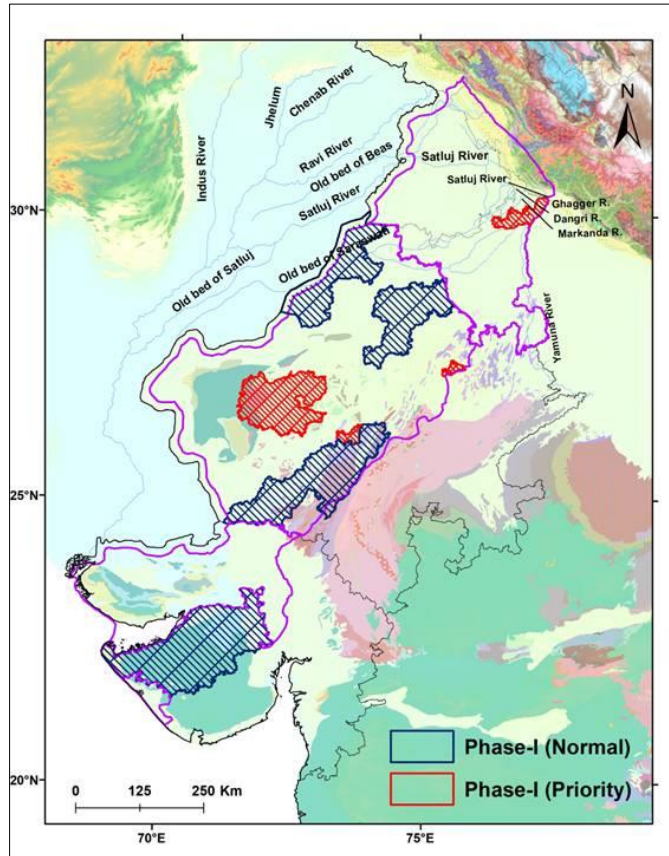
Pre-Connect

- Heli-Borne Survey is based on methodology developed by Council of Scientific and Industrial Research (CSIR)-National Geophysical Research Institute (NGRI), it will provide information about level, quantity, quality and information of ground water.
- In 1961, the NGRI was established as a geo-scientific research organization.

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About Heli-Borne Survey

- The Heli-Borne Survey aims to conduct High resolution aquifer mapping using heliborne geophysical studies, including identification of Sites for artificial recharge.
- It would develop the 3D Geophysical model, Geophysical Thematic maps at horizontal and vertical planes, Aquifer Geometry of principal aquifer with demarcation of de-saturated and saturated aquifers, Aquifer system with relatively fresh and saline zones.
- The survey also aims to map Spatial and depth wise distribution of paleo-channel network if any and its linkage with aquifer system.
- The expected outcome includes selecting suitable sites for groundwater withdrawal and water conservation through artificial or managed aquifer recharge.
- The Survey would cover—
 - **Rajasthan** – Total area to be covered is 66810 sq.km out of which Priority area will be 16738 sq.km in Sikar, Jaisalmer & Jodhpur Districts & Normal area will be 50072 sq.km in Ganganagar, Bikaner, Churu, Pali & Jalore Districts
 - **Haryana** – Priority will be 2642 Sq.km in Kurukshetra & Yamunanagar Districts
 - **Gujarat** – Priority will be 31907 Sq.km (Normal) in Rajkot, Jamnagar, Morbi, Surndranagar & Devbhumi Dwarka Districts.



Benefits

- ✓ The main advantages of the Heliborne geophysical survey is that it is fast, highly data dense, precise and obviously economical. Moreover, it can be conducted in remote as well as inaccessible areas.
- ✓ This survey would further facilitate to develop sustainable and comprehensive groundwater management plans. Precise data can be fetched from this survey.

National Aquifer Mapping Project

- ❖ It was initiated as a part of the Ground Water Management and Regulation Scheme to delineate and characterize the aquifers (water bearing formations) to develop plans for ground water management.
- ❖ It envisages mapping of aquifers, their characterization and development of Aquifer Management Plans to facilitate sustainable management of groundwater resources.

PEPPER IT WITH
Jal Jeevan Mission, Atal Bhujal
Yojana, Water Atlas of India

Climate Vulnerability Index

News Excerpt

Council on Energy, Environment and Water has carried a first-of-its-kind district-level climate vulnerability assessment, or Climate Vulnerability Index (CVI), in which it has analyzed more than 640 districts in India to assess their vulnerability to extreme weather events such as cyclones, floods, heatwaves, droughts, etc.

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Pre-Connect

- The CVI maps exposure (that is whether the district is prone to extreme weather events), sensitivity (the likelihood of an impact on the district by the weather event), and adaptive capacity (what the response or coping mechanism of the district is).
- It helps map critical vulnerabilities and plan strategies to enhance resilience and adapt by climate-proofing communities, economies and infrastructure.
- Instead of looking at climate extremes in isolation, the study looks at the combined risk of hydro-met disasters, which is floods, cyclones and droughts, and their impact. The study does not take into consideration other natural disasters such as earthquakes.

Key finding of the Index

- Only 63 per cent of Indian districts have a District Disaster Management Plan (DDMP). “While these plans need to be updated every year, only 32 per cent of them had updated plans until 2019.
- The CVI has ranked 20 states out of which Assam and Andhra Pradesh are the most vulnerable to extreme weather events, and Kerala, Tripura and West Bengal are the least vulnerable.
- Kerala and west Bengal have performed well comparatively, despite both being coastal states and dealing with the threat of cyclones and floods annually

States with highest vulnerability index rank

- ▶ Assam
- ▶ Andhra Pradesh
- ▶ Maharashtra
- ▶ Karnataka
- ▶ Bihar
- ▶ Manipur
- ▶ Rajasthan
- ▶ Arunachal Pradesh
- ▶ Sikkim
- ▶ Odisha

The findings

- ▶ 27 of 35 states and UTs are highly vulnerable to extreme hydro-met disasters and their compounded impacts
- ▶ 463 of 640 districts are vulnerable to extreme floods, droughts, and cyclones
- ▶ Over 45% of these

districts have undergone unsustainable landscape and infrastructure changes

- ▶ 59% of districts located in the eastern zone are highly vulnerable to extreme cyclone events
- ▶ In the western zone, more than 41% of districts are cyclone hotspots

Need for such index

- ✓ India is the seventh-most vulnerable country with respect to climate extremes.
- ✓ Extreme weather events have been increasing in the country such as super cyclone Amphan in the Bay of Bengal, which is now the strongest cyclone to be recorded in the country.
- ✓ Recent events such as the landslides and floods in Uttarakhand and Kerala, have also increased in the past decade.
- ✓ Three out of four districts in India are extreme event hotspots, with 40 per cent of the districts exhibiting a swapping trend, that is – traditionally flood-prone areas are witnessing more frequent and intense droughts and vice-versa.

How much does climate change cost?

- From floods and fires to conflict and migration: economic models struggle with the many possible knock-on effects from global warming.
- The ballpark IMF estimate is that unchecked warming would shave 7% off world output by 2100.
- The Network for Greening the Financial System (NFGS) group of world central banks puts it even higher - 13%.
- In a Reuters poll of economists, the median figure for the output loss in that scenario was 18%.

Where Is The Impact Going To Be Felt Hardest?

- Clearly, the developing world. Much of the world's poor live in the tropical or low-lying regions already suffering climate change fall-out like droughts or rising sea levels.
- Moreover their countries rarely have the resources to mitigate such damage. The NFGS report projects overall output losses of above 15% for much of Asia and Africa, rising to 20% in the Sahel countries.
- Due to climate change 132 million more people will drive into extreme poverty by 2030.

Who Loses Out In A "Net Zero" Carbon World?

- Primarily, anyone with fossil fuel exposure.
- In September it is estimated that over \$1 trillion of business-as-usual investment by the oil and gas sector would no longer be viable in a genuinely low-carbon world.
- The IMF has called for the end of all fossil fuel subsidies - which it calculates at \$5 trillion annually if defined to include undercharging for supply, environmental and health costs.

What Should Carbon Really Cost?

- Tax and Permit Schemes: so far only a fifth of global carbon emissions are covered by such programmes, pricing carbon on average at a mere \$3 a tonne.
- But according to IMF That's well below the \$75/tonne to cap global warming at well below 2°C.
- The Reuters poll of economists recommended \$100/tonne.

Decoupling Emissions From Economic Growth?

Any decoupling has either been largely relative - in the sense of merely achieving higher rates of economic growth than gains in emissions - or achieved by shifting dirty production from one national territory to another. And that is why, for now, global emissions are still rising.

Way forward

- Clean energy is the next target but the transition is likely to be difficult for many, especially in countries that are heavily reliant on fossil fuels and not equipped with the resources to go green. Many, like India, are responsible for far less emission than wealthier countries that are leading the green push.
- Late push would cost up to 3% in output losses, but the earlier a transition kicks in the less than number would be. The first to go, however, would be the trillion dollar worth oil and gas industry and their current investments. Carbon costs would have to be raised to \$75 per tonne (currently at \$3/tonne) to price the industry out of emissions.

Recommendation of index

- ✚ The report recommended that restoration of climate-sensitive landscapes will act as natural shock absorbers against extreme climate events.
- ✚ Establish a centralised climate-risk commission to coordinate the environmental de-risking mission.'
- ✚ Provide for climate risk-interlinked adaptation financing by creating innovative CVI-based financing instruments that integrate climate risks for an effective risk transfer mechanism.
- ✚ Further, integration of climate risk profiling with infrastructure planning is imperative for protecting the existing and planned infrastructure projects.
- ✚ Combating the rising frequency and scale of extreme climate events is fiscally draining for developing countries such as India.
- ✚ Further, India must collaborate with other countries to create a Global Resilience Reserve Fund, which could act as insurance against climate shocks.

Marine Protected Areas (MPAs) in Antarctica

News Excerpt

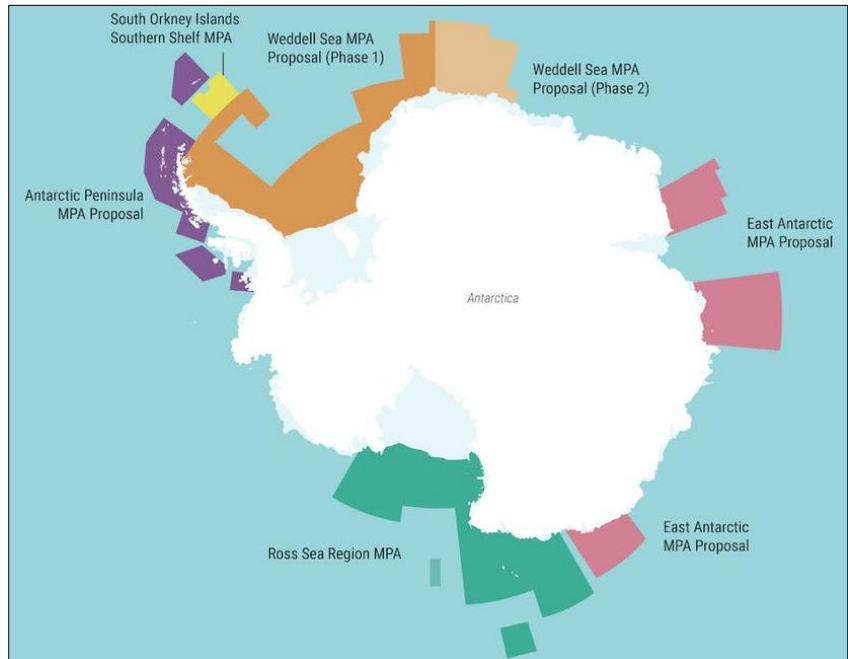
Recently, India has extended support for protecting the Antarctic environment and for co-sponsoring the proposal of the European Union for designating East Antarctica and the Weddell Sea as Marine Protected Areas (MPAs).

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About Proposal

The proposed Weddell Sea MPA contains three zones—

- **The General Protection Zone** would be closed to commercial fishing to maintain the health of this ecosystem, protect biodiversity, and boost climate resilience, as well as support research and monitoring to improve understanding of the climate and human impacts on Antarctic ecosystems.
- **The Fisheries Research Zone** allows for clearly defined research activities, aimed at informing the science-based management of the region’s Antarctic toothfish stock. This includes a better understanding of population structure and life history, biological parameters, and ecology. Part of this zone will remain un-fished and will serve as a scientific reference area for analyzing the wider ecosystem effects of fishing.
- **The Special Protection Zone** prohibits all fishing in order to protect multiple nesting sites for bottom-dwelling fish and unique, rare, or endemic habitats, especially in the shelf area where rich sponge communities exist. This zone also allows scientists the opportunity to monitor the impacts of natural variability and long-term changes on Antarctic marine living resources.



Objective

The proposal is aimed to conserve Antarctic water. In the 20th century, illegal commercial exploitation of fishes was begun in the Southern Ocean, and populations of fish shrunken. In the recent years several measures have been initiated to protect Antarctic wildlife, to allow recovery of depleted species, and to manage fisheries. India also affirms the protection of Antarctic water by means of creation of MPA.

India and the Proposal

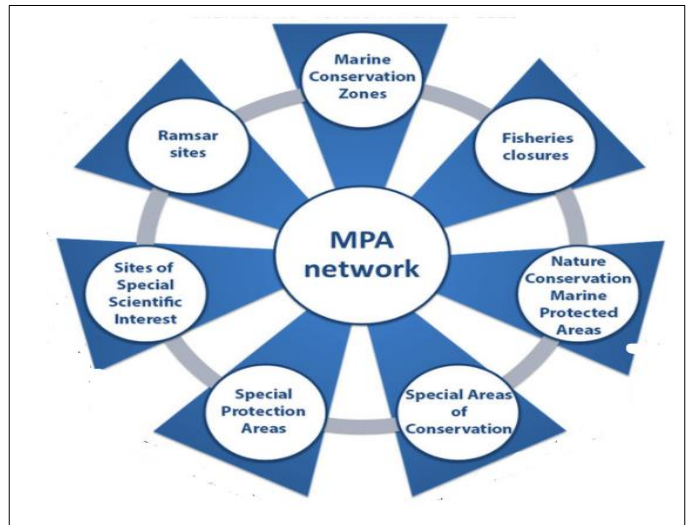
- This is the first time India is considering co-sponsoring an MPA proposal at CCAMLR (Commission for the Conservation of Antarctic Marine Living Resources) and getting aligned with

countries such as Argentina, Brazil, Chile, Korea, New Zealand, South Africa and the USA, which are also proactively considering supporting the MPA proposals.

- India backs move to designate East Antarctica, Weddell Sea as Marine Protected Areas, India asserted that the proposed MPAs is essential to regulate illegal unreported and unregulated fishing.
- India asserted that it would be associated with the formulation, adaptation and implementation mechanisms of these MPAs in future.
- India supports sustainability in protecting the Antarctic environment.

Marine Protected Area (MPA)

- ✓ An MPA is a region of the ocean in which human activities are more strictly demarked and regulated than in the surrounding waters, just like a national park on land.
- ✓ MPAs are the most effective way to protect ocean ecosystems. MPA protect biodiversity, while mitigating the impacts of climate change and providing reference areas for scientific research.
- ✓ By reducing human activities, MPAs reduce pressure on the marine environment. Well-managed areas lead to increases in the diversity and abundance of species to create healthy, productive and functional ecosystems that are more likely to mitigate and adapt to the impacts of climate change.
- ✓ MPAs also create reference areas that act as experimental controls for research, allowing scientists to better understand ocean ecosystems.



Advantages of Marine Protected Areas:

- ✚ MPAs can help vulnerable ecosystems build resilience to climate change by eliminating additional stresses such as fishing. Having greater resilience means that ecosystems can better resist and recover from shocks associated with changing ocean conditions, responding to these disturbances while maintaining viable functions.
- ✚ Networks of MPAs also help species adapt to climate change, or the ability to evolve or change behaviors in relation to shifts in habitat conditions, by creating protected

WETLANDS OF INDIA PORTAL

- ❖ This was launched by Union Minister of Environment.
- ❖ The portal is a single point access to all information relating to wetlands.
- ❖ The portal is a dynamic system for processing information and making it available to the stakeholders in an efficient and accessible manner.
- ❖ The portal has been developed under a Technical Cooperation project “Wetlands Management for Biodiversity and Climate Protection” (Wetlands Project) of Ministry of Environment, Forest and Climate Change (MoEFCC) in partnership with Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.
- ❖ The project is commissioned by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) under the International Climate Initiative (IKI).

pathways for species migrations and range shifts. In addition, their relatively undisturbed waters provide a natural laboratory for studying how intact marine ecosystems react to a warming and acidifying ocean.

- ✚ A network of MPAs would not only preserve connectivity among the Southern Ocean's many unique ecosystems, allowing marine life to migrate between protected areas for breeding and foraging, but it would also significantly contribute to global ocean protection goals.
- ✚ In addition, networks of MPAs that protect migratory pathways and key habitats can ensure that populations are connected, which would build resilience in a changing

Analytica

Antarctica region is crucially important in answering key questions about global climate change, its contribution towards global sea-level rise, the background aerosol properties, variability in the sea ice cover and phenomena like Antarctic haze and ozone concentrations. Attempts to address some of these issues are helping in mitigating several important problems concerning human life and well-being.

- **As a Cryosphere:** Ice and snow on land are part of the cryosphere. This includes the largest parts of the cryosphere, the continental ice sheets found in Antarctica, as well as ice caps, glaciers, and areas of snow and permafrost. The cryosphere help to control the planet's temperature, it also controls the global sea levels. It affects ocean currents and storm patterns around the world, and the melting snow and ice provides freshwater for human consumption and irrigation of crops. The cryosphere is an integral part of the global climate system with important linkages and feedbacks generated through its influence on surface energy and moisture fluxes, clouds, precipitation, hydrology, and atmospheric and oceanic circulation.
- **Role in Global Climate:** Many important Antarctic climate-related processes involve ice. Ice and snow are important components of climate, with snow in particular limiting absorption of solar energy at the surface through its high reflectivity ('albedo').The Antarctic Ice Sheet amplifies small variations in the energy received from the Sun, modifies the climate through its influences on global sea level and carbon cycle changes, and governs important feedbacks across the atmosphere, ocean, and solid Earth.The Southern Ocean around Antarctica also absorbs a large amount of carbon from atmosphere.

Conclusion

- The Antarctic is important from environmental, scientific, historic, and intrinsic values, all of which are worth protecting into the future. Therefore, the protection has to be provided to check the instances of unregulated fishing. Nevertheless, the area is subject to an increasing level and diversity of human activities that may impact these values within marine, terrestrial and cryosphere environments. More suite of legally binding international agreements should be taken up to extend the degree of protection and reduce unsustainable human activities on the icy continent.

PEPPER IT WITH
Madrid Protocol, Antarctic treaty, Dakshin Gangotri, Bharati Station

SCIENCE & TECHNOLOGY

Landsat 9 Satellite by NASA

News Excerpt

Landsat 9 is the latest satellite in the Landsat series. To reduce the build time and a risk of a gap in observations, Landsat 9 largely replicates its predecessor Landsat 8.

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Pre-Connect

Landsat 9 carries two science instruments:-

- Both instruments have sensors with moderate spatial resolution—15 m (49 ft), 30 m (98 ft), and 100 m (328 ft) depending on spectral band and the ability to detect a higher range in intensity than Landsat 8.
- Landsat 9 will be placed in an orbit that it is eight days out of phase with Landsat 8 to increase temporal coverage of observations.

<u>The Operational Land Imager (OLI) 2</u>	<u>The Thermal Infrared Sensor (TIRS) 2</u>
OLI-2 will capture observations of the planet in visible, near infrared and shortwave-infrared light. OLI-2 was built by Ball Aerospace in Boulder, Colorado.	<ul style="list-style-type: none"> ❖ TIRS-2 will measure the thermal infrared radiation, or heat (brightness temperature), of Earth’s surfaces. ❖ TIRS-2 will provide an upgraded version of the Landsat 8 ❖ TIRS instrument, by improving reliability and correcting known issues with stray light.

Advantages

- It will extend the measure changes on the global land surface at a scale where separation can be made between human and natural causes of change. When land use and resource availability issues arise, Landsat 9 will help decision makers make informed management decisions.
- Landsat 9 will contributes to a critical component to the international strategy for monitoring the health and state of the Earth. Landsat users can now take advantage of more frequent observations (every 8 days using two satellites).
- Applications such as weekly tropical deforestation alerts, water quality monitoring, and crop condition reports are now feasible with the constellation. With increased activity in international and commercial remote sensing, **Landsat has emerged as a cornerstone of the global constellation of imagers.**

Informed decision support for key areas

- ✓ **Tropical deforestation and global forest dynamics:** The Landsat archive provides an impartial and unbiased record of Earth’s forests for world governments and resource organizations to verify claims of environmental protection and carbon storage.
- ✓ **Urban expansion:** The Landsat record would help to visualize the impact of humankind’s convergence on urban centers and to understand the environmental consequences.
- ✓ **Water use:** Landsat 9 will be an invaluable tool for managing water in defined areas
- ✓ **Coral reef degradation:** Landsat would also help to enable global monitoring of Earth’s reefs.
- ✓ **Glacier and ice-shelf retreat:** The Landsat archive chronicles changes to 98 percent of Earth’s glaciers, and Landsat 9 will continue monitoring them into the future.
- ✓ **Natural and man-made disasters:** Landsat data are regularly used as part of the International Disaster Charter, mapping disaster impacts to save lives.
- ✓ **Climate change:** Landsat data provide a direct view of how almost five decades of climate change have affected Earth’s surface and biology.

NASA Lucy mission

News Excerpt

Lucy is the first mission of NASA to explore the Jupiter Trojan Asteroids. These asteroids are believed to be the remnants of the early solar system, and studying them will help scientists understand its origins and evolution, and why it looks the way it does.

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About

- The solar-powered mission 'Lucy' is estimated to be over 12 years long, during the course of which the spacecraft will visit eight asteroids covering a distance of about 6.3 billion km to deepen the understanding of the "young solar system".

Asteroids are divided into three categories.

<p>First, those found in the main asteroid belt, between Mars and Jupiter.</p>	<p>The second group is that of trojans, which are asteroids that share an orbit with a larger planet. NASA reports the presence of Jupiter, Neptune and Mars trojans. The Jupiter asteroids can be found in what are referred to as "swarms" that lead and follow the planet Jupiter along its orbit around the Sun. 'Lucy' will reach the first swarm of these asteroids that precede Jupiter by August 2027.</p>	<p>The third classification of asteroids is under Near-Earth Asteroids (NEA), which has orbits that pass close to the Earth. Those that cross the Earth's orbit are called Earth-crossers. More than 10,000 such asteroids are known, of which over 1,400 are classified as potentially hazardous asteroids (PHAs).</p>
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Objectives of the Mission

- NASA says that as per some planet formation and evolution models, the Trojan asteroids are believed to be formed from the same material that led to the formation of planets nearly 4 billion years ago when the solar system was formed.
- Therefore, the mission is designed to understand the composition of the diverse asteroids that are a part of the Trojan asteroid swarms, to determine the mass and densities of the materials and to look for and study the satellites and rings that may orbit the Trojan asteroids.

Indian Astronomical Observatory (IAO), Hanle

News Excerpt

Astronomers are constantly searching for ideal locations around the world to build their next big telescope based on local meteorological data collected over many years. Researchers from India and their collaborators carried out a detailed study of the night time cloud cover fraction over 8 high altitude observatories, including three in India.

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Key Points

- They used re-analysis data, combined from assimilation and observation extending over 41 years, along with 21 years of data from satellites.

- The study classified the quality of observable nights for different astronomical usages like photometry and spectroscopy on a daily basis.
- They analysed datasets for the Indian Astronomical Observatory (IAO) in Hanle and Merak (Ladakh), and Devasthal (Nainital) in India, Ali Observatory in the Tibet Autonomous Region in China, South African Large Telescope in South Africa, University of Tokyo Atacama Observatory and Paranal in Chile, and the National Astronomical Observatory in Mexico.
- The team found that the Hanle site which is as dry as Atacama Desert in Chile and much drier than Devasthal and has around 270 clear nights in a year and is also one of the emerging sites for infrared and sub-mm optical astronomy.
- This is because water vapour absorbs electromagnetic signals and reduces their strength.
- Such studies are crucial in planning for future observatories and the prediction of how they will vary with time.
- IAO-Hanle, and Ali observatories, which are located around 80 km from each other, are similar to each other in terms of clear night skies. They found that Devasthal has a slightly larger number of clear nights compared to the other sites in the sub-continent but are affected by monsoons for about three months in a year.
- However, night observations at IAO-Hanle from 2m-Himalayan Chandra Telescope (HCT) are possible throughout the year without any interruption due to monsoons. Due to the advantages of more clear nights, minimal light pollution, background aerosol concentration, extremely dry atmospheric conditions, and uninterrupted by monsoon, this region is becoming one of the promising sites globally for the next generation of astronomical observatories.
- Studying the variation of atmospheric parameters from 1980 to 2020 for all sites, the researchers found decreasing trends for the cloud cover fraction over the central region of Africa, the Eurasian continent, and the American continents, but increasing trends in the maritime region as well as land regions in the Sahara Desert, the Middle East, Indian sub-continent, the Tibetan Plateau and some of the Southeast Asian islands. This was possibly caused by global warming and associated water vapour changes in land-oceanic regions.
- Such detailed studies of long-term cloud fraction and other various meteorological parameters help IIA plan for several mega-science projects such as National Large Solar Telescope (NLST) of 2-meter aperture and National Large Optical Telescope (NLOT) of 8-10 meter aperture at Merak and Hanle, respectively in the high-altitude Ladakh region.
- After examining several years of data of various astroclimatological parameters, IIA had installed the 2-meter aperture Himalayan Chandra Telescope (HCT) at Indian Astronomical Observatory (IAO), Hanle, during 2000. Thereafter, due to the uniqueness of this site, several astronomical telescopes operating at optical and infrared wavebands have been installed at Hanle by several Institutes in the country.

NITI Aayog Cloud Innovation Center for Startups

News Excerpt

The National Institution for Transforming India (NITI Aayog), the Government of India's national policy think tank, Amazon Web Services (AWS), and Intel have come together to establish a new experience studio at the NITI Aayog Frontier Technologies Cloud Innovation Center (CIC).

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Advantages

- The studio will be a hub for collaboration and experimentation to enable problem solving and innovation between government stakeholders, startups, enterprises, and industry domain experts.
- The studio will help showcase the potential of technologies such as artificial intelligence (AI), machine learning (ML), Internet of Things (IoT), augmented reality and virtual reality (AR/ VR), block-chain, and robotics to accelerate their application in public sector use cases.

- The studio will encourage open innovation and serve as a hub for government, healthcare, education, and nonprofit startups from India to showcase their solutions. It will also provide startups with an option to access necessary support to enhance and scale their solutions.
- The new experience studio at the NITI Aayog Frontier Technologies CIC, based on the AWS Cloud Innovation Centers program, aims to quickly solve public sector challenges through collaboration and actualize innovations from experimentation and prototypes. The studio will help subject matter experts from different verticals, government stakeholders, and startups to apply design thinking to go deeper into problem areas and develop solutions to enable digital healthcare, build the digital agriculture ecosystem, and develop the digital infrastructure for smart cities in India. It will be a hub for creativity, experimentation, and testing new ideas to solve challenges sourced from the community.

ISRO's platform and Private Sector in Space

News Excerpt

Bharti-backed low earth orbit (LEO) satellite communications company OneWeb has partnered with NewSpace India (NSIL), the commercial arm of the Indian Space Research Organisation (Isro), to use Indian-built PSLV (Polar Satellite Launch Vehicle) and the heavier GSLV-MkIII (Geosynchronous Satellite Launch Vehicle) as potential platforms to launch OneWeb's satellites in India from 2022.

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Key Points

- OneWeb is among the founding members of ISpA, which strives to be the collective voice of space and satellite companies in India and will work with stakeholders across for the development of India's space ecosystem.
- ISRO has in the last few years been opening up to the Indian private space sector in a gradual manner – mostly as a matter of compulsion because ISRO simply does not have the in-house capacity to address India's growing requirements.
- Today, the Indian space programme is not just about civilian applications for remote-sensing, meteorology and communication, as in the early decades. India's space sector and its requirements have grown enormously in the last decade to include television and broadband services, space science and exploration, space-based navigation and, of course, defence and security applications.

DLX1 Gene to Treat Prostate Cancer

About

The DLX1 plays an important role in the development of jaws, skeleton, and inter-neurons in the brain.

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Importance of DLX1 Gene

- It has been recently discovered that this gene (DLX1) have an important role to play in the growth and development of prostate cancer.
- It is expressed at higher levels in the prostate cancer cells, has a huge role in the growth and development of the tumour and the spread of the cancer to other organs in the body (metastasis).
- Using small molecules as inhibitors, the researchers have shown in mice a new therapeutic strategy to treat people with DLX1-positive prostate cancer.

Prostate Cancer:

- Prostate cancer is cancer that occurs in the prostate. The prostate is a small walnut-shaped gland in males that produces the seminal fluid that nourishes and transports sperm.
- Prostate cancer is one of the most common types of cancer. Many prostate cancers grow slowly and are confined to the prostate gland, where they may not cause serious harm. However, while some types of prostate cancer grow slowly and may need minimal or even no treatment, other types are aggressive and can spread quickly.

Radio over Internet Protocol

News Excerpt

In view of a much needed solution for providing effective long range Marine communication, the Radio over Internet Protocol (ROIP) System at Syama Prasad Mookerjee Port, Kolkata (SMP, Kolkata), was inaugurated.

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About

- ROIP system is being introduced as a marine communication mode, for the first time in any Major Indian Port.
- Radio over Internet Protocol (RoIP) is a technology for transmitting radio communication signals using the Internet Protocol (IP) standard.
- RoIP provides the same performance as well-enhanced radio communication but uses a digital IP network to enable communication and connection between two or more analog radio devices or radio networks.
- RoIP is similar to a VoIP network, but with radio communication features and abilities. RoIP works in a half-duplex mode where only one radio device can communicate at a time.
- The user must push the push-to-talk (P2T) each time before communicating. Besides standard radio communication features, RoIP enables the connection of two or more radio sites together using digital-to-analog converting receivers at both ends, which are directly connected to an Internet backbone. Moreover, RoIP also enables interoperability between different radio networks with different and non-compatible architecture.
- It shall cover the entire Hugli river Estuary from Kolkata to Sandheads, having base stations at 4 Locations.
- With this facility, vessels at Sandheads can be directly communicated via Radio, from Kolkata, especially during storms and inclement weather.

Quantum Key Distribution (QKD)

News Excerpt

C-DOT's (Centre for Development of Telematics) Quantum Communication Lab has recently been inaugurated by the government and it has unveiled the indigenously developed Quantum Key Distribution (QKD) solution. QKD, also called Quantum Cryptography, is a mechanism to develop secure communication.

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Pre-Connect

- Quantum key distribution (QKD) is a secure communication method for exchanging encryption keys only known between shared parties.
- The communication method uses properties found in quantum physics to exchange cryptographic keys in such a way that is provable and guarantees security.
- QKD implementation requires interactions between the legitimate users. These interactions need to be authenticated. This can be achieved through various cryptographic means.

What are the cyber-security risks to current cryptographic techniques?

- Our cyber-security infrastructure requires two different functions: authentication and confidentiality.
- Authentication allows distant users to trust their counterpart and validate the content of their exchanges. It is mostly implemented by public-key signature schemes. Confidentiality is required for any exchange of private information.
- It is often performed in a two-step process. First the users have to exchange a common secret key.
- This relies on another public-key protocol, the key exchange mechanism. The secret key is then used in a symmetric key encryption scheme. Both functions therefore depend on similar cryptographic techniques, known as asymmetric or public-key cryptography.

How does Quantum Key Distribution improve traditional cryptography implementations?

A security solution is as secure as its weakest link and in network encryption, the current weakest link with respect to the quantum computer threat is the secret key distribution based on public key cryptography. As its name says, QKD is used to distribute encryption keys, whose security is based on quantum physics and is thus guaranteed for the long-term.

What are the current QKD solutions and how do they work?

- Most QKD solutions currently consist of key distribution appliances combined with link encryptors. The QKD appliances distribute the secret keys to the link encryptors. The link encryptors use the keys to encrypt large amounts of data, typically up to 100 Gb/s.
- In the simplest case, two QKD appliances are connected through an optical fiber and continuously distribute key material, which they store at each end-point, until it is requested by the encryptors.
- These solutions work up to an optical attenuation in the fiber of 18 dB, which corresponds to a range of about 80km, depending on the quality of the optical network.
- These systems are thus typically deployed in Local Area Networks or Metropolitan Area Networks, such as corporate campuses or datacenter interconnects.
- These applications have been extended to much longer distances, through the use of so-called Trusted Nodes. These trusted Nodes perform key hopping, whereby keys are generated at a starting node and transferred securely from node to node until the end node.
- Instead of relying on the security of the whole transmission channel, security has to be provided at each node only. Using a similar technology, it is also possible to build various types of QKD networks, such as ring networks and star networks.
- This requires more complex Key Management Schemes, which distribute the keys from and to any node in the network. For global reach, the Trusted Nodes can be implemented in satellites, with free-space QKD.
- Thanks to the rapid development of QKD solutions, many encryptor manufacturers now offer “quantum enabled” devices, which accept keys from QKD appliances. These encryptors are compatible with Ethernet and Fiber Channel with link bandwidth up to 10Gbps and aggregated bandwidth up to 100Gbps.

Indian Space Association (ISpA)

News Excerpt

ISpA is an industry body consisting of various stakeholders of the Indian space domain. The members of the organisation include government bodies such as Indian Space Research Organisation (ISRO) and private telecom companies such as Bharti Airtel’s One Web, Tata Group’s Nelcom, L&T, MapMyIndia, and others.

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Key Points

- Though India too has made significant strides in space exploration over time, state-run ISRO has been at the centre and front of this progress.
- Several private sector companies, however, have shown an interest in India’s space domain, with space-based communication networks coming to the fore.

Aim of ISA

- One of the main goals of the organisation is to supplement the government’s efforts towards making India a global leader in commercial space-based excursions.
- It aims to contribute to the Government of India’s vision of making India Atmanirbhar and a global leader in the space arena, which is fast emerging as the next growth frontier for mankind.
- The association will engage with stakeholders across the ecosystem for the formulation of an enabling policy framework that fulfils the Government’s vision.

- ISpA will also work towards building global linkages for the Indian space industry to bring in critical technology and investments into the country to create more high skill jobs.

Radiation safety in India

News Excerpt

The U.S. Nuclear Regulatory Commission (NRC) decisively upheld the Linear No-Threshold model to prescribe radiation safety standards, ending the protracted controversy on the topic.

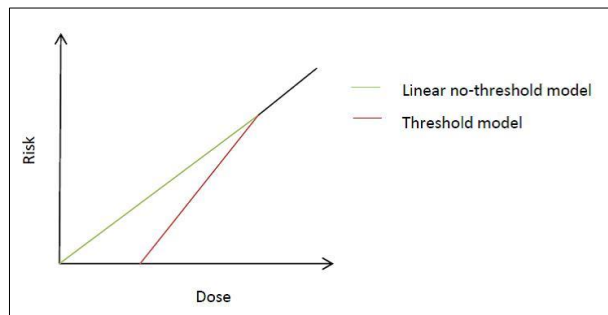
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Background

- In 2015 three petitions requested the NRC, “to amend its regulations based on what they assert is new science and evidence that contradicts the linear no-threshold (LNT) dose-effect model that serves as the basis for the NRC’s radiation protection regulations.
- The petitioners supported the “radiation hormesis,” concept that states that low doses of ionising radiation protect against the deleterious effects of high doses of radiation and result in beneficial effects to humans.

About Linear no-threshold

- Linear no-threshold (LNT) is a model used in radiation protection to estimate the cancer risk caused by ionizing radiation.
- The LNT model assumes that radiation doses greater than zero will increase the risk of excess cancer or heritable disease in a simple proportionate manner in the low-dose range. In other words, according to the LNT model, even very small doses of radiation can still cause cancer or genetic damage.
- The NRC noted that although there are studies and other scholarly papers that support the petitioners’ assertions, there are also studies and findings that support the continued use of the LNT model, including those by national and international authoritative scientific advisory bodies.
- The diagram below shows the difference between the LNT model and an alternative threshold model. The threshold model suggests that below certain exposure levels, there is no observable risk of cancer from radiation. Adoption of the threshold model has an implication of relaxing the current radiation protection standards.



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SECURITY

New Defence companies

News Excerpt

Recently, the Prime Minister Narendra Modi dedicated to the nation seven new defence public sector undertakings (DPSUs), created by incorporating the dissolved erstwhile Ordnance Factory Board (OFB).

The new Defence PSUs are 100 per government owned corporate entities and will help in improving the country's self-reliance in defence preparedness.

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Pre-Connect

- The Indian Ordnance Factories organisation - a family of 41 Ordnance Factories - possesses the unique distinction of over 200 years experience in defence production.
- The Ordnance Factories form an integrated base for indigenous production of defence hardware and equipment, with the primary objective of self reliance in equipping the armed forces with state of the art battlefield equipment.

Highlights

- The Union government has ordered the dissolution of the four-decade-old Ordnance Factory Board (OFB) and amalgamated 41 factories (functioning under the Department of Defence Production, Ministry of Defence) under seven new state-owned companies to manufacture defence hardware ranging from munitions to heavy weapons and vehicles.
 - The restructuring is aimed at transforming the Ordnance Factories into productive and profitable assets, deepen specialisation in the product range, enhance competitiveness, improving quality and cost-efficiency.
- The over 70,000 employees of the OFB (Group A, B & C) belonging to the production units and also the identified non-production units have been transferred en masse to the new DPSUs on terms of foreign service without any deputation allowance initially for a period of two years.

Seven new companies

Munitions India Limited (MIL); Armoured Vehicles Nigam Limited (AVANI); Advanced Weapons and Equipment India Limited (AWE India); Troop Comforts Limited (TCL) (Troop Comfort Items); Yantra India Limited (YIL); India Optel Limited (IOL) and Gliders India Limited (GIL).

Analytica

- ✓ The concerns have been raised regarding high costs, inconsistent quality and delay in supply of OFB products by the armed forces.
- ✓ The new structure will help overcome these various shortcomings in the existing system of OFB and encourage these companies to become competitive and explore new opportunities in the market including exports.
- ✓ This move will bring about enhanced functional autonomy, efficiency and will unleash new growth potential and innovation.
- ✓ These new companies are expected to play an important role in the defence manufacturing ecosystem and would be engines of growth for the Indian economy.
- ✓ Under the initiative of Atmanirbhar Bharat, the goal is to make India a strong military power globally on its own strength and also develop a modern indigenous defence industry.

PEPPER IT WITH
 Defence Industrial Corridor and public sector undertakings (PSUs)

Tibetology

News Excerpt

Recently, the Army has begun a course in Tibetology in a tie-up with the Central Institute of Himalayan Cultural Studies in Arunachal Pradesh.

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Highlights

- The Army’s Training Command, ARTRAC, has identified seven institutes for Tibetology across the country, two of which are in the Northeast. The other one is the Namgyal Institute of Tibetology in Sikkim.
- During the 42 days of the preliminary course, Tibetan history, geopolitics and current political dynamics were covered in the form of lectures and case studies.
- Currently, two courses a year are planned with about 15-20 participants in each course.
- Lamas who were proficient in Tibetan issues were hired from the Monastery in Bomdila to take the course.

Analytica

- It will enable troops to have a better understanding of Tibetan history, culture, language and topography.
- To orienting its officers and men posted along the Line of Actual Control (LAC) in Tibetan culture and also preparing them to better understand the information warfare.

PEPPER IT WITH
ARTRAC, Central Institute of
Himalayan Cultural Studies

What is the Line of Actual Control?

- ✓ The LAC is the demarcation that separates Indian-controlled territory from Chinese-controlled territory.
- ✓ India considers the LAC to be 3,488 km long, while the Chinese consider it to be only around 2,000 km.
- ✓ It is divided into three sectors: the eastern sector which spans Arunachal Pradesh and Sikkim, the middle sector in Uttarakhand and Himachal Pradesh, and the western sector in Ladakh.

Defence Exercises

<u>Mitra Shakti 21</u>	<u>Exercise Ajeya Warrior</u>	<u>Exercise Cambrian Patrol</u>
<ul style="list-style-type: none"> • Recently, the 8th Edition of India-Sri Lanka bilateral joint Exercise Mitra Shakti conducted at Combat Training School, Ampara in Sri Lanka. • The aim of the exercise is to promote close relations between Armies of both countries and enhance inter-operability and sharing best practices in counter insurgency and counter terrorism operations. 	<ul style="list-style-type: none"> • The 6th Edition of India - UK Joint Company Level Military Training EXERCISE AJEYA WARRIOR has commenced at Uttarakhand. • The exercise is part of an initiative to develop inter-operability and sharing expertise with friendly foreign nations. 	<ul style="list-style-type: none"> • Recently, the Gorkha Rifles of the Indian Army has been awarded Gold medal in the prestigious Cambrian Patrol Exercise at Brecon, Wales, UK. • It is considered the ultimate test of human endurance, team spirit and is sometimes referred as the “Olympics of Military Patrolling” among militaries in the world.

<p>Exercise YudhAbhyas</p> <ul style="list-style-type: none"> The 17th Edition of Indo – US joint training exercise “EX YUDH ABHYAS 21” was held at Joint Base Elmendorf Richardson, Alaska (USA). The exercise will facilitate both Armies to know each other better, share their wide experiences and enhance their situational awareness through information exchange. 	<p>Konkan Shakti 2021</p> <ul style="list-style-type: none"> It is the first bilateral tri-service exercise between the armed forces of India and the UK. It aims to derive mutual benefits from each other’s experiences and also showcase the continuing cooperation between the two countries. The maritime component of the exercise will be conducted off India’s west coast. 	<p>JIMEX</p> <p>Recently, India and Japan held the 5th edition of the bilateral maritime exercise, JIMEX, in the Arabian Sea.</p> <p>The exercise will enable the two navies to further strengthen their already wide-ranging strategic partnership and, when required, to jointly safeguard their maritime interests and ensure peace, security and stability in the region.</p>
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DRDO Dare to Dream 2.0 & Young Scientists award

News Excerpt

On October 04, 2021, Defence Minister felicitated the winners of ‘Dare to Dream 2.0’ Contest organized by Defence Research & Development Organisation (DRDO).

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Aim

- To create path-breaking innovation in future in the fields of innovation, design & development.
- To promote collaborative efforts to build a strong and self-reliant ‘New India’.

Highlights

- Dare to Dream is DRDO's pan-India contest to promote Indian academicians, individuals and startups to develop emerging defence and aerospace technologies/systems.
 - The award was given to 40 winners - 22 in Individual category and 18 in Startup category.
 - Award money, up to Rs 10 lakh for startup and Rs five lakh to individual category, will be given to the winners.
- DRDO provides technical and financial support to the winners for realisation of their ideas under the Technology Development Fund (TDF) scheme.
- ShriRajnath Singh also gave away DRDO Young Scientists awards for the year 2019. Sixteen DRDO scientists, under the age of 35 years, were awarded for their outstanding contribution in areas of their expertise.
- On this occasion, three products/systems indigenously developed by DRDO were also handed over to the Armed Forces. These are:
 - ARINC818 Video Processing and Switching Module:** The module, developed for the Indian Air Force.
 - It is a state-of-the-art module with high bandwidth, low latency, channel bonding, easy networking and will cater to 5th generation aircraft development programmes.
 - Sonar Performance Modelling System:** Developed for the Indian Navy.

PEPPER IT WITH
 About DRDO and Integrated Guided Missile Development Programme (IGMDP).

- It is useful for Indian Naval ships, submarines and under water surveillance stations etc.
3. **Bund Blasting Device Mk-II:** The device, developed for Indian Army.
- It is used to reduce the height of Ditch-cum-Bund obstacles to enhance the mobility of mechanised infantry during wartime.

ABHYAS-the High-speed Expendable Aerial Target (HEAT)

News Excerpt

ABHYAS - the High-speed Expendable Aerial Target (HEAT) was successfully flight-tested by Defence Research and Development Organisation (DRDO) from the Integrated Test Range (ITR), Chandipur off the coast of Bay of Bengal in Odisha.

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Pre-Connect

- It was first successfully flight tested in May 2019.
- Under development since 2012, Abhyas is designed to simulate aircraft for endo-atmospheric, surface-to-air, and air-to-air interception missile testing.

PEPPER IT WITH
 Electro Optical Tracking System (EOTS) and Defence Institute of High Altitude Research (DIHAR).

Highlights

- ABHYAS is designed & developed by DRDO’s Aeronautical Development Establishment (ADE), Bengaluru.
- The vehicle can be used as an aerial target for evaluation of various missile systems.
 - The air vehicle is launched using twin under-slung boosters which provide the initial acceleration to the vehicle.
 - It is powered by a gas turbine engine to sustain a long endurance flight at subsonic speed.
 - The target aircraft is equipped with MEMS based Inertial Navigation System (INS) for navigation along with the Flight Control Computer (FCC) for guidance and control.
 - The vehicle is programmed for fully autonomous flight. The check-out of air vehicle is done using laptop-based Ground Control Station (GCS).
- The performance of the target aircraft was monitored through telemetry and various tracking sensors including Radars and Electro Optical Tracking System (EOTS).
- This indigenous target aircraft, once developed, will meet the requirements of High-speed Expendable Aerial Targets (HEAT) for Indian Armed Forces.

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ART & CULTURE

Langa-Manganiyar heritage

News Excerpt

The ballads, folklore, and songs of the Langa-Manganiyar artists are being preserved through an initiative for documentation and digitisation.

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Pre-Connect

- The iconic and internationally acclaimed folk artistes have been hit hard by the COVID-19 pandemic that stopped their performances in India and abroad and poses a challenge to the very survival of the popular art form.
- Apart from the pandemic, this vital heritage is also facing a threat from changes in patronage and increased urbanisation in these districts.
- The Jodhpur-based RupayanSansthan has extended support to the initiative taken by the Archives and Research Centre for Ethnomusicology at the American Institute of Indian Studies (AIIS) in the research project.
 - RupayanSansthan was established by eminent folklorist, the late Komal Kothari, and writer VijaydanDetha.
- During thepandemic, a social media campaign, titled Maru Mani (jewels of desert), was launched to hold virtual events on safeguarding the intangible cultural heritage.

Highlights

- The Langas and Manganiyars are hereditary communities of Muslim musicians.
 - They are residing mostly in western Rajasthan’s Jaisalmer and Barmer districts and in Pakistan’s Tharparkar and Sanghar districts in Sindh.
- The music of the two marginalised communities, who were supported by wealthy landlords and merchants before Independence, forms a vital part of Thardesert’s cultural landscape.
- The RupayanSansthan has a collection of 20,000 hours of audio recordings of Langa-Manganiyar performances in analogue form.
 - The performances are in multiple languages and dialects including Marwari, Sindhi, Saraiki, Dhatti and Thareli.

Analytica

- ✓ The project is aimed at saving the rapidly disappearing narrative traditions of these communities.
- ✓ The preservation of oral traditions would encourage the local communities' involvement in the efforts to nurture audiences and protect the history of the desert region.

PEPPER IT WITH
Kawa Circus and
RupayanSansthan

Bharat Darshan Park

News Excerpt

An 8-acre Bharat Darshan Park at west Delhi’s Punjabi Bagh has replicas of popular historical Indian monuments.

It is being developed by the South Delhi Municipal Corporation (SDMC).

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Pre-Connect

- After the Waste to Wonder park at Sarai Kale Khan, the Bharat Darshan Park will be the second such park featuring replicas of monuments prepared from salvaged junk material from municipal corporation yards.
- The park demonstrates the concept of 'Waste-to-Wealth'.

Highlights

- The park will be eco-friendly and self-sustainable with its own solar and wind power generation.

PEPPER IT WITH
Ajanta and Ellora Caves,
Khajuraho Temple, and
Hampi.

- The theme of Bharat Darshan Park would be 'Unity in Diversity' displayed through iconic monuments of the country.
- The replicas in the park are being built using scrap waste such as vehicles, fans, rods, iron sheets, nut-bolts etc.
- If both the phases are considered together, there will be 39 replicas of monuments or cultural icons with representation from each state and union territory.
 - The second phase of the park will focus on the northeastern states.
- The Park contains replicas of popular Indian monuments including the Khajuraho Temple, Rashtrapati Bhawan, Shanti Stupa, Hawa Mahal, Ajanta and Ellora Caves, the Ruins of Hampi and Nalanda, the Mysore Palace, the Charminar, the Gol Gumbaz, Junagarh Fort and more!

Buddhist circuit

News Excerpt

Recently, under Swadesh Darshan Scheme, Tourism Ministry sanctioned 5 projects of Rs 325.53 crore for Buddhist circuit development.

To tap the potential of the Buddhist tourism, the Ministry of Tourism has organised a Buddhist Circuit Train FAM Tour and Conference.

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Pre-Connect

- Buddhist Circuit is one of the fifteen thematic circuits identified for development under the Swadesh Darshan- Integrated Development of Theme-Based Tourism Circuits Scheme of Ministry of Tourism.
 - All sites in the country related to Buddhism including Kapilvastu are covered under the Buddhist Circuit for development.

Highlights

- Under Swadesh Darshan Scheme, Ministry of Tourism is developing critical tourism infrastructure in the country in a sustainable and inclusive manner to make India, a world class tourist destination.
- This scheme is envisioned to synergise with other Government of India schemes like Swachh Bharat Abhiyan, Skill India, Make in India etc.
- The Ministry of Tourism launched the Swadesh Darshan Scheme (Central Sector Scheme) in January, 2015.
 - The scheme was completely funded by the central government of India.
 - The scheme is a joint venture by the central government and ministry of tourism.
 - It also has provision for leverage the voluntary funding available for Corporate Social Responsibility (CSR) initiatives of Central Public Sector Undertakings and Corporate Sector.
- Under the Scheme 15 circuits have been identified for development namely Himalayan Circuit, North East Circuit, Krishna Circuit, Buddhist Circuit and Coastal Circuit, Desert Circuit, Tribal Circuit, Eco Circuit, Wildlife Circuit, Rural Circuit, Spiritual Circuit, Ramayana Circuit, Heritage Circuit, Tirthankar Circuit and Sufi Circuit.

Development of the circuit

- Under the Ministry of Tourism's flagship Swadesh Darshan scheme, multiple projects have been undertaken in Madhya Pradesh, Bihar, Uttar Pradesh, Gujarat and Andhra Pradesh.
- In Bihar and Uttar Pradesh, the plan is to further develop the sites of Bodh Gaya, Nalanda, Rajgir, Viashali, Sarnath, Shravasti, Kushinagar, Kaushambi, Sankisa and Kapilavastu.
 - These sites currently receive approximately six per cent of nationwide foreign tourist arrivals, with Sarnath and Bodh Gaya leading the pack.

PEPPER IT WITH
PRASHAD Scheme, UDAN
scheme, Dekho Apna Desh

- The Buddhist circuit has four international and two domestic airports, while two more in the pipeline.
- There are also plans of developing helicopter services and improving international connectivity under the UDAN scheme.

Malayalam writer Benyamin bags Vayalar Award

News Excerpt

Recently, a well-known Malayalam writer Benyamin has bagged the 45th VayalarRamavarma Memorial Literary Award for his book “Manthalirile 20 Communist Varshangal”.

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Highlights

- In ‘Manthalirile 20 Communist Varshangal,’ Benyamin, who is best known for award-winning novels such as ‘Aadujeevitham’ (Goat Days) and ‘MullappooniramullaPakalukal’ (Jasmine Days) and short stories, presents the inhabitants of Manthalir village, and how the heady mix of politics and religion impacts their daily struggles for existence in this essentially bucolic setting.
- The novel was selected for the 2021 edition of the coveted prize by a jury consisting of the writers K. R. Meera, George Onakkoor and C. Unnikrishnan.

About Award

- An award given for best literary work in Malayalam instituted by VayalarRamavarma Memorial Trust from 1977.
- It carries a purse of Rs 1 lakh, a bronze statuette crafted by the sculptor KanayiKunhiraman and citation.
- The award commemorates the celebrated poet and lyricist.

Miscellaneous

Henley Passport Index-2021

- India’s rank has slipped by six places from last year (84th) to 90 on the Henley Passport Index, which lists the world’s most travel-friendly passports.
 - India shares the rank with Tajikistan and Burkina Faso.
 - Prepared by Henley and Partners, a London-based global citizenship and residence advisory firm.
- The index ranks the passports of countries according to the number of destinations their holders can visit without a prior visa.
 - The rankings are based on the analysis of data provided by the International Air Transport Association (IATA).
- Japan and Singapore stood at the top of this year’s list, while South Korea and Germany share the second position.
 - For the third consecutive year, Japan has secured the top position.
- Meanwhile, Afghanistan, Iraq, Syria, Pakistan, and Yemen are among the least powerful.

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The Earthshot Prize

- A Delhi-based entrepreneur’s agricultural waste recycling project was named among the winners of Prince William’s inaugural Earthshot Prize, dubbed the “Eco Oscars”, at a gala ceremony in London.
- Vidyut Mohan led Takachar, India was named the winner for its cheap technology innovation to convert crop residues into sellable bio-products in the “clean our air” category.
 - A portable machine created to turn agricultural waste into fertiliser so that farmers do not burn their fields and cause air pollution.

- The burning of agricultural waste causes air pollution that in some areas has reduced life expectancy by a decade.
 - The technology reduces smoke emissions by up to 98%.
 - Takachar went head to head with another Indian finalist in the category — 14-year-old Tamil Nadu schoolgirl Vinisha Umashankar's solar-powered ironing cart project.
- It is an award set up by Prince William and the Royal Foundation, the charity founded by the Duke and Duchess of Cambridge, and historian David Attenborough
- Established in 2020, 2021 was the first year when awards were handed out to finalists for their contributions towards the five UN Sustainable Development Goals — restoration and protection of nature, air cleanliness, ocean revival, waste-free living and climate action.
- Each year five winners will be selected, one for each of the UN SDG goal categories, with a total of 50 million euros being awarded by 2030.
- Its objective is to encourage and support the development of solutions for Earth's environmental problems.
- The London awards ceremony concluded by revealing the Earthshot Prize will travel to the U.S. in 2022.
- **Eligibility:** Prizes could be awarded to a wide range of individuals, teams or collaborations – scientists, activists, economists, community projects, leaders, governments, banks, businesses, cities, and countries – anyone whose workable solutions make a substantial contribution to achieving the Earthshots.

Vyzov

- Sixty years after the Soviet Union beat its rival superpower United States to become the first state to send a human into space, its successor Russia has trumped the US in another kind of space race — shooting the first feature film in orbit.
- Actor Yulia Peresild and director Klim Shipenko travelled to International Space Station (ISS) in a Soyuz MS-19 aircraft to film about 35 to 40 minutes of footage from the movie titled Vyzov, or The Challenge. With them was veteran cosmonaut Anton Shkaplerov.
- Vyzov is about a cosmonaut who loses consciousness after being hit by space debris in the middle of a spaceflight.

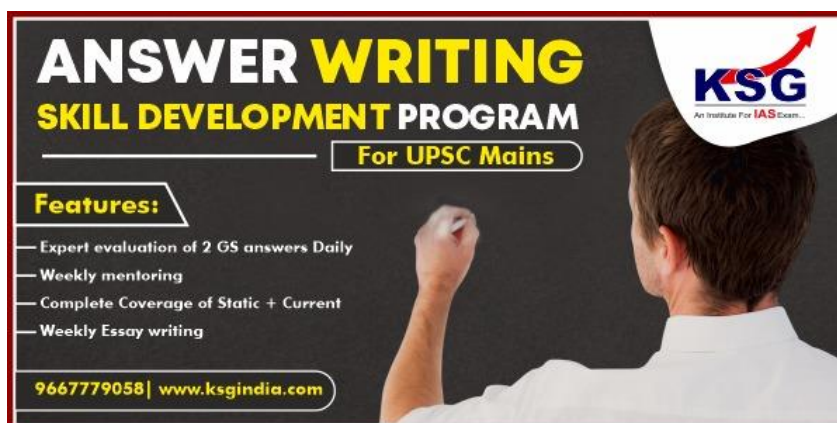
Noble Prizes-2021

- Nobel Prize is a prestigious prize awarded separately in six different fields “to those who, during the preceding year, have conferred the greatest benefit to humankind”.
- Originally, the prize was awarded in the fields of Physics, Chemistry, Physiology or Medicine, Literature, and Peace. Later in 1968, a sixth prize was added in the field of economic sciences.

The Nobel Peace Prize 2021	The Nobel Prize in Literature 2021	The Nobel Prize in Chemistry 2021
<ul style="list-style-type: none">➤ It was awarded jointly to Maria Ressa of the Philippines and Dmitry Muratov of Russia “for their efforts to safeguard freedom of expression, which is a precondition for democracy and lasting peace.”➤ Last year, World Food Programme (WFP) had won the prize “for its efforts to combat hunger, for its contribution to bettering conditions for peace in conflict-affected areas and for acting as a driving force in efforts to prevent the use of hunger as a weapon of war and conflict”	<ul style="list-style-type: none">➤ It was awarded to novelist Abdulrazak Gurnah (Tanzanian author) “for his uncompromising and compassionate penetration of the effects of colonialism and the fate of the refugee in the gulf between cultures and continents.”➤ Last year, American poet Louise Glück had won the prize “for her unmistakable poetic voice that with austere beauty makes individual existence universal”.	<ul style="list-style-type: none">➤ The Nobel Prize for Chemistry is for an efficient, “precise, cheap, fast and environmentally friendly” way to develop new molecules using a simple yet novel concept of catalysis — asymmetric organocatalysis.➤ It was awarded to German scientist Benjamin List of the Max Planck Institute and Scotland-born scientist David W.C. MacMillan of Princeton University who independently developed the new way of catalysis in 2000.➤ Last year, Emmanuelle Charpentier and Jennifer A. Doudna had won the prize “for the development of a method for genome editing”

Concept Clearing Assignment

1. The tiger reserves provide intangible and tangible benefits. Comment, and also highlight the concern regarding Tiger Conservation?
2. Highlight the various bottlenecks in India's health delivery mechanism. Also suggest the way forward to address the issues.
3. The botch to resolve the fishermen's dispute is hurting India – Sri Lanka relations. Elucidate?
4. The solution to protect humanity from the intimidations of global warming is lies in the Antarctica's cryosphere. Comment, and also discuss India's efforts in this regard.
5. Discuss the scope of renewable energy as a champion sector in India? How India's growing renewable energy industry can serve the dual purpose of energy efficiency and Make in India initiative?
6. Throw light on the significance of the thoughts of Mahatma Gandhi in the present times.
7. Assess the importance of preserving the heritage in India. Do you think safeguarding the Indian art heritage is the need of the hour? Substantiate.
8. Government has been focusing on eradication of poverty and has come up with various schemes for this but despite all these, poverty still exists. Discuss the reasons associated with poverty in India.
9. Discuss the role of National Human Rights Commission (NHRC) in India. Do you think giving constitutional status to the commission will help in improving justice system in India. Substantiate.
10. Do you think AUKUS alliance will focus on strategic importance of Indo-Pacific region gains. Substantiate.
11. India's relation with Sri Lanka has reached a level of depth and diversity from where it cannot be rolled back. Discuss.
12. What do you mean by Global Minimum Tax? How will GMT deal be helpful for India?
13. Discuss the role of Small Finance Bank in India. How will it be helpful to the banking sector in India?
14. NITI Ayog recently in collaboration with Indian Space Research Organisation (ISRO) launched Geospatial Energy Map of India. Discuss its importance in the context of India?
15. Discuss the importance of Geographical Indication (GI) tags in today's globalised world.



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P.T. Oriented Questions

1. Consider the following statements:
 1. The National Tiger Conservation Authority (NTCA) is a statutory body.
 2. NTCA is constituted under the Biological Diversity Act.
 3. The 'Project Tiger' is a Central Sector Scheme aimed to provide fund support for ex-situ conservation of tigers.Which of the statements given above is/are correct?
(a) 1 and 2 only (b) 3 only
(c) 1 only (d) 2 and 3 only

2. Which of the following statements are correct regarding Methanol?
 1. It is a low carbon, hydrogen carrier fuel produced from high ash coal and agricultural residue.
 2. It can't be obtained from the municipal solid waste.
 3. Methanol based economy will be contributed in improving the urban air quality.Select the correct answer using the code given below:
(a) 1 and 2 only
(b) 1 and 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

3. Consider the following statements regarding High Ambition Coalition (HAC) for Nature and People:
 1. It was officially launched at the One Planet Summit in 2015 and currently it has more than hundred members.
 2. It aims to reach an ambitious agreement on biodiversity conservation at the 15th Conference of the Parties to the UN Convention on Biological Diversity.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

4. Which among the following are related to the article 51A of Constitution?
 1. Safeguard public property
 2. Avoid violence
 3. Right to assemble peaceably and without armsSelect the correct answer using the code given below:
(a) 1 and 3 only
(b) 1 and 2 only
(c) 2 and 3 only
(d) 1, 2 and 3

5. With reference to the Kunming Declaration on Biodiversity, consider the following statements:
 1. Under the Kunming Declaration the "30 by 30" goal is a proposed commitment to protect 30 percent of land by 2030.
 2. Many of the commitments outlined in the Kunming Declaration are basically a continuation of the 2011-2020 Strategic Plan for Biodiversity and the Aichi Biodiversity Targets.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

6. Consider the following statements regarding Lukha River:
 1. It is located in the southern part of north Jaintia Hills of Manipur.
 2. It passes through southern Assam's Barak Valley and ends up in the floodplains of Bangladesh.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

7. Recently, the Industrial Park Rating System (IPRS) Report was launched. In this context, consider the following statements:
 1. It was prepared by the Department of Promotion of Industry and Internal Trade (DPIIT).

2. It aims to enhance industrial infrastructure competitiveness and support policy development to spur industrialisation.
- 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
8. Which of the following statements are correct regarding India Industrial Land Bank (IILB) portal?
1. It serves as a one-stop source of information on Industrial Infrastructure.
2. It has been integrated with industry-based GIS systems of all the States and UTs.
- Select the correct answer using the code given below:
- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
9. Consider the following statements regarding Election Commission:
1. The registration of all political parties is governed by the provisions of Section 29A of the Election Commission of India Act, 1951.
2. EC grants recognition to national or state parties on the basis of their poll 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
10. Consider the following statements regarding Comprehensive Handicrafts Cluster Development Scheme (CHCDS):
1. It aims to create world-class infrastructure to boost production and export.
2. It would enhance artisans' and micro-entrepreneurs' livelihood.
3. The mega handicraft clusters having more than 25,000 artisans will be selected for overall development under this scheme.
- Which of the statements given above are correct?
- (a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3
11. Which of the following statements are correct regarding GI tags?
1. It covered as an element of intellectual property rights under the Paris Convention.
2. It is used for agricultural and industrial products only.
3. It is expected to boost or revive the items whose production has declined.
- Select the correct answer using the code given below:
- (a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3
12. Consider the following statements:
1. Greenfield projects are the ones which are started from the scratch, while in case of brownfield, the company augments the capacity of the existing unit.
2. A brownfield infrastructure project has higher risks involved than a Greenfield project.
- Which of the statements given above is/are correct?
- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
13. Consider the following statements with respect to PM MITRA Parks:
1. It will reduce logistics costs by locating the entire value chain at one location.
2. The Master Developer will not only develop the Industrial Park but also maintain it during the concession period.
3. Under the scheme, the centre will provide development capital

- support of Rs 1000 crore for each greenfield and brownfield park.
Which of the statements given above are correct?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3
14. Which among the following acts authorizes the Border Security Force to exercise its powers?
1. Criminal Procedure Code (CrPC)
2. Narcotic Drugs and Psychotropic Substances Act, 1985
3. Customs Act
Select the correct answer using the code given below:
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3
15. Which among the following can be cited as objectives of Swachh Bharat Mission-Urban?
1. Elimination of open defecation
2. Promotion of Manual Scavenging
3. To effect behavioral change regarding healthy sanitation practices
Select the correct answer using the code given below:
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3
16. Consider the following statements regarding PM Gati Shakti:
1. It will strengthen last-mile connectivity in India's hinterland or border regions.
2. It will incorporate the infrastructure schemes of various Ministries and State Governments.
3. It will improve the global competitiveness of local products.
Which of the statements given above is/are correct?
(a) 1 and 2 only
(b) 1 and 3 only
(c) 2 and 3 only
(d) 1, 2 and 3
17. Which of the following statements is/are correct regarding the Geospatial Energy Map of India?
1. It has been prepared by Centre for developing and advance computing.
2. It provides a holistic picture of all energy resources of the country.
3. It will aid in disaster management using available energy assets.
Select the correct answer using the code given below:
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3
18. Recently, The Army has begun a course in 'Tibetology'. In this context, consider the following statements:
1. It will enable troops to have a better understanding of history, culture, language and topography of Northern eastern states.
2. It will involve army, navy, coastguard as well air force.
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
19. Which of the following pairs are correctly matched?
- | Exercise | Countries |
|--------------------|---------------|
| 1. Mitra Shakti 21 | India - Nepal |
| 2. Ajeya Warrior | India - US |
| 3. Yudh Abhyas | India - UK |
- Select the correct answer using the code given below:
(a) 1 only
(b) 2 only
(c) 1, 2 and 3
(d) None of the Above
20. Consider the following statements about the Langa-Manganiyar artists:
1. They are hereditary communities of Muslim musicians.
2. They reside only in western Rajasthan's Jaisalmer district.

- Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
21. Consider the following statements regarding Poshan Abhiyan:
1. It aims to Prevent and reduce Stunting in children (0- 6 years) by 2%.
2. It will reduce the prevalence of anaemia among Women and Adolescent Girls in the age group of 15-49 years by 3 %.
- Which of the statements given above is/are correct?
(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
22. Consider the following statements regarding Swadesh Darshan Scheme:
1. The Ministry of Tourism launched the Scheme in 2020.
2. The scheme was completely funded by the central government of India.
3. Under the Scheme 15 circuits have been identified for development.
- Which of the statements given above is/are correct?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3
23. The term “Takachar” is seen in the news. It is related to—
(a) Solar-powered ironing cart project
(b) Inter Continental missile of Israel
(c) Name of the animal found in the Western Ghats
(d) A portable machine created to turn agricultural waste into fertilizer
24. Consider the following statements regarding Organisation for the Prohibition of Chemical Weapons:
1. It is an international organisation established by the Chemical Weapons Convention, 1997 to implement and enforce the terms of the non-proliferation treaty.
2. The OPCW is authorised to perform inspections to verify that signatory states are complying with the convention.
- Which of the statements given above is/are correct?
(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
25. Which among the following is correct regarding the ‘Tax Inspectors without Borders’ (TIWB) initiative?
(a) It is a joint initiative of the United Nations Development Programme (UNDP) and the Organisation for Economic Cooperation and Development (OECD).
(b) It is global level initiative mooted by United Nations, World economic Forum and Global policy think tank on trade.
(c) It is a bilateral initiative between India and Netherlands, aimed to discourage tax evasion and to promote ease of remittance.
(d) None of the above
26. With reference to Ocean Mean Temperature (OMT), which of the following statements is/are correct? (UPSC 2020)
1. OMT is measured up to a depth of 26°C isotherm which is 129 meters in the south-western Indian Ocean during January – March.
2. OMT collected during January - March can be used in assessing whether the amount of rainfall in monsoon will be less or more than a certain long-term mean.
- Select the correct answer using the code given below:
(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
27. In the context of India, which of the following factors is/are contributor/ contributors to reducing the risk of a currency crisis? (UPSC 2019)
1. The foreign currency earnings of India's IT sector
2. Increasing the government expenditure

3. Remittances from Indians abroad
Select the correct answer using the code given below.
(a) 1 only
(b) 1 and 3 only
(c) 2 only
(d) 1, 2 and 3
28. Among the following Tiger Reserves, which one has the largest area under "Critical Tiger Habitat"? (UPSC 2020)
(a) Corbett
(b) Ranthambore
(c) Nagarjunsagar-Srisaïlam
(d) Sunderbans
29. Consider the following statements
1. As per law, the Compensatory Afforestation Fund Management and Planning Authority exists at both National and State levels.
2. People's participation is mandatory in the compensatory afforestation programmes carried out under the Compensatory Afforestation Fund Act, 2016.
Which of the statements given above is / are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
30. Which one of the following statements best describes the term 'Social Cost of Carbon'? It is a measure, in monetary value of the—(UPSC 2020)
(a) long-term damage done by a tonne of CO₂ emissions in a given year.
(b) requirement of fossil fuels for a country to provide goods and services to its citizens, based on the burning of those fuels.
(c) efforts put in by a climate refugee to adapt to live in a new place.
(d) contribution of an individual person to the carbon footprint on the planet Earth.

ANSWERS

- | | | |
|-------|-------|-------|
| 1. C | 11. C | 21. C |
| 2. B | 12. A | 22. B |
| 3. B | 13. A | 23. D |
| 4. B | 14. D | 24. C |
| 5. C | 15. C | 25. A |
| 6. A | 16. D | 26. D |
| 7. C | 17. B | 27. B |
| 8. A | 18. D | 28. C |
| 9. B | 19. D | 29. A |
| 10. A | 20. A | 30. A |