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GENERAL STUDIES PAPER II

National Policy for Rare Diseases, 2021

Why in News

- Dr. Harsh Vardhan, Union Health & Family Welfare Minister approved the “National Policy for Rare Diseases 2021” on 30th March 2021.
- Draft Policy for Rare Diseases was put in public domain on 13th January 2020 on which comments/views were invited from all stakeholders, general public, organization and States and Union Territories.
- All the comments received were examined in depth by an Expert Committee constituted by the Ministry.

Background

- Ministry of Health and family Welfare, Government of India formulated a National Policy for Treatment of Rare Diseases (NPTRD) in July, 2017.
- Implementation of the policy, however, faced certain challenges. A limiting factor in its implementation was bringing States on board and lack of clarity on how much Government could support in terms of tertiary care.
- *Public Health and Hospitals is primarily a State subject.*

Rare Diseases: Issues & Challenges

- The field of rare diseases is complex and heterogeneous.
- The landscape of rare diseases is constantly changing, as there are new rare diseases and conditions being identified and reported regularly in medical literature.
- Apart from a few rare diseases, where significant progress has been made, the field is still at a nascent stage.
- For a long time, doctors, researchers and policy makers were unaware of rare diseases and until very recently there was no real research or public health policy concerning issues related to the field.
- This poses formidable challenges in development of a comprehensive policy on rare diseases.
- Nevertheless, it is important to take steps, in the short as well as long term, with the objective of tackling rare diseases in a holistic and comprehensive manner.
- There are also fundamental challenges in the research and development for the majority of rare diseases as relatively little is known about the pathophysiology or the natural history of these diseases particularly in the Indian context.
 - Rare diseases are also difficult to research upon as the patients pool is very small and it often results in inadequate clinical experience.
 - Availability and accessibility to medicines are also important to reduce morbidity and mortality associated with rare disease.
- Despite progress in recent years, there is a need to augment effective and safe treatment for rare diseases. The cost of treatment of rare diseases is prohibitively expensive.
- Various High Courts and the Supreme Court have also expressed concern about lack of a national policy for rare diseases.

Definition of a Rare Disease

- WHO defines rare disease as often debilitating lifelong disease or disorder with a prevalence of 1 or less, per 1000 population.
- However, different countries have their own definitions to suit their specific requirements and in context of their own population, health care system and resources.

Salient Features of the Policy

- The **Rare Diseases Policy** aims to lower the high cost of treatment for rare diseases with increased focus on indigenous research with the help of a National Consortium to be set up with Department of Health Research, Ministry of Health & Family Welfare as convenor.
 - Increased focus of research and development and local production of medicines will lower the cost of treatment for rare diseases.

- The policy also envisage creation of a national hospital based registry of rare diseases so that adequate data is available for definition of rare diseases and for research and development related to rare diseases within the country.
- The Policy also focuses on early screening and prevention through primary and secondary health care infrastructure such as Health and Wellness Centres and District Early Intervention Centres (DEICs) and through counselling for the high-risk parents.
 - Screening will also be supported by Nidan Kendras set up by Department of Biotechnology.
 - Policy also aims to strengthen tertiary health care facilities for prevention and treatment of rare diseases through designating 8 health facilities as Centre of Excellence and these CoEs will also be provided one-time financial support of up to Rs 5 crores for upgradation of diagnostics facilities.
- A provision for financial support up to Rs. 20 lakhs under the Umbrella Scheme of Rastriya Arogya Nidhi is proposed for treatment, of those rare diseases that require a one-time treatment (diseases listed under Group 1 in the rare disease policy).
 - *Beneficiaries for such financial assistance would not be limited to BPL families, but the benefit will be extended to about 40% of the population, who are eligible under Pradhan Mantri Jan Arogya Yojana.*
- Besides, the Policy also envisages a crowd funding mechanism in which corporates and individuals will be encouraged to extend financial support through a robust IT platform for treatment of rare diseases.
 - Funds so collected will be utilized by Centres of Excellence for treatment of all three categories of rare diseases as first charge and then the balance financial resources could also be used for research.

SWAMITVA scheme

Why in News

- Prime Minister, Shri Narendra Modi has recently launched the distribution of e-property cards under the SWAMITVA scheme on National Panchayati Raj Day through video conferencing.
- 4.09 lakh property owners were given their e-property cards on this occasion, which also marked the rolling out of the SVAMITVA scheme for implementation across the country.

About The Scheme

- SVAMITVA Scheme is a Central Sector scheme launched by Hon'ble Prime Minister of India on National Panchayat Day i.e 24th April 2020.
 - *Ministry of Panchayati Raj (MoPR) is the Nodal Ministry for implementation of the scheme.*
 - In the States, the Revenue Department / Land Records Department will be the Nodal Department and shall carry out the scheme with support of State Panchayati Raj Department.
 - Survey of India shall work as the technology partner for implementation.

Aims and Objectives

- The scheme aims to provide an integrated property validation solution for rural India.
- The demarcation of rural abadi areas would be done using Drone Surveying technology.
 - This would provide the 'record of rights' to village household owners possessing houses in inhabited rural areas in villages which, in turn, would enable them to use their property as a financial asset for taking loans and other financial benefits from Bank.

The scheme seeks to achieve the following objectives

- To bring financial stability to the citizens in rural India by enabling them to use their property as a financial asset for taking loans and other financial benefits.
- Creation of accurate land records for rural planning.
- Determination of property tax, which would accrue to the GPs directly in States where it is devolved or else, add to the State exchequer.
- Creation of survey infrastructure and GIS maps that can be leveraged by any department for their use.
- To support in preparation of better-quality Gram Panchayat Development Plan (GPDP) by making use of GIS maps.
- To reduce property related disputes and legal cases.

Conclusion

- The pilot phase of the Scheme was implemented during 2020–2021 in the States of Maharashtra, Karnataka, Haryana, Uttar Pradesh, Uttarakhand, Madhya Pradesh and select villages of Punjab and Rajasthan.
- It paves the way for using the property as a financial asset by villagers for availing loans and other financial benefits. The Scheme will cover around 6.62 Lakh villages of the entire country during 2021-2025.

Pradhan Mantri Garib Kalyan Anna Yojana

Why in News

- Government of India has decided to allocate free-of-cost food grains @ 5 Kg per person per month to nearly 80 Crore beneficiaries covered under National Food Security Act, 2013 (NFSA) over and above NFSA foodgrains for next two months i.e. May and June 2021 on the same pattern as the earlier “Pradhan Mantri Garib Kalyan Anna Yojana (PM-GKAY)

About the Scheme

- Pradhan Mantri Garib Kalyan Anna Yojana is a food security welfare scheme announced by the Government of India in March 2020, during the COVID-19 pandemic in India.
 - *The program is operated by the Department of Food and Public Distribution under the Ministry of Consumer Affairs, Food and Public Distribution.*
- The scheme aims to feed the poorest citizens of India by providing grain through the Public Distribution System, to all the priority households (ration card holders and those identified by the Antyodaya Anna Yojana scheme).
- PMGKAY provides 5 kg of rice or wheat (according to regional dietary preferences) per person and 1 kg of dal to each family holding a ration card.
- The scale of this welfare scheme makes it the largest food security program in the world.

Present Status

- The scheme has been affected by widespread corruption and failure to distribute grain to the intended recipients.
 - Two states, Goa and Telangana failed to distribute any grain.
 - 11 States (Andhra Pradesh, Gujarat, Jharkhand, Ladakh, Maharashtra, Meghalaya, Odisha, Sikkim, Tamil Nadu, and Tripura) have distributed less than 1%.

E-Courts Project

Why in News

- The eCommittee Supreme Court has prepared the draft vision document for Phase III of the eCourts Project under the auspices of the Supreme Court of India.
- *The Chairperson of eCommittee Dr Justice Dhananjaya Y Chandrachud, Judge, Supreme Court of India, has requested all the stakeholders, i.e. Advocates, Litigants, common citizens, Law students, Technical experts all to come forward to give valuable inputs suggestions and feedback as the knowledge, insight, concerns, and experience of the stakeholders will help to refine the vision document of the next phase of the eCourts Project and to plan its implementation.*

About e-Courts Project

- E-Courts Project is a mission mode project undertaken by the Department of Justice, Government of India.
- It was conceptualized on the basis of the “National Policy and Action Plan for Implementation of Information and Communication Technology (ICT) in the Indian Judiciary – 2005” submitted by eCommittee, Supreme Court of India with a vision to transform the Indian Judiciary by ICT enablement of Courts.
- The project is a pan-India mission mode project funded and monitored by the Department of Justice for the District Courts across the country.
- The project is aimed at providing designated services to litigants, lawyers and Judiciary through universal computerisation of district and subordinate courts, as well as the upgradation of ICT infrastructure of the Supreme Court and the High Courts.

Phase III of the e-Courts Project

- Phase III of the eCourts Project in India is rooted in two central facets — access and inclusion.
- Phase III of the eCourts Project envisions a judicial system that is more
 - Easily accessible irrespective of geographical distances.
 - Efficient and equitable for every individual who seeks justice.
 - Makes more efficient use of human and other resources.
 - Absorbs the latest technology for a positive environmental impact.

This vision for Phase III is sought to be built on the following four building blocks:

- a. **Core Values:** Phase III must strive for a modern judicial system, governed by core values of trust, empathy, sustainability and transparency which, while simplifying procedures, will maximise the positives of technology and minimise its risks and challenges.
 - b. **Whole-of-system approach:** Phase III must aim to make processes more efficient across all three components of dispute management i.e. dispute avoidance, containment and resolution. Each of these components will require technological integration with different institutions.
 - c. **Adoption frameworks:** Phase III must focus on building strong adoption frameworks. Such frameworks must include behavioural nudges, adequate training and skill set development, feedback loops, along with the requisite mandate of law.
 - d. **Governance framework:** From a governance perspective, while numerous judicial decisions have validated the use of technology in judicial processes, Phase III must address the accompanying administrative structures.
- The key goals and strategy of Phase III prioritise the creation of a core digital infrastructure that can enable the development of services for dispute resolution by the judiciary and services of solutions for dispute containment and resolution by the ecosystem.

Conclusion

- A solid foundation for the objectives of the eCommittee has been substantially achieved in the first two phases of the Project.
- The objectives of the eCommittee include: Interlinking of all courts across the country; ICT enablement of the Indian judicial system; Enabling courts to enhance judicial productivity, both qualitatively and quantitatively; Making the justice delivery system accessible, cost-effective, transparent and accountable; and Providing citizen-centric services.

- The President of India, in exercise of the powers conferred by clause (2) of Article 124 of the Constitution of India, appointed **Shri Justice Nuthalapati Venkata Ramana**, Judge of the Supreme Court, to be the Chief Justice of India.
 - A notification in this regard has been issued by the Department of Justice, Ministry of Law & Justice.
 - The Warrant of Appointment and a copy of the Notification of Appointment have been handed over to Shri Justice N. V. Ramana.
 - Justice Nuthalapati Venkata Ramana, will take over as the Chief Justice of the Supreme Court of India on 24th April, 2021.
 - He will be 48th Chief Justice of India.



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International Virtual Election Visitors Programme (IVEP) 2021

Why in News

- Election Commission of India recently hosted International Virtual Election Visitors Programme (IEVP) 2021 for Election Management Bodies (EMBs) /Organisations from 26 countries and 3 International Organisations during the ongoing elections for Legislative Assemblies of Assam, Kerala, Puducherry, Tamil Nadu and West Bengal.

About IVEP

- IVEP 2021 would provide the participants an overview of the
 - Large canvas of Indian electoral process.
 - The new initiatives taken by ECI on voter facilitation.
 - Transparency and accessibility of electoral system.
 - ECI's response to the changing needs of training and capacity building.
 - The new formats necessitated by COVID-19.
 - Provide insights into the elections underway in the states of Assam, Kerala, Tamil Nadu, West Bengal and the Union Territory of Puducherry.
- On the 6th of April 2021 the delegates will be given a virtual tour of live snapshot of how elections are conducted at some polling stations including familiarization with the electoral process, polling station arrangements, facilitation of Persons with Disabilities and senior citizens and interaction with various stakeholders.

Other Initiatives

- On the sidelines of IEVP 2021, the Chief Election Commissioner also released the maiden issue of A-WEB Journal of Elections.
 - This scholarly journal is aimed at specialists, researchers and experts.
- Secretary General ECI, Shri Umesh Sinha, during International Virtual Election Visitor Programme 2021, stressed that Election Commission of India has been very proactive in enhancing co-operation with Election Management Bodies across the world.
- A short film on the glimpse of ongoing elections in the states of Assam, Tamil Nadu, West Bengal, Kerala and UT Puducherry was showcased to the delegates.

A-WEB India Journal of Elections

- The Journal, published by the **India A-WEB Centre which was set up at ECI in 2019**, highlights research papers, articles, book reviews, etc. from eminent writers, experts, researchers and practitioners from the A-WEB Community and from across democracies of the world in the area of Elections and Electoral Democracy.
- A-WEB India Journal of Elections is envisaged to be a Journal of the highest international standards and will include peer reviewed contributions from members of the A-WEB community and beyond.

BRICS Finance Ministers and Central Bank Governors Meeting

Why in News

- India hosted a Meeting of BRICS Finance Ministers and Central Bank Governors virtually on April 6, 2021.
- As 2021 BRICS Chair, India's approach is focused on strengthening intra-BRICS cooperation based on Continuity, Consolidation and Consensus.

About the Meeting

- *This was the first meeting of the BRICS Finance Ministers and Central Bank Governors under India Chairship in 2021.*
 - BRICS Finance Ministers and Central Bank Governors discussed financial cooperation agenda set by India for 2021 - Global Economic Outlook and Response to COVID-19 pandemic, New Development Bank (NDB) Activities, Social Infrastructure Financing and Use of Digital Technologies, Cooperation on Customs related issues, IMF reforms, Fintech for SMEs and Financial Inclusion, BRICS Rapid Information Security channel and BRICS Bond Fund.
- On the BRICS priorities and agenda for 2021, Finance Minister Smt. Sitharaman informed that the *efforts should be made towards delivering outcomes that reflects the needs and aspirations of BRICS in particular and emerging markets and developing economies in general.*

- The Finance Minister emphasised the importance of BRICS in responding to the COVID-19 crisis through policy support and enhancing international coordination.
- India has supplied 64.5 million vaccine doses to 84 countries.
- The Finance Minister talked about thematic priorities for New Development Bank for discussion during 2021 and the issues of membership expansion.
- Smt. Sitharaman also called for greater coordination among BRICS member countries on the issues of 16th general review of Quotas of IMF.

About BRICS

- BRICS is the acronym coined to associate five major emerging economies: Brazil, Russia, India, China, and South Africa.
- The BRICS members are known for their significant influence on regional affairs.
- Since 2009, the governments of the BRICS states have met annually at formal summits.
- *Russia hosted the most recent 12th BRICS summit on 17 November 2020 virtually due to the COVID-19 pandemic.*

Anamaya

Why in News

- Dr Harsh Vardhan, Union Minister for Health and Family Welfare along with Shri Arjun Munda, Union Minister of Tribal Affairs launched 'Anamaya', the Tribal Health Collaborative through video conference.
- A multi-stakeholder initiative supported by Piramal Foundation and Bill and Melinda Gates Foundation (BMGF), 'Anamaya' will converge efforts of various Government agencies and organisations to enhance the health and nutrition status of the tribal communities of India.

About the Initiative

- Anamaya is a tribal health collaborative supported by Piramal Foundation and Bill and Melinda Gates Foundation (BMGF).
- It will converge efforts of various government agencies and organisations to enhance the health and nutrition status of the tribal communities of India.
- The initiative is committed to ending preventable deaths in the tribal communities.
- Initially it is going to be implemented in 50 tribal aspirational districts.
- Tribal Health Collaborative (THC) would help to accelerate TB activities and achieve India's target of TB Elimination by 2025 through the launch of a "Jan Andolan for TB" along with focus on addressing key determinants like alcohol dependence and under-nutrition in tribal areas.

Aim and Objectives

- This Collaborative is a unique initiative bringing together governments, philanthropists, national and international foundations, NGOs/CBOs to end all preventable deaths among the tribal communities of India.
- It aims to build a sustainable, high-performing health eco-system to address the key health challenges faced by the tribal population of India.
- It will begin its operations with 50 tribal, Aspirational Districts (with more than 20% ST population) across 6 high tribal population states.
- Over a 10-year period, the work of the THC will be extended to 177 tribal Districts as recognised by the Ministry of Tribal Affairs.

MoU between India and Japan

Why in News

- The Union Cabinet is apprised of a Memorandum of Understanding (MoU) signed between National Atmospheric Research Laboratory (NARL), Dept of Space, Government of India and Research Institute for Sustainable Humanosphere (RISH), Kyoto University, Kyoto, Japan for Academic and Research Cooperation and Exchange on November 4, 2020 and November 11, 2020 at respective institutes and exchanged by post.

Objectives

- This MoU shall enable NARL and RISH to continue their cooperation in areas of atmospheric science and technology, collaborative scientific experiments/campaigns and related modelling studies utilising the research facilities of RISH and NARL, exchange of scientific materials, publications and information, joint research meetings and workshops, exchange of faculty members, students and researchers.
- ***This MoU would lead to mutual utilization of facilities*** such as the Middle and Upper atmosphere (MU) radar in Shigaraki, Japan, the Equatorial Atmosphere Radar (EAR) in Kototabang, Indonesia and complementary instruments available from RISH, and the Mesosphere-Stratosphere-Troposphere (MST) radar and complementary instruments available at NARL.

Background

- NARL and RISH have been collaborating in the area of atmospheric science and technology as well as exchange of scientists.
 - This arrangement was formalised in 2008 through an MoU.
 - The above MoU was renewed in the year 2013.
 - A fresh MOU to promote collaborative research, as per the new guidelines, was signed in November 2020 by both sides and exchanged.
- NARL scientists worked as resource persons in the international school on atmospheric radar conducted by RISH.
- A team of Professors and Researchers of Kyoto University visited NARL and conducted focused workshop to strengthen cooperative research being carried out by the two institutes.

Madhukranti Portal

Why in News

- Union Minister for Agriculture and Farmers' Welfare Shri Narendra Singh Tomar launched "Madhu Kranti Portal" and Honey Corners of NAFED in New Delhi.

Background

- Necessary functionalities are being developed on the Portal to create a database of all stakeholders involved in Honey and other hive products' production, sales and marketing chain.
- On-line Registration of beekeepers is being launched recently in first phase, followed by registration of other stake-holders in Honey Trade.
- All sales transactions in Honey trading in country shall be captured through a mobile app in second phase to achieve desired results in the area of Honey source traceability.

About Madhukranti Portal

- "Madhu Kranti Portal" is an initiative of National Bee Board (NBB), Ministry of Agriculture and Farmers Welfare under National Beekeeping & Honey Mission (NBHM).
- This portal is being developed for online registration to achieve traceability source of Honey and other beehive products on a digital platform.
- **The technical and banking partner for development of this digital platform is Indian Bank.**
- An MoU between NBB and Indian Bank was signed for this project.

Initiatives taken

- For marketing support to the FPOs, NAFED has developed 14-15 Honey Corners, one each in 5 NAFED Bazaar at Ashram, New Moti Bagh and East of Kailash, Panchkula and Mussoorie in their Bazaar/Retail Stores.
- More Honey Corners will be developed by NAFED in most of the upcoming major 200 NAFED Stores to promote market support for honey & other beehive products.
- Online marketing options will be explored to provide a platform for marketing and promotion of Honey supplied by the FPOs.

National Beekeeping & Honey Mission (NBHM)

- Keeping in view the importance of beekeeping, a new Central Sector Scheme entitled National Beekeeping & Honey Mission (NBHM) was approved by Government of India for Rs. 500.00 crores allotted under Aatma

Nirbhar Bharat Announcement for overall promotion and development of scientific beekeeping & to achieve the goal of "Sweet Revolution".

- **NBHM is implemented through National Bee Board (NBB).**
- The scheme has three Mini Missions (MM-I, II & III) under which main thrust is given on awareness, capacity building/trainings, focus on women empowerment through beekeeping, setting up of requisite infrastructural facilities, viz.; Integrated Beekeeping Development Centres (IBDCs), Honeybees Disease Diagnostic Labs, Setting up of/upgradation of Honey Testing labs, Beekeeping Equipment Manufacturing Units, Custom Hiring Centres, Api therapy Centres, Development of Quality Nucleus Stock Centres & Bee Breeders, etc., Digitization/online registration, etc. under MM-I, processing, value addition, market support, etc. under MM-II and R&D under MM-III.

Conclusion

- Online registration/ traceability system for source of Honey & other beehive products will help in checking the quality & source of adulteration of honey.
- The system will also enable consumers/public to know the source of honey and assure quality of the products.

Plenary Meeting of International Monetary and Financial Committee (IMFC) of IMF

Why in News

- Union Minister for Finance & Corporate Affairs Smt. Nirmala Sitharaman has recently attended the Plenary Meeting of the International Monetary and Financial Committee of the Board of Governors of the International Monetary Fund (IMF) at the virtual Spring Meetings 2021.
- The meeting was attended by Governors/Alternate Governors representing 190 member countries of the IMF.

Details of Discussion

- The discussions at the meeting were based on IMF Managing Director's Global Policy Agenda (GPA) titled, "Bolstering the Recovery, Countering Divergence".
- The members of the IMFC updated the committee on the actions and measures taken by member countries to combat COVID-19 pandemic and facilitate economic recovery.

India's Proposals

- Finance Minister Smt. Sitharaman emphasised that the GPA's suggestion to hasten the transition to a low-carbon economy for promoting growth that benefits all needs to be viewed in the context of its implications for the Emerging Market and Developing Economies and low-income economies.
- The burden of economic transformation to a low carbon economy would disproportionately be higher for these countries, and positive benefits may not accrue in the short run.
- The focus needs to remain on the agreed principles of equity and differentiated responsibility of climate action.
- The Finance Minister endorsed the view of the IMF that the *key priority remains to end the pandemic and the universal availability of vaccines and medical solutions need to be ensured.*

About The IMFC meets

- The IMFC meets twice a year, once during the Fund-Bank Spring Meetings in April, and again during the Annual Meetings in October.
- The Committee discusses matters of common concern affecting the global economy and advises the IMF on the direction of its work.
- This year, due to ongoing COVID-19 pandemic, the Spring Meetings took place through video-conference.

SARTHAQ

Why in News

- In pursuance of the goals and objectives of the National Education Policy (NEP) 2020 issued on 29th July, 2020 and to assist States and UTs in this task, the Department of School Education and Literacy has developed an indicative and suggestive Implementation Plan for School Education, called '*Students' and Teachers' Holistic Advancement through Quality Education (SARTHAQ)*'.

- This implementation plan was released by the Education Minister Shri Ramesh Pokhriyal Nishank also as a part of the celebrations leading to the Amrit Mahotsav on 75 years of Indian independence.

About the Initiative

- SARTHAQ has been developed through wide and intensive consultative process with States and UTs, Autonomous bodies and suggestions received from all stakeholders; around 7177 suggestions/inputs were received from them.
- SARTHAQ has also been prepared as an evolving and working document and is broadly suggestive/indicative in nature and will be updated from time to time based on the inputs/feedback received from the stakeholders.

Following outcomes have been envisaged for entire education system after implementation of SARTHAQ

- New National and State Curriculum Frameworks for School Education, Early Childhood Care and Education, Teacher Education and Adult Education will be developed encompassing the spirit of NEP and will pave way for curriculum reforms
- Increase in Gross Enrolment Ratio (GER), Net Enrolment Ratio (NER), transition rate and retention rate at all levels and reduction in drop outs and out of school children.
- Access to quality ECCE and Universal Acquisition of Foundational Literacy and Numeracy by Grade 3.
- Improvement in Learning Outcomes at all stages with emphasis on teaching and learning through mother tongue/local/regional languages in the early years.
- Integration of vocational education, sports, arts, knowledge of India, 21st century skills, values of citizenship, awareness of environment conservation, etc. in the curriculum at all stages.
- Introduction of Experiential learning at all stages and adoption of innovative pedagogies by teachers in classroom transaction.
- Reforms in Board exams and various entrance tests.
- Development of high quality and diversified teaching-learning material.
- Availability of text books in Regional/local/home language.
- Improvement in quality of Teacher Education Programmes.
- Improvement in quality of newly recruited teachers and capacity building through Continuous Professional Development.
- Safe, Secure, inclusive and conducive learning environment for students and teachers.
- Improvement in infrastructure facilities including barrier free access and sharing of resources among schools.
- Uniform standards in learning outcomes and governance across public and private schools through setting-up of an online, transparent public disclosure system through establishment of SSSA in states.
- Integration of technology in educational planning and governance and availability of ICT and quality e-content in classrooms.
- SARTHAQ will pave the way for our children and youth to meet the diverse national and global challenges of the present and the future and help them to imbibe 21st century skills along with India's tradition, culture and value system as envisioned in National Education Policy 2020.

Conclusion

- It is envisaged that the implementation of SARTHAQ would benefit all stakeholders including 25 crore students, 15 lakh schools, 94 lakh teachers, Educational Administrators, Parents, and community as education is the backbone of an equitable and just society.

Project RE-HAB (Reducing Elephant - Human Attacks Using Bees)

Why in news

- Minister for Road Transport & Highways and of MSME, Shri Nitin Gadkari has hailed Khadi and Village Industries Commission's (KVIC) innovative Project RE-HAB, which has significantly reduced elephants' presence at four places in Karnataka's Kodagu district.

About Project RE-HAB

- Project **RE-HAB (Reducing Elephant – Human Attacks using Bees)** was launched by KVIC Chairman Shri Vinai Kumar Saxenast month, at four locations on the periphery of Nagarhole National Park in Kodagu district of Karnataka.
- It is a unique, cost-effective way of preventing elephant – human conflicts without causing any harm to both, the animals and the humans.
- Under this project, bee boxes are used as a fence to prevent elephants from entering human habitation, thus reducing loss of lives and property.
- Elephants fear that the honey bees might sting them in their eyes and the inner side of the trunk.
 - Also, the buzz of the bees irritates the elephants the most.

Working of Bee-fences

- Bee fences have reduced the movement of elephants at these points to a great extent.
- Night vision cameras installed at these locations have captured amazing footage of elephants' behaviour on seeing bee boxes.
- A number of elephants are seen returning to the jungles fearing honey bees.
- Also, no destruction of crops or property by elephants has been reported in these areas since the bee boxes have been placed on the passageways of elephants.

Way Forward

- States like West Bengal, Jharkhand, Odisha, Chhattisgarh, Assam, Tamil Nadu and Kerala are major elephant – human conflict zones where KVIC is planning to implement Project RE-HAB in a phased manner. Approximately 2400 people have been killed in conflicts with wild elephants across the country since 2015.
- KVIC Chairman ShriSaxena said implementing Project RE-HAB in other states will save hundreds of human and elephant lives.

Post Matric Scholarship Scheme

Why in News

- Central Government has released an amount of Rupees Thirty Nine Crore Eighty Six Lakh only as Central Assistance to the State Government of Madhya Pradesh under the Centrally Sponsored Scheme of Post-Matric Scholarship for OBC Student during the year 2020-21.
 - Earlier Rupees Twenty crore only was released to State Government of Madhya Pradesh on Ad-hoc basis on 12th June, 2020 and Rupees Nineteen Crore Eighty Six Lakh was also released to Govt. of Madhya Pradesh on 22nd September, 2020.
 - Hence total amount of Rupees Seventy Nine Crore Seventy Two Lakh (up to Notional Allocation) is available with the State Government for expenditure in 2020-21.
- As per the decision of the Government of India, the scholarship amount due to the selected beneficiaries (students) shall be disbursed through DBT mode only.
 - Other mode of disbursement such as through cash of cheque shall be unacceptable.

What has been done

- The government had completely revamped the Post Matric Scholarship scheme for Scheduled Castes to provide universal access to the SC youth for higher education.
- The funding pattern under the Scheme was changed from the committed liability formula to a fixed sharing pattern of 60:40 between the Centre and the States (90:10 for the North Eastern States), thus increasing the commitment of the Government in the scheme by almost four times.
 - An amount of Rs.35,534 crore was committed by Central Govt. for this scheme till 2025-26 and it is estimated that about 4 crore youth from the SC community will be benefitted during this period.
 - Apart from increasing the central share in the scheme, the Government has brought in several process improvements to avoid delays in payment of scholarships using the DBT system.

About Post Matric Scholarship Scheme for Scheduled Castes

- It is a Centrally Sponsored Scheme and implemented through State Governments and UT administrations.

- The Scheme provides financial assistance to the Scheduled Caste students studying at post matriculation or post-secondary stage to enable them to complete their education.
- Scholarships will be paid to the students whose parents/guardians' income from all sources does not exceed Rs. 2,50,000/- per annum.
- The scholarship includes maintenance allowance, reimbursement of fees, study tour charges, book allowances, etc.

Objective

- The objective of the scheme is to appreciably increase the Gross Enrolment Ratio of SC students in higher education with a focus on those from the poorest households, by providing financial assistance at post-matriculation or post-secondary stage to enable them to complete their education.
- These scholarships are available for studies in India only and the awardees are selected by the State Government/Union Territory to which the applicant actually belongs (i.e. the State/UT in which permanently settled or domiciled, as per the terms of domicile decided by the State).
- This is applicable to all the students who are currently beneficiaries of the scheme as well as fresh admissions.

Online Dispute Resolution

Why in News

- NITI Aayog—in association with Agami and Omidyar Network India and with the support of ICICI Bank, Ashoka Innovators for the Public, Trilegal, Dalberg, Dvara, NIPFP—will launch the first-of-its kind Online Dispute Resolution (ODR) handbook in India.

About the Handbook

- The handbook is an invitation to business leaders to adopt ODR in India. It highlights the need for such a mechanism, the models of ODR that businesses can adopt and an actionable pathway for them.

About ODR

- ODR is the resolution of disputes outside courts, particularly of small and medium-value cases, using digital technology and techniques of alternate dispute resolution (ADR), such as negotiation, mediation, and arbitration.
- While courts are becoming digitized through the efforts of the judiciary, more effective, scalable, and collaborative mechanisms of containment and resolution are urgently needed.
- ODR can help resolve disputes efficiently and affordably.

10 FULL LENGTH TEST SERIES

WITH COMPLIMENTARY
3 CSAT TESTS
FOR PRELIMS 2021

AT ₹1499 ONLY

The advertisement features a large orange circle with the number '10' and the text 'FULL LENGTH TEST SERIES'. Below this, it states 'WITH COMPLIMENTARY 3 CSAT TESTS FOR PRELIMS 2021' and 'AT ₹1499 ONLY'. The background of the advertisement shows a person's hand writing on a notepad with a pencil.

'Aahaar Kranti'

About The Mission

- The mission is aimed to spread the message of the need for a nutritionally balanced diet and to understand the importance of accessible to all local fruits and vegetables.
- The 'Aahaar Kranti' movement is designed to address the peculiar problem being faced by India and the world called 'hunger and diseases in abundance'.
 - Studies estimate that India produces as much as two times the amount of calories that it consumes. However, many in the country are still malnourished.
 - The root cause of this strange phenomenon is a lack of nutritional awareness in all sections of our society.
- The United Nations has also declared 2021 as the International Year of Fruits and Vegetables, which vibes very well with Aahaar Kranti.
 - Fruits and vegetables make a large part of a balanced diet. Further, UN sustainable goal # 3 that emphasizes on human well-being reads, "Ensure healthy lives and promote well-being for all at all ages."
- Vijnana Bharati (Vibha) and Global Indian Scientists' and Technocrats' Forum have aimed to set Aahaar Kranti as a model for the entire world to follow.

India Energy Dashboards (Version 2.0)

Why in News

- India Energy Dashboards Version 2.0 was launched by Dr Rajiv Kumar (Vice Chairman, NITI Aayog), Dr V K Saraswat (Member, NITI Aayog), Shri Amitabh Kant (CEO, NITI Aayog) and Dr Rakesh Sarwal (Additional Secretary, NITI Aayog). Secretaries from Ministry of Coal, Ministry of Power, Ministry of Petroleum and Natural Gas, and Ministry of New and Renewable Energy attended the launch event.

About IED

- India Energy Dashboards (IED) is an endeavour to provide single-window access to the energy data for the country.
- Controller's Organisation, and Ministry of Petroleum and Natural Gas is compiled in the Dashboards. NITI Aayog launched the Version 1.0 in May 2017.

Features

- *The IED provides time series data from FY 2005-06 until FY 2019-20.*
- Enhanced data download - It enables easy downloading of data into convenient spreadsheet formats in a cleaner, more intuitive way.
- *IED provides data at sub-yearly frequencies as well.*
- This includes monthly data and API linked data from some portals maintained by the government agencies.
 - The monthly data is sourced from the monthly reports that are regularly published for the electricity, petroleum and natural gas sectors. API linked data from Saubhagya.
 - UJALA, PRAAPTI, and Vidut PRAVAH has been incorporated in the portal.
- *A 'Feedback and Suggestions' forum for the engagement of energy data user community has been incorporated.*
- A semi-automated workflow/ issue-tracking system for managing periodic updates to the IED.
- The workflow system performs basic checks and data validation, helping to avoid incorrect data entry;
- Addition of technical and financial data of electricity utilities available from the regulatory documents in the state of Maharashtra.
- Regulatory data specifically for the area served by the state-owned distribution utility - MSEDCL has been added.
- *The Dashboards will include other states data in future.*

Raisina Dialogue-2021

Why in News

- The 6th Edition of the prestigious Raisina Dialogue, jointly organised by the Ministry of External Affairs and the Observer Research Foundation, was recently held virtually.
- The theme for the 2021 Edition is "#ViralWorld: Outbreaks, Outliers and Out of Control".

About Raisina Dialogue

- The Raisina Dialogue is a multilateral conference held annually in New Delhi, India.
 - Since its inception in 2016, the conference has emerged as India's flagship conference on geopolitics and geoeconomics.
 - The conference is hosted by the Observer Research Foundation, an independent think tank, in collaboration with the Ministry of External Affairs of India.
- The conference is structured as a multi-stakeholder, cross-sectoral discussion, involving a variety of global policymakers including heads of state, cabinet ministers and local government officials.
 - In addition, the Dialogue also welcomes major private sector executives, as well as members of the media and academia.
 - It is designed on the lines of Singapore's Shangri-La Dialogue.
- The name "Raisina Dialogue" comes from Raisina Hill, an elevation in New Delhi, seat of the Government of India, as well as the Presidential Palace of India, Rashtrapati Bhavan.

Raisina Dialogue 2021

- During the four-day event, talks will be based on five subjects namely,
 - WHOse multilateralism.
 - Reconstructing the UN and beyond.
 - Securing and diversifying supply chains
 - Global 'Public Bads': Holding actors and nations to account;
 - Infodemic: Navigating a 'No-Truth' world in the age of Big Brother.
 - The Green stimulus: Investing in gender, growth, and development.
- 150 speakers from 50 countries and multilateral organisations will attend the event virtually.
- The event will feature the Prime Minister of Denmark and the President of Rwanda as chief guests in the inaugural session. Subsequent sessions will see the participation of the Australian PM, European Council.
- President, foreign ministers of Portugal, Japan and Singapore. A few former heads of government of various countries will also take part in India's flagship conference on geopolitics & geoeconomics.

e-SANTA

Why in News

- Union Commerce and Industry Minister Shri Piyush Goyal has recently virtually inaugurated e-SANTA, an electronic marketplace providing a platform to connect aqua farmers and the buyers.
- It will enable the farmers to get a better price and the exporters to directly purchase quality products from the farmers enhancing traceability, a key factor in international trade.

Background

- Dwelling upon the challenges in traditional aqua farming, farmers were facing monopoly and exploitation, exporters were facing inconsistency and quality gaps in the products purchased, and traceability is a big issue in international trade.
- e-SANTA website (<https://esanta.gov.in>) will change the life standards of our fishermen, bring in substantive improvements in their lives, and also enhance India's reputation in the global trade.
- The portal will act as a bridge between the fishermen and buyers, within the country and abroad.

About e-SANTA

- The term e-SANTA was coined for the web portal, meaning Electronic Solution for Augmenting NaCSA farmers' Trade in Aquaculture.
 - National Centre for Sustainable Aquaculture (NaCSA) is an extension arm of Marine Products Export Development Authority (MPEDA), Govt. of India, Ministry of Commerce & Industry.
- e-SANTA will raise income, lifestyle, self-reliance, quality levels, traceability, and provide new options for our aqua farmers.
 - The platform will change the traditional way of carrying out business from a word of mouth basis to become more formalised & legally binding.

Benefits

- e-SANTA will RAISE the lives & income of farmers by:
 - Reducing Risk
 - Awareness of Products & Markets
 - Increase in Income
 - Shielding Against Wrong Practice
 - Ease of Processes
- e-SANTA is a Digital Bridge to end the market divide and will act as an alternative marketing tool between farmers & buyers by eliminating middlemen.
 - It will revolutionize traditional aquafarming by providing cashless, contactless and paperless electronic trade platform between farmers and exporters.
 - e-SANTA can become a tool to advertise collectively the kind of products the buyers, fishermen & fish producing organisations are harvesting, so people in India & internationally can know what is available & in the future, it can become an auction platform.
 - The Platform is available in many languages, which will help the local population.

How will it work?

- e-SANTA is a completely paperless and end-to-end electronic trade platform between Farmers and exporters.
- The farmers have the freedom to list their produce and quote their price while the exporters have the freedom to list their requirements and also to choose the products based on their requirements such as desired size, location, harvest dates etc.
- This enables the farmers and buyers to have greater control over the trade and enables them to make informed decisions.
 1. The platform provides detailed specification of each product listing and it is backed by an end to end electronic payment system with NaCSA as an Escrow agent.
 2. After crop listing and online negotiation, a deal is struck, advance payment is made and an estimated invoice is generated.
 3. Once the harvest date is fixed, the buyer goes to the farm gate and the produce is harvested in his presence.
 4. Once the harvest is completed, the final count, quantity of material is verified, the final amount is decided and delivery challan is issued.
 5. Once the material reaches the processing plant, the final invoice is generated and the exporter makes the balance payment.
 6. This payment is reflected in the escrow account. NaCSA verifies it and accordingly releases the payment to farmers.

Infant, Toddler and Caregiver-Friendly Neighbourhoods Training and Capacity Building Programme

Why in News

- The 'Infant Toddler and Caregiver-friendly Neighbourhoods (ITCN) Training and Capacity Building Programme' was launched virtually today by National Institute of Urban Affairs (NIUA) in partnership with Bernard van Leer Foundation (BvLF).
- The Programme is designed to help build capacities of city officials and young professionals for developing young children and family-friendly neighbourhoods within cities in India.
- Shri Kunal Kumar, Joint Secretary and Mission Director (Smart Cities), Ministry of Housing and Urban Affairs remotely launched the event.

Background

- The programme is a continuation of the long-term partnership between NIUA and BvLF to scale up the efforts and embed the lessons of ITC needs at neighbourhood level within the city level programmes.

About the Programme

- Under the programme, city officials and young professionals are proposed to be skilled through certified training and capacity building modules.

- The training is proposed to be delivered through well-structured training modules, provided online through National Urban Learning Platform (NULP), the platform developed for knowledge dissemination by MoHUA and NIUA.

Aim and Objectives

- The programme is envisioned with the twin objectives:
 - first, embedding the learnings from the inventory of knowledge developed by NIUA and BvLF within the on-going and proposed urban development initiatives at neighbourhood and city level.
 - second, handholding participants to embed learnings into the various initiatives of the cities which take into account the everyday needs of young children and caregivers.
- In addition, an academic certified course for young professionals has been planned to sensitize them about the needs of young citizens (0-5 years) in the city and to equip them with the adequate tools for the purpose.

About NIUA

- Established in 1976, the National Institute of Urban Affairs (NIUA), is a premier Institute of Ministry of Housing and Urban Affairs, Government of India for research and capacity building for the urban sector in India.
- The Institution has been actively working on bringing forth key areas of
 - Concern for urban India to build the urban discourse at various urban scales.
 - Committed towards aligning its efforts towards achieving Sustainable Development Goals (SDGs) through all its initiatives and programs.
- It has utilized its competencies in research, knowledge management, policy advocacy and capacity building to address urban challenges and continuously striving to develop sustainable, inclusive, and productive urban ecosystems in the country.
- It has emerged as a thought leader and knowledge hub for urban development in India and is sought out by both Indian and International organizations for collaborations and partnerships in India's urban transforming journey.

Mental-Health Digital platform MANAS

Why in News

- The Principal Scientific Adviser to the Government of India Prof. K VijayRaghavan virtually launched the "MANAS" App to promote wellbeing across age groups.
- MANAS which stands for Mental Health and Normalcy Augmentation System was endorsed as a national program by the Prime Minister's Science, Technology, and Innovation Advisory Council (PM-STIAC).

About MANAS

- MANAS is a comprehensive, scalable, and national digital wellbeing platform and an app developed to augment mental well-being of Indian citizens.
- MANAS App integrates the health and wellness efforts of various government ministries, scientifically validated indigenous tools with gamified interfaces developed/researched by various national bodies and research institutions.
- MANAS was initiated by the Office of the Principal Scientific Adviser to the Government of India. It was jointly executed by NIMHANS Bengaluru, AFMC Pune and C-DAC Bengaluru.

OCI Cards

Why in News

- In a decision which is expected to significantly ease the process for re-issue of Overseas Citizen of India (OCI) cards, the Government has decided to simplify the process.
 - This decision has been taken on the directions of the Union Home Ministry.

Background

- The OCI Card has proved to be very popular amongst foreigners of Indian Origin and spouses of foreign origin of Indian citizens or OCI cardholders, as it helps them in hassle free entry and unlimited stay in India. So far about 37.72 lakh OCI Cards have been issued by the Government of India.

Present Situation

- As per the extant law, a foreigner of Indian origin or a foreign spouse of an Indian citizen or foreign spouse of an Overseas Citizen of India (OCI) cardholder, can be registered as an OCI cardholder.
- OCI card is a life-long visa for entry into and stay in India with a number of other major benefits attached to it which are not available to other foreigners.
- Presently, the OCI card is required to be re-issued each time a new passport is issued up to 20 years of age and once after completing 50 years of age, in view of biological changes in the face of the applicant.
- With a view to facilitate the OCI cardholders, it has now been decided by the Government of India to dispense with this requirement.
- A person who has got registration as OCI cardholder prior to attaining the age of 20 years will have to get the OCI card re-issued only once when a new passport is issued after his/her completing 20 years of age, so as to capture his/ her facial features on attaining adulthood.
- If a person has obtained registration as OCI cardholder after attaining the age of 20 years, there will be no requirement of re-issue of OCI card.

New changes in the process

- With a view to update the data regarding new passports obtained by the OCI cardholder, it has been decided that he/she shall upload a copy of the new passport containing his/her photo and also a latest photo on the online OCI portal, each time a new passport is issued up to 20 years of age and once after completing 50 years of age.
 - These documents may be uploaded by the OCI cardholder within 3 months of receipt of the new passport.
- However, in the case of those who have been registered as OCI cardholder as spouse of foreign origin of a citizen of India or an OCI cardholder, the person concerned will be required to upload on the system, a copy of the new passport containing the photo of the passport holder and also a latest photo along with a declaration that their marriage is still subsisting each time a new passport is issued.
 - These documents may be uploaded by the OCI cardholder spouse within three months of receipt of his/ her new passport.
- The details will be updated on the system and an auto acknowledgement through e-mail will be sent to the OCI cardholder informing that the updated details have been taken on record.
 - There will be no restriction on the OCI cardholder to travel to/ from India during the period from the date of issue of new passport till the date of final acknowledgement of his/ her documents in the web-based system.

Indian SARS-CoV-2 Genomics Consortium (INSACOG)

Why in News

- Indian SARS-CoV-2 Genomics Consortium (INSACOG) is a network of ten laboratories established in December 2020 for continuously monitoring the genomic changes of SARS-CoV-2 in India, through Whole Genome Sequencing (WGS).

Guidelines

- The detailed guidelines of INSACOG were published on the website of MoHFW on 27th December, 2020.
- SOPs for epidemiological Surveillance and Response in the context of new variant of SARS-CoV -2 virus detected in UK were disseminated to all States as well as placed on the website of the Ministry on 22nd December, 2020.
- As per the INSACOG guidelines, positive samples are sourced for Whole Genome Sequencing from:
 - International travelers who are positive by RT-PCR.
 - Community samples are coordinated by State Surveillance Officers who facilitate transfer of samples from districts/labs to the designated INSACOG labs.
 - All states have been mapped to specific INSACOG labs.
 - Samples from districts reporting exponential surge.

Status

- The 10 identified laboratories of INSACOG Consortium report their sequencing results to Central Surveillance unit of National Center for Diseases Control [NCDC]; from where it is shared with the State Surveillance Units (SSUs) of IDSP by the Central Surveillance Unit (CSU) through email as well as regular meetings by NCDC with State Surveillance Officers who in turn, take up the operational response with the Health Secretaries.
- Hence States are continuously informed of variant viruses having been found in the States.

- In a few instances, the INSACOG labs have also communicated the results directly to the States.

Gender Samvaad

Why in News

- Gender Samvaad event, a joint attempt between DAY-NRLM and the Initiative for What Works to Advance Women and Girls in the Economy (IWWAGE) to create a common platform to share experiences emerging from this effort, was organised today by the Ministry of Rural Development, Govt. of India.
- The attempt is to generate greater awareness on gender related interventions under DAY-NRLM across the country and best practices, with a focus on hearing voices from the states and the field.

About the Event

- Gender Samvaad provides states with opportunities to:
 - a. Understand best practices/initiatives that other states have been undertaking to improve women's agency (e.g. facilitating women's access to land rights, their engagement in farmer producer organizations (FPOs), best practices around Food, Nutrition, Health and Water and Sanitation (FNHW), in establishing strong institutions for public service delivery, and in protecting and providing redress to vulnerable groups within women (e.g. to victims of witch hunting));
 - b. Understand gender interventions globally;
 - c. Engage with experts and other colleagues on suggestions regarding how to handle issues/implementation barriers;
 - d. Contribute to creation of a 'gender repository' with resource materials on best practices for gender interventions across the country/other countries.
 - e. Build advocacy around the need to focus on gender issues across SRLMs and the NRLM.

About DAY-NRLM

- With over 60 million women mobilised to be part of one of India's largest livelihoods programme, the Deendayal Antayodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM) holds great promise for advancing women's socio-economic empowerment by organising them into self-help groups (SHGs) and federations of the rural poor.
- Not only are these platforms facilitating financial opportunities and livelihood support services for women, but they have also become an extended arm of governance to demand accountability from and build linkages with mainstream institutions.
- In 2016, DAY-NRLM laid out a gender operational strategy to mainstream gender issues within its federated architecture, with a focus on training and capacity building of staff, cadres and institutions on gender issues.
- This was coupled with the establishment of institutional platforms (e.g. social action committees and gender resource centres) at the field level, so women could approach them for their grievances and to claim their rights and entitlements.



GENERAL STUDIES PAPER III

Blockage of Suez Canal

Why in News

- Recently India has taken a Four-point plan has been chalked out to deal with the situation arising from the blockage of Suez Canal.
- This plan was chalked out in a meeting convened by the Logistics Division, Department of Commerce, Government of India.
- The meeting was chaired by Shri Pawan Agarwal, Special Secretary (Logistics) and attended by the Ministry of Ports, Shipping and Waterways, ADG Shipping, Container Shipping Lines Association (CSLA) and Federation of Indian Export Organisations (FIEO).

Background

- The Suez Canal was blocked for six days in March 2021 after the accidental grounding of *Ever Given*, a Golden-class container ship, on the morning of 23 March.
- The 400-metre-long (1,300 ft) vessel was buffeted by strong winds, and ended up wedging itself across the waterway, bow and stern stuck in the canal bank, which prevented other vessels from passing through that part of the Suez Canal.

How is India related to it?

- India's shipments of oil, textiles, furniture, cotton, auto components and machine parts to Europe, North America and South America could get delayed by 10-15 day.
- On the imports side, oil, items of steel and raw materials such as scrap and machine parts used in assembly lines, basic chemicals such as phenol and aniline will get delayed.
- The blockage could result in a 5-15% hike in freight rates from India along key lines.
- India's trade with these geographies through the Suez Canal amounts to \$200 billion annually.

Actions taken

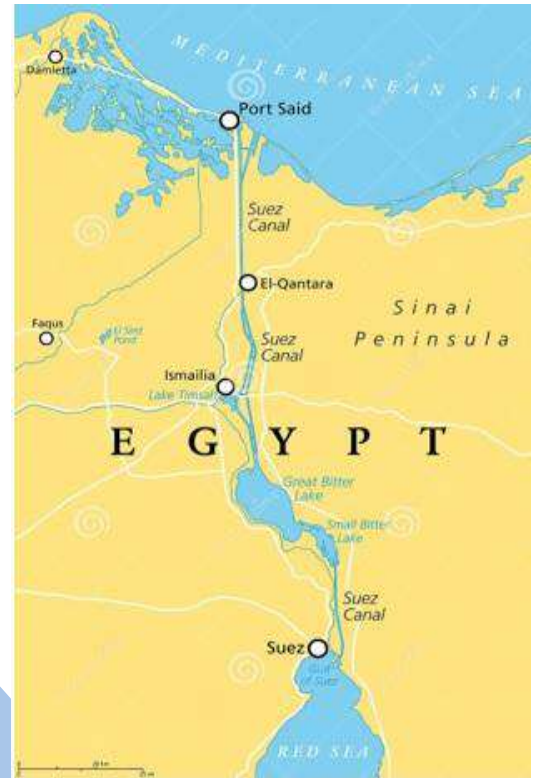
- **Prioritisation of cargo** : FIEO, MPEDA and APEDA will jointly identify cargo particularly perishable cargo for priority movement and work with the shipping lines for the same.
- **Freight Rates**: CSLA assured that the freight rates as per existing contracts will be honoured.
 - A request has been made to the shipping lines to maintain stability in freight rates during the period of this crisis.
 - It was noted that the situation is temporary and is unlikely to have a long-lasting impact.
- **Advisory to Ports**: Once the blockage is over, it is expected that some bunching may take place, especially at the ports of JNPT, Mundra and Hazira.
 - Ministry of Ports, Shipping and waterway assured to issue an advisory to these ports so as to gear up arrangements and ensure efficient handling during the forthcoming busy period.
- **Re-routing decisions**: Shipping lines were advised through CSLA to explore the option of re-routing of ships via the Cape of Good Hope. It was pointed that such re-routing usually takes 15 additional days' time.

Conclusion

- The delays caused to global supply chains will lead to goods piling up at key ports of origin in the east, experts said.
- Supply chain disruptions could impact manufacturing further – many sectors such as automobiles and electronics are already facing shortages.
- If the situation is not resolved quickly, west-bound ships from the east may start skipping lower-priority Indian ports to make up for lost time or reduce their lot size per sailing.

About Suez Canal

- The Suez Canal is an artificial sea-level waterway in Egypt, *connecting the Mediterranean Sea to the Red Sea through the Isthmus of Suez and dividing Africa and Asia.*
- In 1858, Ferdinand de Lesseps formed the Suez Canal Company for the express purpose of building the canal.
 - Construction of the canal lasted from 1859 to 1869 and took place under the regional authority of the Ottoman Empire.
 - The canal officially opened on 17 November 1869.
- It offers vessels a direct route between the North Atlantic and northern Indian oceans via the Mediterranean Sea and the Red Sea, avoiding the South Atlantic and southern Indian oceans .
- The canal extends from the *northern terminus of Port Said* to the *southern terminus of Port Tewfik* at the city of Suez.
- Suez Crisis of October–November 1956 :While the canal was the property of the Egyptian government, European shareholders, mostly French and British, owned the concessionary company which operated it until July 1956, when President Gamal Abdel Nasser nationalized it—an event which led to the Suez Crisis of October–November 1956.



FOSS4GOV Innovation Challenge

Why in News

- To increase awareness about the usage of Free and Open Source Software (FOSS) in governance and Government functioning, and adoption of FOSS, a virtual roundtable discussion 'Free and Open Source Software (FOSS) in Government' was organized by the Ministry of Electronics and Information Technology (MEITY) in collaboration with Omidyar Network India on April 22, 2021.

What is Free and Open Source Software ?

- Free and open-source software (FOSS) is software that can be classified as both free software and open-source software.
- Anyone is freely licensed to use, copy, study, and change the software in any way, and the source code is openly shared so that people are encouraged to voluntarily improve the design of the software.
 - This is in contrast to proprietary software, where the software is under restrictive copyright licensing and the source code is usually hidden from the users.
- FOSS maintains the software user's civil liberty rights (see the Four Essential Freedoms, below). Other benefits of using FOSS can include decreased software costs, increased security and stability (especially in regard to malware), protecting privacy, education, and giving users more control over their own hardware.
 - Free and open-source operating systems such as Linux and descendants of BSD are widely utilized recently , powering millions of servers, desktops, smartphones (e.g., Android), and other devices.

Four essential freedoms of Free Software

1. The freedom to run the program as you wish, for any purpose (freedom 0).
2. The freedom to study how the program works, and change it so it does your computing as you wish (freedom 1).
 - Access to the source code is a precondition for this.
3. The freedom to redistribute copies so you can help others (freedom 2).
4. The freedom to distribute copies of your modified versions to others (freedom 3).
 - By doing this one can give the whole community a chance to benefit from your changes.
 - Access to the source code is a precondition for this.

Benefits of FOSS

1. Privacy and security are more with respect to the proprietary softwares.
2. Low costs or no costs.

- FOSS allows for better collaboration among various parties and individuals with the goal of developing the most efficient software for its users or use-cases.

India and FOSS

- The Government of Kerala, India, announced its official support for FOSS software in its State IT Policy of 2001, which was formulated after the first-ever Free software conference in India, **Freedom First!**, held in July 2001 in Trivandrum, the capital of Kerala.
- In 2009, Government of Kerala started the International Centre for Free and Open Source Software (ICFOSS). In March 2015 the Indian government announced a policy on adoption of FOSS.
- India is well positioned to become a vibrant hub for Free and Open Source Software (FOSS) innovations, due to the large number of 4G data subscribers in India, 96% of whom access the digital world via open-source based mobile operating systems (primarily Android).
 - Some of India's largest-government projects (including Aadhaar) and many technology start-ups have also been built using FOSS.
 - Acknowledging the huge potential of FOSS, the Government of India had issued a Policy on Adoption of Open Source Software in 2015.

About FOSS Innovation Challenge

- The #FOSS4GOVInnovation Challenge calls upon FOSS innovators, technology entrepreneurs and Indian Startups to submit implementable open source product innovations in CRM and ERP with possible applications for Govtech in Health, Education, Agriculture, Urban Governance etc.
- Participants to be eligible for incubation support, prize money, mentorship by domain experts, institutional support from eminent organizations for incubation of ideas and listing of solutions on GeM.
- Further details about the challenge and how to participate will be shared soon by the Ministry through MyGov and MeitY Startup Hub.

Spices Board India and UNDP India's Accelerator Lab sign MoU

Why in News

- Spices Board India under Ministry of Commerce and Industry and UNDP India's Accelerator Lab has recently signed a Memorandum of Understanding (MoU), with the aim to build a blockchain based traceability interface for Indian spices to enhance transparency in supply chain and trade.
-
- UNDP and Spices Board India are working towards integrating the **Blockchain Traceability Interface** with the e-Spice Bazaar portal developed by Spices Board India for connecting spices farmers with markets.
 - Design of the Blockchain interface is expected to be completed by May'21.
 - The project will be piloted with over 3,000 farmers engaged in chilli and turmeric farming in select Districts of Andhra Pradesh.

Background

- India is the largest exporter, producer and consumer of spices in the world.
- India's spices export crossed a milestone of 3 Bn USD during 2019-20 and our estimates indicate that we would cross that milestone and achieve a new high during the 2020-21.
- Spices Board, the agency responsible for export promotion of Indian spices in the world markets, is happy about these achievements and would like to facilitate further growth in the sector.

About the present initiative

- This UNDP-Spices Board joint initiative to build a blockchain-powered traceability interface for Indian spices is another significant milestone in our journey to make the spices value chain efficient, transparent and equitable for all stakeholders.
- This traceability interface is *expected to enhance consumer confidence and facilitate sourcing of spices for exports* as well as for local value addition and use.
- Upon successful demonstration, the Board would like to expand the reach of this interface to cover all major spices and regions of the country, and expects to have continuous partnership and support from the UNDP.

About Spices Board

- Spices Board is one of the five **Commodity Boards** functioning under the Ministry of Commerce & Industry.
- It is an **autonomous body** responsible for the export promotion of the 52 scheduled spices and development of Cardamom (Small & Large).
- The main functions of the Spices Board are the following:
 - Research, Development and Regulation of domestic marketing of Small & Large Cardamom.
 - Post-harvest improvement of all spices.
 - Export promotion of all spices and assisting exporters in technology upgradation, quality management, brand promotion, research & product development.
 - Development of spices in the North East.
 - Regulation of quality of spices for exports through its quality evaluation services; etc.

About UNDP

- UNDP works across 170 countries and territories **to eradicate poverty while protecting the planet**.
- They help countries develop strong policies, skills, partnerships, and institutions so they can sustain their progress.
- UNDP has worked in India since 1951 in almost all areas of human development, from systems strengthening to inclusive growth and sustainable livelihoods, as well as sustainable energy, environment, and resilience. UNDP's programmes continue to integrate a global vision for catalytic change with India's national priorities.
- With over 30 projects on the ground in almost every state, recently, it works to achieve the Sustainable Development Goals by transforming traditional models to do development differently.

About Blockchain

- Blockchain is a decentralized process of recording transactions on an open and shared electronic ledger.
 - This allows for ease and transparency in data management across a complex network, including, farmers, brokers, distributors, processors, retailers, regulators, and consumers, thus simplifying the supply chain.
 - It will allow farmers just as all other members of the supply chain to access the information which further makes the entire supply chain more efficient and equitable.

E9 initiative

Why in News

- Minister of State for Education, Shri Sanjay Dhotre will attend consultation meeting of Education Ministers of E9 countries on E9 initiative: Scaling up digital learning to accelerate progress towards SDG4 on 6th April, 2021.
- The consultation is the first of a three-phased process to co-create an initiative on digital learning and skills, targeting marginalised children and youth, especially girls.

Background

- The UN is spearheading a global initiative on digital learning and skills for all, targeting marginalized children and youth and aiming to close the digital divide and drive rapid change in education systems.
- This initiative focuses on three of the five priorities of the 2020 Global Education meeting Declaration:
 - Supporting teachers.
 - Investing in skills.
 - Narrowing the digital divide.

About E9 Initiative

- Building on the established partnership of E9 countries allows **Bangladesh, Brazil, China, Egypt, India, Indonesia, Mexico, Nigeria and Pakistan** the opportunity to benefit from this global initiative and accelerate progress on digital learning and skills towards the achievement of **Sustainable Development Goal 4 - Quality Education**.
- The inception meeting, a Consultation of Ministers of Education, took place on 6 April 2021.
 - It discussed the co-creation of the Digital Learning initiative by the nine countries.
 - This Consultation highlighted progress, shared lessons and explored opportunities for collaboration and scale-up to expand digital learning and skills. In addition, a Marketplace segment, for public-private partnership focused on promising local and global solutions and opportunities for digital learning to strengthen local ecosystems.

- The meeting featured the participation of the UN Deputy Secretary-General, UNESCO, UNICEF, Generation Unlimited, the Malala Fund, the World Bank and a number of stakeholder representatives including from the private sector partners of the Global Education Coalition.

About E9 Countries

- The E9 is a forum of nine countries, which was formed to achieve the goals of UNESCO's Education For All (EFA) initiative.
 - The "E" stands for education and the "9" represents the following nine countries: Bangladesh, Brazil, China, Egypt, India, Indonesia, Mexico, Nigeria and Pakistan, representing over half of the world's population and 70% of the world's illiterate adults.
 - *E-9 Initiative was launched in 1993 at the EFA Summit in New Delhi, India.*
 - E-9 Initiative has become a forum for the countries to discuss their experiences related to education, exchange best practices, and monitor EFA-related progress.

Heat Wave Conditions

Why in News

- According to the National Weather Forecasting Centre of the India Meteorological Department (IMD), Heat wave conditions very likely in isolated pockets over Rajasthan, Vidarbha and interior Tamil Nadu.

What is Heat Wave?

- Qualitatively, heat wave is a condition of air temperature which becomes fatal to human body when exposed.
- Quantitatively, it is defined based on the temperature thresholds over a region in terms of actual temperature or its departure from normal.
- In certain countries it is defined in term of the heat index based on temperature and humidity or based on extreme percentile of the temperatures.
- *Heat wave is considered if maximum temperature of a station reaches at least 40 Degree C or more for Plains and at least 30 Degree C or more for Hilly regions.*

Favorable conditions for Heat wave

- Transportation / Prevalence of hot dry air over a region (There should be a region of warm dry air and appropriate flow pattern for transporting hot air over the region).
- Absence of moisture in the upper atmosphere (As the presence of moisture restricts the temperature rise).
- The sky should be practically cloudless (To allow maximum insulation over the region).
- Large amplitude anti-cyclonic flow over the area.
- Heat waves generally develop over Northwest India and spread gradually eastwards & southwards but not westwards (since the prevailing winds during the season are westerly to northwesterly).
 - But on some occasions, heat wave may also develop over any region in situ under the favorable conditions.

Spatial and Physical Distribution of Heat Wave

- In India, it is occurring mainly during March to June and in some rare cases even in July.
 - The peak month of the heat wave over India is May.
- Heat wave generally occurs over plains of northwest India, Central, East & north Peninsular India during March to June.
 - It covers Punjab, Haryana, Delhi, Uttar Pradesh, Bihar, Jharkhand, West Bengal, Odisha, Madhya Pradesh, Rajasthan, Gujarat, parts of Maharashtra & Karnataka, Andhra Pradesh and Telengana.
 - Sometimes it occurs over Tamilnadu & Kerala also.

Monitoring and Reporting

- IMD declares heat wave over the region as per its definition. IMD issues temperature forecast & warning in following range:
 - a. Short to medium range (lead time/validity of 1 to 5 days).
 - b. Extended range (lead time/validity upto 4 weeks).
 - c. Seasonal range (lead time/validity upto 3 months).

- IMD predicts heat wave based on synoptic analysis of various meteorological parameters and from the consensus guidance from various regional & global numerical prediction models like, WRF, GFS, GEFS, NCUM, UMEPS, UM Regional etc. run in Ministry of Earth Sciences (MoES) and other international models available under bilateral multi-institutional arrangement.

IMD Heat warning

Colour Code	Alert	Warning	Impact	Suggested Actions
Green (No action)	Normal Day	Maximum temperatures are near normal	Comfortable temperature. No cautionary action required.	Nil
Yellow Alert (Be updated)	Heat Alert	Heat wave conditions at isolated pockets persists on 2 days	Moderate temperature. Heat is tolerable for general public but moderate health concern for vulnerable people e.g. infants, elderly, people with chronic diseases	(a) Avoid heat exposure. (b) Wear lightweight, light-coloured, loose, cotton clothes. (c) Cover your head: Use a cloth, hat or umbrella
Orange Alert (Be prepared)	Severe Heat Alert for the day	(i) Severe heat wave conditions persists for 2 days (ii) Through not severe, but heat wave persists for 4 days or more	High temperature. Increased likelihood of heat illness symptoms in people who are either exposed to sun for a prolonged period or doing heavy work. High health concern for vulnerable people e.g. infants, elderly, people with chronic diseases.	(b) Avoid heat exposure— keep cool. Avoid dehydration. (b) Drink sufficient water- even if not thirsty. (c) Use ORS, homemade drinks like lassi, torani (rice water), lemon water, buttermilk, etc. to keep yourself hydrated

Wolf-Rayet stars

Why in News

- Indian astronomers have tracked a rare supernova explosion and traced it to one of the hottest kind of stars called Wolf-Rayet stars or WR stars.

Background

- A team of astronomers from Aryabhata Research Institute of Observational Sciences (ARIES), Nainital an autonomous institute under the Department of Science & Technology, Govt. of India with international collaborators have conducted the optical monitoring of one such stripped-envelope supernova called SN 2015dj hosted in the galaxy NGC 7371 which was spotted in 2015.
- They calculated the mass of the star that collapsed to form the supernovae as well as the geometry of its ejection.
- This work has been recently published in 'The Astrophysical Journal'.

About WR Stars

- The rare Wolf-Rayet stars are highly luminous objects a thousand times that of the Sun and have intrigued astronomers for long.
- They are massive stars and strip their outer hydrogen envelope which is associated with the fusion of Helium and other elements in the massive core.
 - Wolf-Rayet stars were named on the basis of the strong broad emission lines in their spectra, identified with helium, nitrogen, carbon, silicon, and oxygen, but with hydrogen lines usually weak or absent.
- Tracking of certain types of massive luminous supernovae explosion can help probe these stars that remain an enigma for scientists.
- They were previously called W-type stars referring to their spectral classification.
- All Wolf-Rayet stars are highly luminous objects due to their high temperatures—thousands of times the bolometric luminosity of the Sun.

Observations

- The scientists also found that the original star was a combination of two stars – one of them is a massive WR star and another is a star much less in mass than the Sun.
- *Supernovae (SNe) are highly energetic explosions in the Universe releasing an enormous amount of energy.*
- Long-term monitoring of these transients opens the door to understand the nature of the exploding star as well as the explosion properties.
- It can also help enumerate the number of massive stars.

Insolvency and Bankruptcy Code (Amendment) Ordinance, 2021

Why in News

- The President promulgated the Insolvency and Bankruptcy Code (Amendment) Ordinance, 2021 on 4th April 2021.
 - The Cabinet had approved on 31st March 2021 the proposal to make amendments in the Insolvency and Bankruptcy Code, 2016 (Code), through the Insolvency and Bankruptcy Code (Amendment) Ordinance, 2021.

Implications

- The amendments aims to provide an efficient alternative insolvency resolution framework for corporate persons classified as micro, small and medium enterprises (MSMEs) under the Code, for ensuring quicker, cost-effective and value maximising outcomes for all the stakeholders, in a manner which is least disruptive to the continuity of MSMEs businesses and which preserves jobs.
- The initiative is based on a trust model and the amendments honour the honest MSME owners by trying to ensure that the resolution happens and the company remains with them.
- It is expected that the incorporation of *Pre-Packaged insolvency resolution process for MSMEs* in the Code will alleviate the distress faced by MSMEs due to the impact of the pandemic & the unique nature of their business, duly recognizing their importance in the economy.
- It provides an efficient alternative insolvency resolution framework for corporate persons classified as MSMEs for timely, efficient & cost-effective resolution of distress thereby ensuring positive signal to debt market, employment preservation, ease of doing business and preservation of enterprise capital.
- Other expected impact and benefits of the amendment in Code are
 - Lesser burden on Adjudicating Authority.
 - Assured continuity of business operations for corporate debtor (CD).
 - Less process costs & maximum assets realization for financial creditors (FC).
 - Assurance of continued business relation with CD.
 - Rights protection for operational Creditors (OC).

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Copyright (Amendment) Rules, 2021

Why in News

- The Government of India has notified Copyright (Amendment) Rules, 2021 vide Gazette notification under reference G.S.R. 225(E) dated 30th March, 2021.
- In India, the copyright regime is governed by the Copyright Act, 1957 and the Copyright Rules, 2013.
- The Copyright Rules, 2013 were last amended in the year 2016.

Implications

- The amendments have been introduced with the objective of bringing the existing rules in parity with other relevant legislations.
- It aims to ensure smooth and flawless compliance in the light of the technological advancement in digital era by adopting electronic means as primary mode of communication and working in the Copyright Office.
- A new provision regarding publication of a copyrights journal has been incorporated, thereby eliminating the requirement of publication in the Official Gazette.
 - The said journal would be available at the website of the Copyright Office.
- In order to encourage accountability and transparency, new provisions have been introduced, to deal with the undistributed royalty amounts and use of electronic and traceable payment methods while collection and distribution of royalties.
- To reinforce transparency in working of copyright societies a new rule has been introduced, whereby the copyright societies will be required to draw up and make public an Annual Transparency Report for each financial year.
- The amendments have harmonised the Copyright Rules with the provisions of Finance Act, 2017 whereby the **Copyright Board has been merged with Appellate Board.**
- The compliance requirements for registration of software works have been largely reduced, as now the **applicant has the liberty to file the first 10 and last 10 pages of source code**, or the entire source code if less than 20 pages, with no blocked out or redacted portions.
- **The time limit for the Central Government to respond to an application made before it for registration as a copyright society is extended to one hundred and eighty days**, so that the application can be more comprehensively examined.

Nano Sniffer

Why in News

- Union Education Minister, Shri Ramesh Pokhriyal 'Nishank' has recently launched NanoSniffer, the world's first Microsensor based Explosive Trace Detector (ETD) developed by NanoSniff Technologies, an IIT Bombay incubated startup.
- NanoSniff Technologies has partnered with Vehant Technologies, a pioneer in Artificial Intelligence/Machine Learning- based Physical Security, Surveillance and Traffic Monitoring & Junction Enforcement Solutions.

About NanoSniffer

- NanoSniffer is a 100% Made in India product in terms of research, development & manufacturing.
 - The core technology of NanoSniffer is protected by patents in the U.S. & Europe.
 - This affordable device will reduce our dependency on imported explosive trace detector devices.
 - It will also encourage other institutions, startups and medium-scale industries to research & develop products indigenously.
 - It's a perfect example of lab to market product.

How does it Work

- NanoSniffer provides trace detection of nano-gram quantity of explosives & delivers result in seconds.
 - It can accurately detect a wide range of military, commercial and homemade explosives threats. Further analysis of the algorithms also helps in categorization of explosives into the appropriate class. With local manufacturing, including its MEMS sensor, it will save a lot of import cost for the country.
- This home-grown Explosive trace detector device (ETD) - NanoSniffer can detect explosives in less than 10 seconds and it also identifies and categorizes explosives into different classes.
 - It detects all classes of military, conventional and homemade explosives.

- NanoSniffer gives visible & audible alerts with sunlight-readable color display.

Development Committee Meeting of World Bank-IMF

Why in News

- Union Minister for Finance & Corporate Affairs Smt. Nirmala Sitharaman participated in the 103rd Meeting of the Development Committee Plenary via video conferencing.

Agenda of the Meeting

- The items on the agenda included :
 - World Bank Group (WBG) and International Monetary Fund Support for Debt Relief Under the Common Framework and Beyond; COVID-19 pandemic.
 - World Bank Group Support for Fair and Affordable Access to Vaccines by Developing Countries.
 - COVID-19 Crisis Response to Resilient Recovery – Saving Lives and Livelihoods while Supporting Green, Resilient and Inclusive Development (GRID).

Conclusion

- Finance Minister noted that the WBG has stepped up its financing in the wake of COVID-19 pandemic with total financing approvals exceeding \$100 billion for the first time.

Himalayas-large earthquake events

Why in News

- Scientists have found that the Himalayas are not uniform and assume different physical and mechanical properties in different directions – a property present in crystals called anisotropy which could result in significantly large earthquake events in the Himalayas.

Background

- The NW region of India, an area covering Garhwal and Himachal Pradesh, has been hit by four destructive moderate to great earthquakes since the beginning of the 20th century -- the Kangra earthquake of 1905, the Kinnaur earthquake of 1975, the Uttarkashi earthquake of 1991, and the Chamoli earthquake of 1999.
- These seismic activities manifest large-scale subsurface deformation and weak zones, underlining the need for deeper insights into the ongoing deformation beneath these tectonically unstable zones.

Data

- Researchers from Wadia Institute of Himalayan Geology (WIHG), Dehradun, an autonomous institute under the Department of Science and Technology, Government of India, & Indian Institute of Technology Kharagpur (IIT KGP), used the data from WIHG to show that The North-West Himalayan region exhibits a peculiar characteristic present in crystals.

Observations

- The joint study using seismic waves from 167 earthquakes recorded by 20 broadband seismic stations deployed in the Western Himalaya suggested that the major contribution of the anisotropy is mainly because the strain induced by the Indo-Eurasia collision (going on since 50 million years) and deformation due to the collision is found to be larger in the crust than in the upper mantle.
 - It has been recently published in 2020 in the Journal 'Lithosphere (GSA)'.
- The inhomogeneity along the Himalayas influences the stressing rate is because of variation in the geometry of the Main Himalayan Thrust (MHT) system, and it controls the rupture size during the earthquake.
 - This lack of homogenous physical and mechanical properties of the Himalayas could help explore new perspectives about deformations taking place at the Himalaya-Tibet crustal belt involved in the formation of the Himalayan Mountains.

DGFT Trade Facilitation App

Why in News

- Commerce & Industry Minister Shri Piyush Goyal has recently launched DGFT 'Trade Facilitation' Mobile App during the online video conference, for promoting ease of doing business and providing quick access to information to importers/exporters.
- The App is READY for Industry 4.0.

Features

- The new Mobile App of DGFT provides the following features for ease of the exporters and importers –
 - Real-time Trade Policy Updates and Event Notifications.
 - Your Trade Dashboard Anytime Anywhere.
 - Access all services offered by DGFT in App.
 - Explore Item-wise Export-Import Policy and Statistics.
 - 24x7 Virtual Assistance for Trade Related Queries.
 - Track your IEC Portfolio – IEC, Applications, Authorizations.
 - Real-time Alerts on status of applications.
 - Raise and track help requests in real-time.
 - Share Trade Notices, Public Notices easily.

How will it help Industries?

- Real-time trade policy updates, notifications ,application status alert, tracking help requests
 - Explore item-wise Export-Import policy & statistics, Track IEC Portfolio.
 - AI-based, 24*7 assistance for trade queries.
 - DGFT services made accessible to all.
 - Your Trade Dashboard accessible anytime &anywhere.

Indian Standards are now available Free of Cost

Why in News

- Director General, Bureau of Indian Standards, Shri P.K.Tiwari, in his address to media said that the services of BIS standards are now available free of cost for everyone.
- In the area of Standardization, this is planned to be achieved through a combination of processes engineering, automation and manpower augmentation.
- Some of the initiatives are like
 - Quarterly meeting of Sectional Committees.
 - Stage-wise timeframe for every Standard under development or revision.
 - Action Research to be an integral part the process.
 - Broad-banding of consultation process through Standardization Cells in Ministries and Industry Associations.
 - Better provisioning of Human Resources to ensure that one Scientific Officer does not deal with more than 30 standards in a year and Initiation of revision of standards parallel to formulation or revision of corresponding ISO/IEC standards for prompt harmonization.

Objective

- The objective is to ensure genius standard for every product relevant for the national economy and consumers.
- For the benefit of industry, particularly the MSME sector, Indian Standards are now available free of cost, and can be downloaded from the Standardization Portal of e-BIS.

Steps already taken

- Several steps have been taken to ease the compliance burden on the stakeholders like
 - Automation of entire process of certification, including grant of license, renewal of license, and inclusion is automated through Manak Online Portal of e-BIS,
 - Strict timelines for the disposal of applications and real-time basis monitoring of compliance,
 - Introduction of the system of automatic renewal of licenses.

- Substantial reduction in the Minimum Marking fee i.e 50% for Micro industry and start-ups and women entrepreneurs and old licence holders will also get additional 10% rebate.
- More than 80 percent products being brought under Simplified Procedure.
- This means license for the manufacturing of these products will be granted within a period of one month, System of consultation with applicants introduced at the stage of Scrutiny of Application to avoid delay in processing.

Factory and Market Surveillance

- Factory and Market Surveillance are critical to creating Quality Consciousness in the country and following initiatives have been taken to strengthen the surveillance system:
- Engagement of five NABCB accredited agencies for carrying out Factory Surveillance.
- Engagement of two outside agencies to carry out Market Surveillance.
- Development of Mobile App based surveillance system for greater speed and transparency.
- Integration of ICEGATE of Customs with Foreign Manufacturers Certification Module of e-BIS for surveillance of imported goods.
- Module for regular feeding of production and consignee details introduced in Manak Online.

LIMS (Laboratory Information Management System)

- To make the laboratory operations more efficient, following steps have been taken like Development of LIMS (Laboratory Information Management System) to automate the entire process of testing of product samples in BIS and recognized private labs.
- LIMS ensure tracking of the progress of each and every sample on real-time basis.
- Integration of LIMS with Manak Online and CRS portals, Automation of Laboratory Recognition Scheme, Integration of the accreditation and recognition processes of NABL and BIS, Renovation of BIS lab infrastructure, Plan of action for expansion and upgradation of testing facilities based on a scientific gap analysis.

The Hydrogen Economy – New Delhi Dialogue 2021

Why in News

- The Energy Forum (TEF) and the Federation of Indian Petroleum Industry (FIPI), under the aegis of Ministry of Petroleum and Natural Gas, Government of India, are organising a Hydrogen Roundtable titled “Hydrogen Economy- the Indian Dialogue-2021” in a virtual mode on 15th April, 2021 to discuss emerging hydrogen ecosystems and exploring opportunities for collaboration, cooperation and coalition.

Background

- As the world chases its international climate commitments and takes steps to counter climate change, Hydrogen is gaining increasing importance as a source to bridge energy gaps and also as a standalone source to conventional fuels.

About New Delhi Dialogue 2021

- The Hydrogen Roundtable, the first of its kind, will comprise a High-level Ministerial Session, followed by five Panel Discussions by eminent policy makers, experts and industry leaders from different geographical regions of the world, with focus on policy roadmaps and mapping demand and supply of Hydrogen.
- This high-level roundtable conference is led by Shri Dharmendra Pradhan, Minister for Petroleum and Natural Gas & Steel, Government of India who has delivered inaugural keynote.
 - It was followed by keynotes from H.E. Dr. Sultan bin Ahmad Sultan Al Jaber, Minister of Industry and Advanced Technology, UAE, H.E. Mr. Angus Taylor, Minister for Energy and Emissions Reduction, Australia, H.E. Mr. Dan Jørgensen, Minister for Climate, Energy and Utilities, Denmark, and H.E. Mr. David M. Turk, Deputy Secretary of Energy, United States.
 - A separate session is devoted to India's Hydrogen Mission, which has featured a keynote speech from Dr. Indu Shekhar Chaturvedi, Secretary, Ministry of New and Renewable Energy.
 - The Concluding Session was chaired by Mr. Tarun Kapoor, Secretary, Ministry of Petroleum and Natural Gas.
- The Hydrogen Roundtable did have 25 panelists from 15 countries, discussing the potential of Hydrogen from multiple sources and its relevance in national energy transitions.

Objective

- The objective of the Roundtable is to understand the progress of Hydrogen ecosystem across continents and contribute to creating synchrony among the thinktanks, Governments and the industry to join forces for developing innovative and sustainable technologies at attractive costs.

NIXI-IP-Index

Why in News

- Sh. Ajay Prakash Sawhney, IAS, Secretary Ministry of Electronics & Information Technology (MeitY) & Chairman NIXI recently inaugurated three path breaking initiatives for National Internet Exchange of India (NIXI).
- With this launch, NIXI has announced to play a supporting role for the IPv6 awareness and adoption in the country along with DOT & MeitY.

About the Initiatives

The details of the three new initiatives are as below:

a. IPv6 Expert Panel (IP Guru) (<https://nixi.in>):

- IP Guru is a group to extend support to all the Indian entities who are finding it technically challenging to migrate and adopt IPv6.
- In addition to this the IPv6 expert group will help in identifying & hiring agency that will help end customer by providing necessary technical support to adopt IPv6.
- This panel will guide all such Indian entities and help in increasing the IPv6 adoption. It's a joint effort of DOT, MeitY & community to promote IPv6.
- The expert panel group comprises members from government and private organizations.

b. NIXI Academy (<https://training.nixi.in>):

- NIXI Academy is created to educate technical/non-technical people in India to learn and relearn technologies like IPv6 which are normally not taught in Educational Institutes.
- The easy-to-use platform helps network operators and educators understand networking best practices, principles and techniques; manage Internet resources better; and use appropriate Internet technologies more effectively.
- NIXI academy comprises an IPv6 training portal which is developed with the help of various technical experts in order to provide mass training to the community.
- Through this academy our Internet community will be able to learn from various technical modules. Successful candidates (after passing examination) can take a certificate from NIXI, which will be useful to find/upgrade jobs in the Industry.

c. NIXI-IP-INDEX (<https://ipv6.nixi.in>):

- NIXI has developed an IPv6 index portal for the Internet community. NIXI-IP-INDEX portal will showcase the IPv6 adoption rate in India and across the world.
- It can be used to compare IPv6 Indian adoption rate with other economies in the world.
- NIXI will populate this portal with web adoption in IPv6, IPv6 traffic etc. in coming days.
- This portal will motivate organisations to adopt IPv6, provide inputs for planning by technical organisations and research by academicians.

About NIXI

- National Internet Exchange of India (NIXI) is a not-for-profit organization (section 8 of the Companies Act 2013) working since 2003 for spreading the internet infrastructure to the citizens of India through the following activities:
 - Internet Exchanges through which the internet data is exchanged amongst ISP's, Data Centers and CDNs.
 - .IN Registry, managing and operation of .IN country code domain and .भारत IDN domain for India.
 - IRINN, managing and operating Internet protocol (IPv4/IPv6).

National Climate Vulnerability Assessment

Why in News

- The report titled 'Climate Vulnerability Assessment for Adaptation Planning in India Using a Common Framework', which identifies the most vulnerable states and districts in India with respect to current climate risk and key drivers of vulnerability, was released by DST Secretary Professor Ashutosh Sharma.

Background

- In a developing country such as India, vulnerability assessment is considered as an important exercise to develop suitable adaptation projects and programmes.
 - While climate vulnerability assessments for various states and districts already exist, the states and districts cannot be compared to each other as the framework used for assessments are different, thereby limiting decision-making capabilities at the policy and administrative levels.
 - This necessitated an assessment using a Common Vulnerability Framework.
- Keeping this requirement in mind, DST and SDC supported the development of a Common Framework for Vulnerability Assessment for the Himalayan region based on the definition provided in the latest 5th Assessment report of the Intergovernmental Panel on Climate Change (IPCC) [AR5].
- The Common Framework, along with a manual to apply the framework, was developed by IIT Mandi, IIT Guwahati, and Indian Institute of Science (IISc), Bangalore.
 - The framework was applied to the Indian Himalayan Region, involving all 12 States (including pre-divided J&K) through capacity building process.

Key findings of the vulnerability assessment:

- Based on an all-India assessment, this report identifies the most vulnerable states and districts in India with respect to current climate risk and the main drivers of vulnerability.
- The states with a relatively high vulnerability, Jharkhand, Mizoram, Odisha, Chhattisgarh, Assam, Bihar, Arunachal Pradesh, and West Bengal, are mostly in the eastern part of the country, requiring prioritisation of adaptation interventions.
- Assam, Bihar, and Jharkhand have over 60% of districts in the category of highly vulnerable districts.

How can it be used?

- The outcome of the exercise undertaken was shared with the Himalayan States, have led to several positive developments in terms of some of these already prioritizing and implementing climate change adaptation actions based on these vulnerability assessments.
- Based on the positive feedback received from the states and its usefulness to the Himalayan states for implementing climate change adaptation actions, it was decided to roll out the climate vulnerability assessment exercise for the entire country through capacity building of the States.
- The task was assigned to the same team, which coordinated to carry out a series of training workshops for the state governments in India towards capacity building for vulnerability assessment.
- DST has been implementing 2 national missions on climate change as part of the National Action Plan on Climate Change.
 - These are National Mission for Sustaining the Himalayan Ecosystem (NMSHE) and National Mission on Strategic Knowledge for Climate Change (NMSKCC).
 - As part of these missions, DST has been supporting the State Climate Change Cells in 25 States and Union Territories.
 - Besides other tasks assigned to these State CC Cells, carrying out assessment of vulnerability due to climate change at district and sub-district levels has been their primary responsibility, and the national level vulnerability assessment an extension of the same.

Way Forward

- We have seen how extreme events are on rise both in terms of their number and severity.
- Mapping the parts of India that are vulnerable to such changes will help initiating climate actions at the ground level.
- The report should be made easily accessible to all stakeholders so that it can benefit climate-vulnerable communities across India through development of better-designed climate change adaptation projects.

Glacial Lake Outburst Floods (GLOF)

Why in News

- Satellite-based real-time monitoring of Himalayan glacial catchments would improve understanding of flood risk in the region and help inform an early flood warning system that could help curb disaster and save human lives, says a recent study.

- This should be the future strategy to reduce loss of human lives during glacial lake outburst floods (GLOF), said a study carried out by scientists from IIT Kanpur.

About GLOF

- GLOFs occur when either a natural dam containing a glacial lake bursts or when the lake's level suddenly increases and overflows its banks, leading to catastrophic downstream destruction.
 - For example, in 2013, an avalanche caused the glacial moraine holding back Chorabari Lake in northern India to give way, releasing a sudden torrent of water, boulders, and debris that scoured the river valley below, resulting in the deaths of more than 5,000 people.
 - With climate change, these events are likely to increase in frequency and magnitude throughout the Himalayas.
 - However, the remote, challenging Himalayan terrain and the overall lack of cellular connectivity throughout the region have made the development of early flood warning systems virtually impossible.

Recent Development

- In their recent work, the Scientists also point out that the surge of meltwater in mountain streams is most commonly caused by cloud-burst events during the monsoon season (June-July-August) time frame.
 - However, the recent (7 February 2021) sudden surge of meltwater in the river tributary of the Ganga, Dhauliganga, during the dry season suggests that this time frame needs to be expanded.
- The catastrophe in the upper Dhauliganga basin is linked to processes other than precipitation events, such as snow avalanches, rock landslides, or other unidentified drivers, and therefore determining all of the potential major and minor drivers behind sudden surges of meltwater into headwater streams is vital for understanding the hazard profile of the region.
- The IIT Kanpur team suggests that efforts to help mitigate GLOF events in the future should include the creation of a network of satellite-based monitoring stations that could provide in situ and real-time data on GLOF risk.

Earth's "Third Pole"

- Temperature and the numbers of extreme rainfall events are rising at an increased rate because of climate change.
- Suitably called Earth's "Third Pole", the Himalayan region is home to the largest ice mass outside of the planet's Polar Regions.
- The glaciers in the Himalayas are melting at a faster rate creating new lakes and expanding the existing ones.
- Besides, the rising temperatures and extreme precipitation events make the region increasingly prone to a variety of natural hazards, including devastating glacial lake outburst floods (GLOFs).






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FOREIGN RELATIONS

Sl. No.	Countries	Issue
1	United States	<ol style="list-style-type: none"> India-U.S.economic cooperation on the basis of shared objectives and resolve pending legacy issues through mutual dialogue and discussion. Strengthen the India- U.S. Trade Policy Forum (TPF). Convene the next Ministerial-level meeting of the forum in 2021.
2	Republic of Korea	<ol style="list-style-type: none"> India's First Indo-Korean Friendship Park was jointly inaugurated by Mr Suh Wook, Hon'ble Minister of National Defence, Republic of Korea and Shri Rajnath Singh, Hon'ble Raksha Mantri, at Delhi Cantonment on 26 Mar 2021. The park's significance is not only because of it being a symbol of strong India-South Korea friendly relations, but also as a monument to India's contributions as part of 21 countries which participated in <u>Korean war 1950-53, under the aegis of the United Nations.</u> One pillar also encompasses Nobel Laureate Gurudev Rabindranath Tagore's narration of Korea as "<i>The Lamp of the East</i>" which was published in Korean daily "<i>Dong-A-Ilbo</i>" in 1929.
3	France	<p>EXERCISE VARUNA - 2021</p> <ol style="list-style-type: none"> The 19th edition of the Indian and French Navy bilateral exercise 'VARUNA-2021' is scheduled to be conducted in the Arabian Sea from 25th to 27th April 2021.
4	La Perouse	<ol style="list-style-type: none"> The Indian Navy ships and aircraft will exercise at sea with ships and aircraft of French Navy (FN), Royal Australian Navy (RAN), Japan Maritime Self Defence Force (JMSDF) and United States Navy (USN) during the three day exercise at sea. The exercise La Pérouse is led by French Navy.
5	SHANTIR OGROSHENA 2021	<ol style="list-style-type: none"> Multinational Military Exercise SHANTIR OGROSHENA 2021 (Front Runner of Peace) commenced on 04 April 2021 at Bangabandhu Senanibas, Bangladesh to commemorate the birth centenary of Bangladesh's 'Father of the Nation' Bangabandhu Sheikh Mujibur Rahman and mark glorious 50 years of liberation.
6	India-Seychelles High Level Virtual Event	<ol style="list-style-type: none"> The high level virtual event will feature the following: <ul style="list-style-type: none"> Joint e-inauguration of the new Magistrates' Court Building in Seychelles. Handing over of a Fast Patrol Vessel to Seychelles Coast Guard. Handing over of a 1 MW Solar Power Plant. Inauguration of 10 High Impact Community Development Projects (HICDPs). The new Magistrates' Court Building in the capital city Victoria, is India's first major civil infrastructure project in Seychelles built with grant assistance. Seychelles occupies a central place in the Prime Minister's vision of 'SAGAR' - 'Security and Growth for All in the Region'. The 1 MW ground-mounted Solar power plant at the Romainville Island of Seychelles has been completed as part of the 'Solar PV Democratization Project' being implemented in Seychelles by the Government of India under grant assistance. The 50-m Fast Patrol Vessel, which is a modern and fully equipped naval ship, has been made in India by M/s GRSE, Kolkata, and is being gifted to Seychelles under Indian grant assistance to strengthen its maritime surveillance capabilities.

Serial No	Countries	Issue
7	Netherlands	<ol style="list-style-type: none"> 1. Prime Minister Shri Narendra Modi and H.E Mr. Mark Rutte, Prime Minister of the Netherlands held a Virtual Summit recently. 2. It was the first high level Summit attended by PM Rutte after the general elections held in March 2021. 3. The two Prime Ministers also agreed on instituting a 'Strategic Partnership on Water' to further deepen the Indo-Dutch cooperation in the water related sector, and upgrading the Joint Working Group on water to Ministerial-level.
	Germany	<ol style="list-style-type: none"> 1. The Ministry of Housing and Urban Affairs (MoHUA), Government of India and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH India on behalf of the German Federal Ministry of Environment, Nature Conservation and Nuclear Safety signed an agreement on Technical Cooperation titled 'Cities Combating Plastic Entering the Marine Environment' at a virtual ceremony in New Delhi. 2. The project, aimed at enhancing practices to prevent plastic entering the marine environment, will be undertaken at the national level (at MoHUA), select states (Uttar Pradesh, Kerala and Andaman & Nicobar Islands) and in the cities of Kanpur, Kochi and Port Blair for a period of three and a half years.

SHORT NOTES

1. Amrut Mahotsav

- It is a series of events, is being organized by the Government of India to commemorate the 75th Anniversary of Independence.
- The Mahotsav has been launched by the Hon'ble Prime Minister on 12th March, 2021.

2. Background of Salt Satyagraha

- In the pre-independence era, Indians were forced to buy imported salt at a very high cost and were barred from producing or selling salt locally.
- **Dandi March by Mahatma Gandhi** marks a very important Chapter in India's Independence struggle. Recently India is the 3rd largest Salt Producing Country in the world and exports salt worldwide.
- The Salt production has reached 30 million Tonnes (from less than 2 million Tonnes in pre-independence era), meeting all human and industrial requirements and then exporting surplus to the tune of 5 million Tonnes to foreign countries worldwide.
- Salt, as a vehicle of nutrient supplementation (Iodine and Iron), has proven to be effective as we have enabled almost entire Population to have access to the Iodised Salt which has been effective in combating Iodine Deficiency Disorders.

3. A Memorandum of Understanding (MoU) was recently signed by representatives of **State Pollution Control Boards, Urban Local Bodies and Institutes of Repute for 132 identified cities** for implementation of city specific action plans under **National Clean Air Programme (NCAP)**.

- The National Clean Air Programme (NCAP) is a long-term, time-bound, national level strategy to tackle air pollution problem across the country in a comprehensive manner with targets to achieve **20% to 30% reduction in Particulate Matter concentrations by 2024 (with 2017 as base year)**.
- *This MoU will facilitate smooth and binding execution of planned actions in time targeted manner.*

- A National Knowledge Network comprising leading air quality specialists has also been constituted as a technical advisory group to support activities under NCAP and guide local Institutes of Repute (IoRs) in conducting air quality researches.
- 4. MSP for MFP scheme**
- The objective of the MSP for MFP scheme is to establish a framework for ensuring fair prices for the tribal gatherers, primary processing, storage, transportation etc. while ensuring sustainability of the resource base addressing the problems tribals are facing such as perishable nature of the produce, lack of holding capacity, lack of marketing infrastructure, exploitation by middle men, and timely government intervention.
 - Mechanism for Marketing of Minor Forest Produce (MFP) Through Minimum Support Price (MSP) & Development of Value Chain for MFP' that provides MSP to gatherers of forest produce and introduces value addition and marketing through tribal groups and clusters and Van Dhan Vikas Kendras has found widespread acceptance across the country.
- 5. Integrated Health Information Platform (IHIP)**
- Union Minister of Health & Family Welfare, Dr Harsh Vardhan has recently virtually launched the Integrated Health Information Platform (IHIP).
 - It is the next generation highly refined version of the presently used Integrated Disease Surveillance Programme (IDSP).
 - The new version of IHIP will house the data entry and management for India's disease surveillance program.
 - In addition to tracking 33 diseases now as compared to the earlier 18 diseases, it shall ensure near-real-time data in digital mode, having done away with the paper-mode of working.
 - The refined IHIP with automated -data will help in a big way in real time data collection, aggregation & further analysis of data that will aid and enable evidence-based policy making.
- 6. FDI inflows in the country**
- The Measures taken by the Government on the fronts of FDI policy reforms, investment facilitation and ease of doing business have resulted in increased FDI inflows into the country as India has attracted total FDI inflow of US\$ 72.12 billion during April to January, 2021.
 - It is the highest ever for the first ten months of a financial year and 15% higher as compared to the first ten months of 2019-20 (US\$ 62.72 billion).
 - The trends show that the FDI equity inflow grew by 28% in the first ten months of F.Y. 2020-21 (US\$ 54.18 billion) compared to the year ago period (US\$ 42.34 billion).
 - In terms of top investor countries, *'Singapore' is at the apex with 30.28% of the total FDI Equity inflow followed by U.S.A (24.28%) and UAE (7.31%)* for the first ten months of the current financial year 2020-21.
 - *Japan has been leading the list of investor countries to invest in India* with 29.09% of the total FDI Equity inflows during January, 2021, *followed by Singapore (25.46%) and the U.S.A. (12.06%)*.
 - *The Computer Software & Hardware has emerged as the top sector during the first ten months* of F.Y. 2020-21 with 45.81% of the total FDI Equity inflow followed by Construction (Infrastructure) Activities (13.37%) and Services Sector (7.80%) respectively.
 - As per the trends shown *during the month of January, 2021, the consultancy services emerged as the top sector with 21.80% of the total FDI Equity inflow* followed by Computer Software & Hardware (15.96%) and Service Sector (13.64%).
- 7. Directorate General of Training (DGT), under the aegis of Ministry of Skill Development & Entrepreneurship (MSDE), recently announced results of the All India Trade Test (AITT) for CITS Academic session 2019-2020.**
- DGT offers Crafts Instructor Training programmes under Crafts Instructor Training Scheme (CITS) to ITI trainees who aspire to pursue a career in skill training.
 - At the end of year-long CITS training, an All India Trade Test (AITT) for each of the 34 trades is conducted online by DGT.
- 8. National Supercomputing Mission**
- The National Supercomputing Mission was launched to enhance the research capacities and capabilities in the country by connecting them to form a Supercomputing grid, with National Knowledge Network (NKN) as the backbone.

- The NSM is setting up a grid of supercomputing facilities in academic and research institutions across the country.
 - Part of this is being imported from abroad and part built indigenously.
- The Mission is being jointly steered by the Department of Science and Technology (DST) and the Ministry of Electronics and Information Technology (MeitY) and implemented by the Centre for Development of Advanced Computing (C-DAC), Pune, and the Indian Institute of Science (IISc), Bengaluru.
- *PARAM Shivay, the first supercomputer assembled indigenously, was installed in IIT (BHU), followed by PARAM Shakti, PARAM Brahma, PARAM Yukti, PARAM Sanganak at IIT-Kharagpur IISER, Pune, JNCASR, Bengaluru and IIT Kanpur respectively.*
- A 200 AI PF Artificial Intelligence supercomputing system has been created and installed in C-DAC, which can handle incredibly large-scale AI workloads increasing the speed of computing-related to AI several times.
- Completion in of Phase II of NSM in September 2021 will take the country's computing power to 16 Petaflops (PF).
 - MoUs have been signed with a total of 14 premier institutions of India for establishing Supercomputing Infrastructure with Assembly and Manufacturing in India. These include IITs, NITs, National Labs, and IISERs.

9. National Programme on High Efficiency Solar PV Modules

- The Cabinet has approved the Ministry of New & Renewable Energy's proposal for implementation of the Production Linked Incentive (PLI) Scheme 'National Programme on High Efficiency Solar PV (Photo Voltic) Modules' for achieving manufacturing capacity of Giga Watt (GW) scale in high efficiency solar PV modules with an outlay of Rs.4,500 crore.
- Solar capacity addition presently depends largely upon imported solar PV cells and modules as the domestic manufacturing industry has limited operational capacities of solar PV cells and modules.
 - The National Programme on High Efficiency Solar PV Modules will reduce import dependence in a strategic sector like electricity.
 - It will also support the Atmanirbhar Bharat initiative.
- Solar PV manufacturers will be selected through a transparent competitive bidding process.
 - PLI will be disbursed for 5 years post commissioning of solar PV manufacturing plants, on sales of high efficiency solar PV modules.
 - Manufacturers will be rewarded for higher efficiencies of solar PV modules and also for sourcing their material from the domestic market.
 - Thus, the PLI amount will increase with increased module efficiency and increased local value addition.

10. 90 Basic Care Ambulances for the States / Union Territories of Andaman – Nicobar Island, Arunachal Pradesh, Jammu – Kashmir, Ladakh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura and Uttarakhand were flagged off by Ministry for Road Transport & Highways and MSME.

- As per Road Accident Statistics, 415 deaths per day in India, about 40% lives can be saved if immediate and basic medical treatment received during Golden hour period.

11. *An Memorandum of Understanding (MoU) was signed between the National Medicinal Plants Board (NMPB), Ministry of AYUSH and Department of Animal Husbandry and Dairying for research on new formulations in quality drugs for veterinary science through medicinal herbs.*

- The initiative involves capacity building in related areas through training, exploring marketing possibilities for herbal veterinary medicines on a sustainable basis and providing for services including cultivation, preservation and conservation of medicinal plants.

12. Ministry of Civil Aviation (MoCA) and Directorate General of Civil Aviation (DGCA) have granted conditional exemption to Central Mine Planning and Design Institute (CMPDI) for surveying in coalfield areas of Coal India Ltd. As per the permission, the drones will be deployed for acquisition of data for monitoring of Mapping and Surveying activity using UAV Based Optical, LiDAR and Thermal Payloads, volumetric measurement, and, inspections in coalfield areas of Coal India Limited.

- 13. Union Minister of State (Independent Charge) Development of North Eastern Region (DoNER), MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Dr.Jitendra Singh flagged off India Russia Friendship Car Rally 2021.**
- The event organized by International Friendship Car Rally Association, IFCRA, will take place in Russia from 18th to 20th April.
 - This is the 5th IFCRA edition and there are 14 participants from IFCRA India representing the North East.
- 14. The first delegation level virtual Police Chiefs' Dialogue between the Police Chiefs of India and Sri Lanka was held recently in an environment of positivity and trust.**
- The Indian delegation was led by Director, Intelligence Bureau while the Sri Lankan delegation was led by Shri CD Wickramaratne, Inspector General of Police.
- 15. Clean Ganga Fund**
- The Clean Ganga Fund began as an initiative to harness the enthusiasm of people for Ganga and to bring them closer to the Ganga and inculcate a sense of ownership.
 - As on March 2021, funds of Rs 453 crore have been deposited in the Clean Ganga Fund. Out of which major projects have been/are being executed.
 - These projects include Development of GuariKund near Kedarnath by the Uttarakhand Tourism Development Board, Treatment Works of 5 drains, Reconstruction of ghats and shamans, Construction of Har Ki Pauri Complex in Haridwar and Afforestation in various areas.
 - *In 2020-2021, around 14.18 crores have been received. Out of this, Petronet LNG Limited has contributed 1.5 crores. At the same time, Power Grid Corporation has also contributed more than 1 crore. While AAI Cargo Logistics has contributed Rs 1.45 crore.*
- 16. Raksha Mantri Shri Rajnath Singh held bilateral talks with Defence Minister of Republic of Kazakhstan Lieutenant General Nurlan Yermekbayev in New Delhi on April 09, 2021.**
- The Defence Minister of Kazakhstan thanked Raksha Mantri for the opportunity given to the Kazakh troops for deployment as part of the Indian battalion in United Nations Interim Force in Lebanon (UNIFIL).
 - Both Ministers also positively assessed the annual KAZIND Exercise.
- 17. Sanjib Kumar Agarwalla, Associate Professor, Institute of Physics (IOP), Bhubaneswar, a Swarnajayanti Fellow of the Department of Science & Technology (DST), Govt. of India, will unravel the fundamental properties of massive neutrinos and explore the interesting signals of New physics in upcoming high-precision neutrino oscillation experiments.**
- 18. Union Minister of Education Shri Ramesh Pokhriyal 'Nishank' presented the AICTE Lilavati Awards 2020 on women empowerment to the winners in New Delhi.**
- 19. Shri Sushil Chandra has assumed charge as the 24th Chief Election Commissioner of India, succeeding Shri Sunil Arora.**
- The ECI family bid a warm farewell to outgoing Chief Election Commissioner, Sh. Sunil Arora on 12th April, 2021.
- 20. National Cooperative Development Corporation (NCDC) has secured Euro 68.87 million (Rs 600 cr) loan from Deutsche Bank, Germany's largest bank, for onward lending to cooperatives in the country.**
- This is for the first time that one of the largest European banks in the world is lending to the NCDC, thus reflecting the confidence of the global financial institution in the Indian development finance institution, particularly at a time when global economic turmoil created by the Covid-19 crisis has made lending a challenging proposition.
 - Set up in 1963, the NCDC is a development finance statutory institution under the Ministry of Agriculture and Farmers Welfare.
 - It has extended loans to the tune of Euro 16 Billion to cooperatives of various sizes since 2014.
 - With zero net NPA, NCDC has Pan India presence with its 18 regional directorates catering to all the States.

- 21. The Union Government has approved 2 Vaccines for Emergency Use Authorisation (EUA) by the National Regulator i.e. Drugs Controller General of India (DCGI). These are:**
- “Covishield” manufactured by Serum Institute of India (SII).
 - “Covaxin” manufactured by Bharat Biotech International Limited (BBIL).
 - M/s Dr. Reddy’s Laboratories Ltd. (M/s DRL) had applied for the grant of permission to import and market Gam-COVID-Vac combined vector vaccine, popularly called Sputnik-V, developed by M/s Gamaleya Institute, Russia for Emergency Use Authorization.
- 22. NHAI has decided to deploy Network Survey Vehicle (NSV) to enhance quality of the National Highways.**
- Carrying out road condition survey using NSV on the National Highways has been made mandatory at the time of certifying completion of the project and every six months thereafter.
 - The provision has also been included as a part of the standard bidding document of consultancy services.
 - NSV will also help collate data to analyse the Road condition including measurement of the road surface, surface cracking, potholes and patches.
- 23. Astronomers have discovered a new active galaxy identified as the farthest gamma-ray emitting galaxy that has so far been stumbled upon.**
- This active galaxy called the Narrow-Line Seyfert 1 (NLS1) galaxy, which is about 31 billion light-years away, opens up avenues to explore more such gamma-ray emitting galaxies that wait to meet us.
 - Ever since 1929, when Edwin Hubble discovered that the Universe is expanding, it has been known that most other galaxies are moving away from us.
 - Light from these galaxies is shifted to longer (and this means redder) wavelengths - in other words, it is red-shifted. Scientists have been trying to trace such red-shifted galaxies to understand the early Universe.
- 24. Indian Medicines Pharmaceutical Corporation Limited (IMPCL), the public sector manufacturing unit of the Ministry of AYUSH has recorded a turnover of Rs 164.33 Crore (tentative figure) for the financial year 2020-21.**
- This is the highest number achieved in the company’s history and an all-time high profit of approximately Rs 12 crore is reported for the year.
- 25. Scientists have developed an electronic nose with biodegradable polymer and monomer that can detect hydrogen sulphide (H₂S), a poisonous, corrosive, and flammable gas produced from swamps and sewers.**
- H₂S is the primary gas produced from the microbial breakdown of organic matter in the absence of oxygen, and this necessitates easy detection of its emission from sewers and swamps.
 - The fabricated sensor consists of a heterostructure consisting of two layers –
 - the top layer a monomer and is realized with a novel chemical tris (keto-hydrazone), which is both porous and contains H₂S specific functional groups
 - the bottom layer is the active channel layer which plays a key role in altering the current and mobility of charge carriers.
 - Thus the synergistic combination helps to pre-concentrate the H₂S molecules, initiate an acid-base chemical reaction, and thereby brings a change in the majority carriers (holes) of the channel region in the device.
- 26. Labour Bureau, Ministry of Labour, GoI has already initiated the first phase of field work of two surveys namely All India Quarterly Establishment based Employment Survey (AQEES) and All India Survey of Migrant Workers w.e.f. 1st of April, 2021.**
- Broadcast Engineering Consultants India Limited (BECIL)* is providing the IT as well as the HR support to Labour Bureau in conducting these pan India Surveys.
- 27. EatSmart Cities Challenge**
- The ‘Eat Right India’ movement initiated by FSSAI under the aegis of Ministry of Health & Family Welfare, has gone a long way in creating awareness amongst the people about eating safe, healthy and sustainably.
 - The launch event of EatSmart Cities Challenge today was organized in association with Food Safety and Standards Authority of India (FSSAI) under the aegis of Ministry of Health and Family Welfare.
 - The EatSmart Cities Challenge is envisioned as a competition among cities to recognize their efforts in adopting and scaling up various initiatives under Eat Right India.

- This unique challenge, in partnership with Smart Cities Mission will create an environment of right food practices and habits, strengthen the food safety and regulatory environment, build awareness among the consumers and urge them to make better food choices in India's major cities and can set an example for other cities to follow.

28. Transport 4 All (T4All) Challenge

- The Ministry of Housing and Urban Affairs launched the Transport 4 All challenge in collaboration with ITDP.
 - The Challenge aims to bring together cities, citizen groups, and start-ups to develop solutions that improve public transport to better serve the needs of all citizens.
 - At the core of the Challenge are citizens who will not only define the problems for which solutions shall be created but also help start-ups and cities to refine the solutions to meet their needs.
- The first edition of the Challenge focuses on digital innovation.
- Cities and start-ups will receive guidance to develop and test various solutions, learn from them, and scale them to build people's trust in public transport and enhance their mobility.

29. In its ongoing effort to strengthen the Hospitality & Tourism Industry especially in the times of the pandemic, the Ministry of Tourism signed a Memorandum of Understanding (MoU) with Cleartrip and Ease My Trip on 15th April 2021.

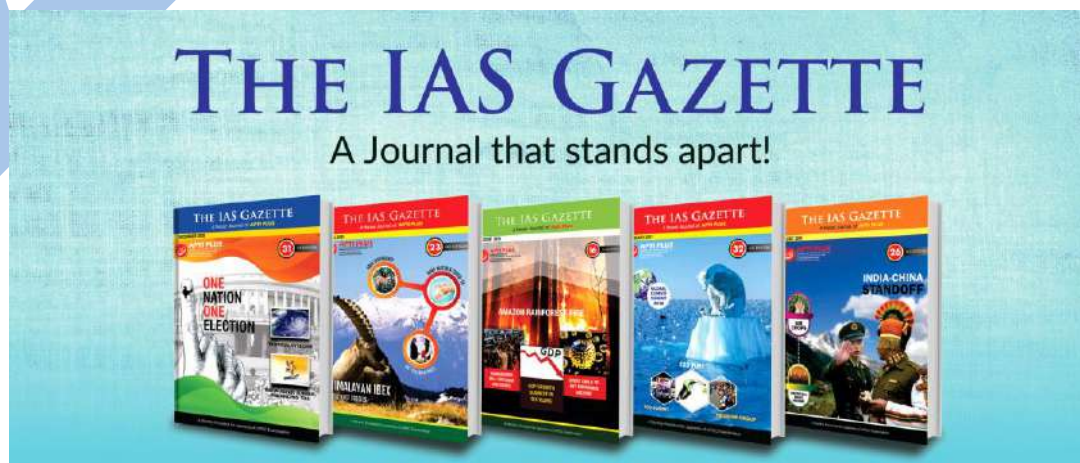
- The primary objective of this MoU is to provide extensive visibility to accommodation units which have self-certified themselves on SAATHI (System for Assessment, Awareness & Training for the Hospitality Industry) on the OTA platform.
- The MoU also outlines both parties to encourage Units to register on NIDHI and thereby on SAATHI and encourage local tourism Industry with appropriate safeguards for curbing spread of COVID-19.

30. Centre for land Warfare Studies (Claws)

- The Centre for Land Warfare Studies (CLAWS), an autonomous think tank, under the patronage of Indian Army has established a joint initiative with Manipal Academy of Higher Education (MAHE), Mangalore, formerly known as Manipal University, to conduct PhD programme for Army Officers.
- CLAWS has taken this initiative to further enhance professional military education (PME) of officers which will eventually benefit the country with better equipped military leaders with in-depth knowledge in respective domains.
- Under the initiative, CLAWS has been recognised as a sub-centre of MAHE by virtue of which five of CLAWS faculties will serve as co-supervisors. CLAWS will also initiate the selection process and conduct mandatory research methodology classes, as per guidelines given by the UGC and MAHE, Mangalore.

31. Khajuraho Temples were built between 950-1050 AD by the Chandela Dynasty. The temples are categorised into three groups that is Eastern, Western and Southern.

- These temples display intricate & exceptional carvings and astounding architectural skill which makes Khajuraho one of the most popular tourist destination among domestic as well as international visitors.
- To name few temples are Kandariya Mahadev Temple, Chaunsat Yogini Temple, Brahma Temple, Chitragupta Temple, Devi Jagdamba Temple, Lakshmana Temple, Matangeshwar Temple, Parsvanath Temple. During the webinar, the architecture styles of the temples were also discussed.



YOJANA

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Access to Water is Access to Education and Opportunity for All

Introduction

- Schools and Anganwadi Centres play a crucial role in the lives of children and are considered important places for learning and socialisation.
 - These are places where children get to learn positive and healthy behaviours while mothers are given support on parenting and caretaking skills.
- Assurance of running water in toilets not only helps children's hygiene and also helps motivate adolescent girls and teachers not to miss schools, especially during menstruation days.

Background

- **Schools and Anganwadi centers (AWCs) especially those in vulnerable communities and regions of the country - were struggling with access to a regular water supply.**
 - According to the data submitted to the Lok Sabha back in 2019, almost 160,000 AWCs did not have access to water and there were significant gaps in hard-to-reach communities.
 - Every dollar invested in water access and sanitation yields an average of \$6.80 in return, through averted health and productivity costs.

Jal Jeevan Mission

- **Jal Jeevan Mission (JJM) was launched back in 2019 to**
 - bring piped water supply to every rural household in India by 2024 and
 - ambition to invest in sustainable water usage
 - opportunities for women and girls who will have averted time lost to travel to collect water for their homes.
- With the concerted efforts of the Government of India and State Governments, so far, more than 3.71Crore rural households have been provided with new tap water connections.
 - As a result, more than 6.95Crore (36.3%) rural households in the country are getting assured and potable tap water in their homes.

UNICEF as a Partner

- UNICEF has been working with both central and state governments to drive forward the vision of achieving universal access to safely managed drinking water and sanitation.
- UNICEF advocated with the Chief Secretaries and Principal Secretaries of departments of rural water supply, Education, Women and Child development to prioritise the implementation.
- UNICEF supported States in
 - Sharing data among the different line departments
 - Developing plans for coverage of the schools and Anganwadi centers based on the availability of water supply sources.
 - Assisting States and districts in developing standard designs of location-specific upgradations using sustainable technologies such as the solar-powered lifting of water to overhead tanks in the institutions and monitoring progress of implementation.

Present Status of Jal Jeevan Mission

- **The Government has launched a 100-Day Campaign, which mandated States/ UTs to actively priorities the provision of piped water supply in schools and AWCs in previously unserved or serving vulnerable communities.**
 - Six States reported achieving 100 percent coverage for schools, another five States reported achieving coverage above 90 percent.
 - Women were not only treated as beneficiaries but also as problem solvers, as cadres of self-help groups, teachers, and AWC workers who took up the responsibility of disseminating key information that sensitised communities on the importance of piped water supply.
 - School management committees and children themselves became champions for the cause of equitable access to water for all.

Significance of Jal Jeevan Mission

- The Jal Jeevan Mission is not just about the provision of drinking water, it is also about increasing women's participation in the workplace and economy, by giving them more time to pursue their aspirations.
- It is about helping adolescent girls practice menstrual hygiene management while still having access to education.
- It is about keeping safe hygiene and sanitation practices at the center of all the work we do to keep children safe at home and outside of them.

Conclusion

- Adding water to the lives of millions of people, especially those of women and girls, can be transformational ensuring regular schooling, less absenteeism among teachers, learning new hygiene habits, and preventing disease.
- We must therefore continue to prioritize water supply if we want to continue transforming India into a more resilient nation.

Centrality of Women in Water Management

Introduction

- In rural areas water has four primary uses :
 1. Drinking water for human.
 2. Drinking water for livestock
 3. Water for irrigation.
 4. Water for ecosystem balance and restoration (common lands, forests, etc).
- While women do play a key role in water for irrigation and livestock, we will discuss their role in the provision of potable drinking water at the household level, which is the core aim of the Jal Jeevan Mission.

Gender roles: Ownership and Management

- Gender roles in fetching and managing water may differ or change based on
 - location and distance of the source,
 - caste/social norms, and
 - severity of scarcity or immediate needs at the household level.
- In most rural communities, the collection of drinking water has been traditionally allotted to women.
 - They travel to different sources (wells, ponds, tanks, streams, rivers) to collect water, which they fetch mostly through pots.
 - Young girls miss school to fetch water, and the drudgery of water collection is known to cause many health problems.
 - Thus, the provision of water service at the household level would benefit women the most, and save them substantial time and drudgery.
- Gender roles also make women the "health care-takers of the family". Hence, when children or the elderly fall ill, they have to take up the burden of health care at home.
 - Thus, the poor quality of water which causes water-borne diseases also affects women the most.
- In some locations, when water collection has to be done in the early/late hours because of the erratic supply or nature of the source (sandy river beds), there are issues of women's safety also.
- In most communities, women not only collect water, but they are also primarily responsible for managing the drinking water at home: so any change in water timings, change in pressure/flow of water - affects women in the household the most.
- Being water carriers and water managers, women are traditional knowledge bearers of the season-wise water availability in different water sources, source-wise water quality as compared to men, as they use the sources and water every day.

Ways in which women's contribution can be sought and their voice be given weight

1. **Mandatory 50% participation of women**, especially those belonging to SCs/ STs and OBCs, in the Village Water & Sanitation Committee (VWSC).

2. Separate meetings with women during the mobilisation process:

- The 73rd/74th Amendments of the Constitution and PRL Act make women's representation mandatory and many Gram Panchayats have women Sarpanches.
- Each Panchayat has at least 1/3rd women and many states have 50% women representation in the Panchayat.
- These elected women representatives (EWRs) should be given greater powers in all water-related schemes and separate training empowering them in decision-making also.

3. Interaction with existing women's groups during the initial village visits:

- Thanks to National Rural Livelihood Mission, 12 Crore women are part of almost 1 Crore women Self-Help Groups (SHGs) all across the country.
- Many states have thousands of women's SHGs promoted by government departments or NGOs.

4. Gender sensitisation of the implementation team staff is essential and women should be part of the capacity building.

- Having women staff as part of the community mobilisation team, but not restricted to, is an added advantage.

5. Involving trained women in critical decision-making, including planning, procurement, accounting, technical sanctions, financial sanctions, monitoring, and O&M.

6. Train village women for the supervision of implementation, and later for a regular supply of water. Nominate and train women as Jal Doots/ Bhu Jaankar, if there is a cadre of water para-legal workers.

7. Make it mandatory to obtain a certificate about satisfactory completion of the schemes from women groups in the habitations in addition to the certification of panchayats which may be male-dominated.

8. Develop women entrepreneurs and SHG-led enterprises for water supply services like de-fluoridation treatment plants, water-testing kits, etc.

Case Study

- In Gujarat, there are many examples of tribal women taking a lead role in canal irrigation cooperative societies. Because of their holistic understanding of water, they ensure that there is enough water for irrigation and drinking water needs for livestock and drinking.
- Thus, women across the country need to be engaged in rural drinking water supply schemes consciously for long-term water security in villages.

Way Forward

- For an equal society, we do want men also to take up an equal role in providing drinking water, but till this gender transformation takes place.
- We need to ensure that women are empowered in all decisions related to drinking water management in a village as they have the most to gain when a system works well.
- By involving women, not only does the drinking water intervention become more effective and inclusive, but by giving voice to women in its implementation and management, the programme also empowers the women and enhances their respect in the village as community leaders /members who solve the problems common to the village, thus creating a gender impact.
- Hence, it is critical to involve women in decision-making processes at all the stages of planning, implementation, management, operation, and maintenance of rural drinking water supply schemes.



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#Detailed Model Answers & Test discussion
by Experts

Framework for River Rejuvenation

Introduction

- Narmada Ganga was launched in 2014-15 for the rejuvenation of Ganga and its tributaries with assured funding of Rs20,000crores.
- National Mission for Clean Ganga (NMCG) is the implementing agency.
 - The Government notified NMCG as an authority under Environment Protection Act, 1986 and created empowered institutions, and laid down fundamental principles with a comprehensive framework for rejuvenation of rivers in the Ganga Basin.
- It is backed by Ganga River Basin Management Plan by a consortium of 7 IITs.
- It has a holistic multi-sectoral, multi-agency and multi-level approach in four broad categories-
 - Pollution Abatement (Nirmal Ganga);
 - Improving flow and ecology (Aviral Ganga);
 - Strengthening People-River connect (Jan Ganga) and
 - Research, knowledge management (Gyan Ganga).
- Unlike previous efforts, it is not limited to cleaning or piecemeal selected city interventions but follows river centric, basin-based approach for comprehensive rejuvenation.

Components

Pollution Abatement (Nirmal Ganga)

1. Namami Gange introduced PPP for sewerage infrastructure for the first time in India, through Hybrid Annuity Mode (HAM), bringing a paradigm shift from payment for construction to Performance-Linked Payments.
 - The 'One City One Operator' approach to improve governance was introduced.
 - HAM is now accepted by NITI Aayog and states outside the Ganga basin have also started using it.
2. Projects have been taken up as per a comprehensive plan for all the 97 cities/towns along Ganga including rehabilitation, upgradation of old plants after condition assessment.
 - All projects along Ganga have been completed in Uttarakhand and Jharkhand.
3. Annual inspection of grossly polluting industries by expert institutions, online monitoring, process improvement, **Common Effluent Treatment Plant (CETP)** helped in checking industrial pollution.
4. Improving sanitation at ghats, stopping solid waste from entering the river, surface water cleaning, and improving process capacity in ULBs have helped.
 - 4500 Ganga Grams are ODF.

Improvement in Flow and Ecology (Aviral Ganga)

1. **The Notification of Ecological flow for river Ganga in October 2018** is a big step for Aviral Ganga.
 - Demarcation and protection of floodplains, protection & conservation of wetlands especially flood plain and urban wetlands, spring and small river rejuvenation projects are under implementation.
2. **Sustainable Agriculture is being promoted** through organic farming, eco-agriculture, and medicinal plantation, and improving water use efficiency.
3. **Demand-side management**, Rainwater harvesting, aquifer mapping, and recharge are in progress.
4. **Afforestation along Ganga** as per the scientific plan by FRI is a model for similar work for 13 more rivers.
5. **A comprehensive programme for fisheries and Biodiversity Conservation** include baseline survey, habitat and species improvement, and community involvement in the biodiversity hotspot of Ganga.
6. **Conservation of Ganges Dolphin, the National Aquatic Animal is a top priority.**

People River Connect (Jan Ganga)

1. **Dedicated Cadres of Ganga saviors** are working to reach out to the community and create awareness.
 - They are imparted skills, supported for improving their livelihood, by linking with the conservation of biodiversity and river.
2. **Several innovative public outreach activities** such as Ganga Quest quiz (www.gangaquest.com), rafting expeditions, Ganga run, Ganga Utsav, etc are conducted throughout the year.

Research, Policy & Knowledge Management (Gyan Ganga)

1. **Centre for Ganga Management & study was set up at IIT Kanpur** for long-term basin studies, technology development.

2. Scientific mapping of different aspects -**LIDAR mapping for high-resolution DEM & GIS-ready database**, mapping of springs, microbial diversity, fisheries, biodiversity, heli survey for aquifers help in evidence-based decisions.
3. The unique cultural mapping for natural, built and intangible heritage has potential for the development of tourism, heritage, and traditional livelihood opportunities.
4. A new paradigm for **planning for River Cities** to mainstream river health in urban planning and a national framework for reuse of treated wastewater are being formulated.
5. **Namami Gange** is now leading to the development of **Arth Ganga modelling the economic development of the Ganga Basin with ecological improvement and Ganga Rejuvenation**.

Groundwater Management: A Paradigm Shift

Introduction

- Groundwater is sometimes called an invisible resource. It is mostly free, available to those with access and the means to extract it.
 - It sustains critical ecosystems, such as lakes, wetlands, and woods.
 - It is, however, largely invisible and users have no knowledge about aquifers that yield the groundwater they use and what constitutes sustainable and equitable usage of this common-pool resource.
- India is the largest user of groundwater in the world, using more than a quarter of the available global resources.
 - Ground water has played an important role in ensuring the food security of the country.
 - It was a major driver in ensuring the success of the 'Green Revolution' through millions of energised tube wells.
 - **This finite resource currently caters to more than 60% of irrigated agriculture, 85% of rural drinking water supply, and more than 50% of urban water supply.**

Issues Arising out of Groundwater Use

- Increasing and unsustainable extraction of groundwater has resulted in significant depletion, with consequent adverse environmental impact.
 - From the large-scale loss of livelihoods to health issues related to lack of availability of safe drinking water to people migrating, the impact of water scarcity is severe.
 - This is compounded by climate change, which makes precipitation patterns erratic and therefore affects the predictability of groundwater recharge.
 - Currently, groundwater resources in nearly one-third of the country are under different levels of stress.
 - Small and marginal farmers, women, and weaker sections of the society, disproportionately bear the brunt of groundwater depletion and contamination.

Background

- According to a report published by the Central Water Commission in 2019,
 - The utilisable water available in India is 1,122 billion cubic meters (BCM) per annum, and this availability varies over time and space.
 - The total requirement of the country for different uses for a high demand scenario for the years 2025 and 2050 has been assessed as 843 BCM and 1,180 BCM respectively.
- This implies that, even if we store every drop of available water, we will still fall short in 2050, unless we manage demand.

Initiatives and Interventions

Supply-side Interventions

- Schemes implemented in the water sector in the past did help to improve groundwater conditions to some extent through improvement in availability but did not focus on reducing demand through more efficient use.
- These schemes also suffered from a top-down approach with little or no community participation.

The Community Leads the Way

- As groundwater resources in the country continued to be under increasing stress, the need for a shift in approach in the management of groundwater was felt.
- It was observed, however, that such initiatives have been few and isolated and needed to be replicated at scale with an area based approach.

Atal Jal-Scaling-up Informed Demand Management

- Government intervention through a combination of strengthening of institutions at State and district levels, community mobilisation, a convergence of ongoing schemes with a focus on more efficient use of water, and efforts to change the behavior of the community toward judicious use of available water was perceived to be the need of the hour.

The Atal Bhujal Yojana (Atal Jal)

- The goal of Atal Bhujal Yojana is to demonstrate community-led sustainable groundwater management, taken to scale.
- The major objective of the scheme is to improve the management of groundwater resources through a convergence of various ongoing schemes.
- It is a pioneering and unique experiment involving government institutions, and civil society organisations to bring about innovative reform in the management of groundwater by energising the local communities.
- Atal Bhujal Yojana is a Central Sector Scheme with an outlay of Rs6,000Crore.
- For now, the scheme is being implemented in seven States-in water-stressed areas of Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, and Uttar Pradesh.
- The scheme, partly funded by the World Bank, was launched on Good Governance Day i.e. December 25, 2019.

Disbursement of Resources against measurable indicators

- A key feature of this outcome-focused scheme is the **disbursement of incentive funds (disbursement linked indicators- DLIs)** to states based on performance against selected indicators.
 - DLI 1 : Public disclosure of groundwater data/information and reports
 - DLI 2: Preparation of Community-led Water Security Plans.
 - DLI 3- Public financing of approved Water Security Plans through a convergence of ongoing/ new schemes
 - DLI4-Adoption of practices for efficient water use.
 - DLI5- Improvement in the rate of decline of groundwater levels.

Way Forward

- Strengthened water-aware communities, reliable water data that informs decision making, and a participatory regulatory, framework are the three pillars that will support sustainable groundwater use in the country, making water available for life, for livelihoods and culture and enable us to combat the effects of climate change.

Inside India's Inland Waterways Plan

Introduction

- Waterways were the arteries of moving India, its people, and goods before the advent of the railways, and even after it, for a long time.
- Independent India created the **Inland Waterways Authority of India (IWAI)** in 1986 to help maintain and energise infrastructure around key inland waterways.
- Five such waterways were identified at that time:
 - **Ganga-Bhagirathi-Hoogly river system** between Haldia (Sagar) and Allahabad (1,620 kilometres),
 - **Brahmaputra** between Sadiya and the Bangladesh border (891 kilometres),
 - Third set made up of the west coast canal (Kottapuram to Kollam), the Udyogmandal canal, and the Champakara canal, a total of 205 kilometres,
 - **Kakinada-Puducherry stretch of canals** between Bhadrachalam-Rajahmundry stretch of River Godavari and Wazira - Vijayawada stretch of River Krishna (1,078 kilometres),
 - **Talcher- Dhamra stretch of River Brahmani**, Geonkhali • Charbatia stretch of the east coast canal, the Charbatia-Dhamra stretch of River Matai and the Mangalgadi-Paradip stretch of Mahanadi delta rivers (623 kilometres).

Significance of Waterways

- These waterways have served India well for seven decades, and in recent years, there has been renewed momentum to explore the full potential of the country's inland waterways.

- This is especially because India has an elaborate network of inland waterways in the shape of rivers, canals, backwaters, and creeks.
- Of the total length that can be navigated 20,236 kilometres, 17,980 kilometres of the river and 2,256 kilometres of canals can be used by mechanized crafts.
- For many years, freight transportation by waterways has been utilised well below its potential, especially when mapped to the use of inland waterways in other countries like the United States, China and European Union.
- To transform this situation and make the best use of the inland waterways' potential of India, **106 additional inland waterways were declared as national waterways through The National Waterways Act, 2016.**

Background

- **National Waterways Bill 2015**, noted that "due to large network of feeder State Waterways, district roads and village roads, the potential of National Highways have been exploited fully.
- However, the absence of such a network for waterways has resulted in gross under utilisation of the potential of National Waterways.
- State Governments have not been able to take adequate measures for the development and maintenance of inland waterways due to insufficient financial outlays, lack of expertise and other pressing priorities.
- Thus, only Central Government had to take the initiatives to develop this sector and as per the Constitutional provision, Central Government can undertake development and regulation of an inland waterway for navigation, only when it is declared as a National Waterway (NW) by an Act of Parliament".
- Therefore, a new law had to be introduced to subsume the older national waterways and introduce a new range of national waterways for rejuvenation and the introduction of new ideas on India's rivers - from goods and services transport to recreation.

Notes of Parliamentary Committee

- The Parliamentary Committee studying the matter before the Bill was passed also noted the vital contribution of water-based transport to safety and revenues by pointing out that
 - "the national highways are contributing to about 40% of the road accidents and trucks being the major contributor in this.
 - Water transportation being the safest mode, can reduce road accidents and result in casualties significantly.
 - It also reduces treatment and rehabilitation costs to a great extent.
 - Land acquisition for the highways/roads have been a major problem which is not only a sensitive issue, it is high time taking and costly exercise.
 - Switching to water mode, therefore, would become the most viable option to reduce the dependency on roads, particularly for the transportation of bulk and oversized cargo.
 - Waterways have lots of tourist potential especially for pilgrimage as many famous pilgrim centres are mainly located on river side".



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Initiatives Taken

- In 2020, the Ministry of Shipping declared that all usage charges from waterways would be removed, for an initial period of three years, to promote the greater commercial and tourist exploration of the inland waterways network.
 - This was done to promote the idea that inland waterways could serve as a supplementary mode of transport that is not only more economical but also environment friendly.
- **Signing of a Memorandum of Understanding (MoU) between the Inland Waterways Authority of India and the MOL Group, which is a global leader in gas carriers.**
 - MOL (Asia Oceania) Limited is investing in the construction and operation of LPG (Liquefied Petroleum Gas) barges, as part of the Government's Make in India initiative.
 - The MoU comes at a time when approximately 60% of Liquefied Petroleum Gas in the country is being transported via road, at a high cost of five to six rupees per metric tonne per kilometre.
 - The usage of waterways will reduce the logistical costs that were being faced earlier, which in India stand at a high 13% to 14% of GDP as opposed to a global average rate of 8%.
- The eco-friendly nature of inland waterways provides another important result of this MoU, namely a reduction in our carbon footprints'.

Conclusion

- Use of inland waterways has opened up a whole new innovative vision of transportation in India combining speed and safety.
- The country now has a **total of 111 inland waterways** which are marked as national waterways and the total length of the national waterways is **20,275 kilometres spread across 24 states**.

Integrated Water Management for Faster Socio-economic Development and Water Security State Concerned: Gujarat

Introduction

- India is home to 18% human population and 15% global Livestock with only 4% global freshwater resources.
- The situation in Gujarat is worse with 6.4% of India's geographical area and 5% population, along with more than 2 Crore livestock, having a meager 2% of country's freshwater availability.
 - Gujarat is considered capital of India's dairy industry.
 - Farmers of Gujarat and their families are entrepreneurial and very industrious.
 - Animal husbandry is one of the major sources of income to rural families.
 - Ensuring adequate and assured availability of clean water for cattle is pre-requisite for productivity.
- The annual rainfall in Gujarat is skewed with Central and south Gujarat receiving 80-200cm, North Gujarat & Saurashtra receiving 40-80 cm and Kachchh receiving less than 40 cm rainfall annually.
 - The uneven distribution of water in Gujarat creates a peculiar situation wherein 1/4th area has adequate water and remaining 3/4th of the State is water-scarce, especially Kachchh with 23.29% area but only 3% share in total water availability in the State.
- **As per estimates', in 2011**, per capita water availability in the State has been only 920 cubic meters per annum against country's 1,720 cubic meters.
 - About 58.6% of the total area of Gujarat is water-stressed due to arid, semi-arid and salinity conditions.
 - It is severely water-stressed State, next only to Rajasthan.

Strategy to Achieve Water Security

- In all decision-making related to water, people's participation became the non-negotiable principle.
- **Rainwater harvesting** and/or artificial recharge with scientific planning and monitoring based on watershed principles, using satellite data was adopted;
- **Completion of Sardar Sarovar Dam on Narmada river** and distribution canal network was taken up on top priority;
- **Inter-basin transfer of water** from reasonably water rich South and Central Gujarat to North Gujarat, Saurashtra and Kachchh was planned.
- **Strengthening of existing canal system**, participatory irrigation management and micro-irrigation promoted in a big way;

- **Agriculture extension activities to educate farmers** to promote the concept of 'Per Drop More Crop' and conserve water was initiated as a campaign.
- In every village, five persons, especially women, were trained to test the quality of water.
- To bring behaviour change, promote water conservation and judicious use, micro-irrigation was promoted in a big way.

Issues

- Despite all these efforts, ensuring adequate quantity of water, especially in drought years was a challenge.
 - To ensure drinking water security, a State-wide drinking water supply grid was planned.
 - Under this project, 2,900 km long bulk water transfer pipeline, 270 water treatment plants, 350 major pumping stations, 1,073 elevated storage reservoirs and 1,883 groundwater storage structures have been constructed.
 - This grid is providing potable drinking water to 207 ULBs including 5 municipal corporations and 106 municipalities, and to about 14,000 villages.

Initiatives Taken

1. **Sujalam Sufalam Jal Abhiyan**
 - 'Sujalam Sufalam Jal Abhiyan' was launched in 2018.
 - Under this, a number of water conservation activities including cleaning and deepening of ponds, canals, tanks, checkdams and reservoirs, repair of water storage structures, construction of rainwater harvesting structures, etc., were taken up.
2. **'Saurashtra Narmada Avtaran Irrigation' (SAUNI) Yojana**
 - To ensure water security in drought-prone Saurashtra region, 'Saurashtra Narmada Avtaran Irrigation'(SAUNI) Yojana was taken up under which on completion, during monsoon, surplus water from Narmada will be transferred and stored into about 115 reservoirs of Saurashtra.
3. In southern and eastern Gujarat inhabited by tribals, small lift irrigation schemes have been taken up in a big way providing assured irrigation to about 3.50 lakh acre farmland belonging to tribal communities, thus improving their income.

Conclusion

- If water security can be achieved in drought-prone Gujarat, it is possible that this integrated and focused approach followed by the Union Government will bring water security in the country, ensuring faster socio-economic development and high economic growth for the benefit of all.

Jal Jeevan Mission - Har Ghar Jal

Introduction

- To improve the quality of life and enhance the 'ease of living' of people of the country, Jal Jeevan Mission (JJM) was announced by the Prime Minister on August 15, 2019 to provide Functional Household Tap Connection (FHTC) to every rural home by 2024.
 - **The outlay of JJM is Rs.3.60 lakh Crore**, out of which Union Government's share is Rs.2.08 lakh Crore and State's share is Rs.1.52 lakh Crore.
- **Jal Jeevan Mission aims** to reach all rural households by 2024, which is six years well ahead of the **Sustainable Development Goal-6** target and could become a model for other developing countries to adopt such practices and achieve their SDG-6 goal.
- **The motto of Jal Jeevan Mission is 'Building Partnerships, Changing Lives'.**
- The mission is to give a boost to the manufacturing industry, creating job opportunities, and helping the rural economy.

Focus on Service Delivery

- Under the mission, the focus has shifted to the assured supply of potable water to every home rather than merely infrastructure creation.
- Massive training and skilling programmes are being taken up to build the capacity of public health engineers and the local community including masons, plumbers, fitters, pump operators, etc. to ensure regular service delivery to every home.

- Public Health Engineering Department and Gram Panchayats and/or its sub-committees to play the role of a public utility.
- **Jal Jeevan Mission has identified key priority areas** such as
 - water quality-affected habitations,
 - villages in desert and
 - drought-prone areas,
 - SC/ST majority, and Sansad Adarsh Gram Yojana villages.
- Under the mission, 112 Aspirational districts with low human development indices and 61 JE-AES affected districts have been given top priority for providing piped water supply to every borne.
- Under JJM, all villages with water quality issues, have been prioritised for potable tap water supply.
- **Drinking water quality testing laboratories** in various States/UTs have been opened to the general public so that they can get their water samples tested at nominal charges and ascertain the quality of drinking water.

Special Focus on Children

- Children are most susceptible to water-borne diseases and they spend a considerable amount of time in their educational spaces such as schools, Anganwadi centres, and Ashramshalas (tribal residential schools).
 - On October 2, 2020, a 100-day-campaign was launched to ensure potable tap water supply in adequate quantity for drinking and cooking mid-day meals, hand washing, and use in toilets in all schools, Anganwadi centres, and Ashramshalas.
- **So far, States like Andhra Pradesh, Goa, Haryana, Himachal Pradesh, Tamil Nadu, and Telangana have provided tap water supply to 100% of schools and Anganwadi centres.**

Making Water Everyone's Business

- It adopts an end-to-end approach, where the focus is on source sustainability, water supply, greywater treatment & its re-use, and operation & maintenance.
- Every village to prepare a **Village Action Plan (VAP)** co-terminus with 15th Finance Commission period, capturing these details and to be achieved by dovetailing all available sources at village level such as **MGNREGS, JJM, SBM(G), 15th Finance Commission grants to PRIs, District Mineral Development Fund, CSR funds, community contribution etc.** to achieve long-term water security.
 - This holistic approach will help in achieving water security by judicious utilisation of resources.
- **Jal Jeevan Mission** focuses on the involvement of women at every step since they are the primary stakeholder in the drinking water sector.

Strategy for Implementation

To ensure tap water supply in every home, the following strategy is adopted:

1. **In villages where piped water supply systems exist**, they are being assessed and if required, augmentation and retrofitting work including water source strengthening are taken up, to make them functional for the next 30 years and all households are given tap water connection.
2. **In villages with sufficient groundwater of prescribed quality**, a single-village piped-water scheme based on the local water source to be built, and every household is given tap-water connection.
3. **Villages having sufficient groundwater, but with some geo-genic contaminants**, single-village water-supply schemes, with treatment plant, are to be built.
4. **In water-deficient drought-prone and desert areas** without a dependable source of water and in severe quality-affected areas, bulk water transfer and distribution network along with treatment plants, known as regional water supply schemes or group schemes are planned for assured piped water supply to every home.
5. **For tribal/hilly/forested areas**, gravity or solar power-based water supply schemes are planned, which are easy to operate and maintain as recurring operation and maintenance expenses are comparatively low.
6. **In hills and mountains, springs** are explored as a reliable drinking water source. In hot and cold deserts, innovative technological solutions are encouraged.

Technological interventions

- A robust JJM-IMIS captures physical and financial progress under JJM with a dedicated 'Dashboard' is in the public domain.
- A 'MobileApp' is for the use of all stakeholders to bring in ease of working'.

- A sensor-based IoT solution is piloted for measurement and monitoring water supply with respect to quantity, quality, and regularity in villages on a real-time basis.
- Every water supply asset created is geo-tagged.
- Hydro-geomorphological (HGM) maps are used in the planning of single-village schemes in identifying drinking water sources as well as building aquifer recharge structures.
- Household tap connections provided are linked with Aadhaar number or the 'head of household' and more importantly, all financial transactions are undertaken through Public Finance Management System (PFMS).

Status

- 3.77 Crore households have been provided with tap water connections, thus increasing the tap water supply from 3.23 Crore (17%) to 7 Crore (37%) rural households in the country.
- Presently, Goa and Telangana States have become 'Har Ghar Jal' States and every household in 52 districts and 82 thousand villages of the country have tap water supply.

Conclusion

- To achieve the goal of **Jal Jeevan Mission**, communities to be trained and empowered to plan, implement, manage, operate & maintain their in-village water supply system.
- There is a paradigm shift from the 'department-based and construction-based' approach to 'service delivery' approach with the index being empowered communities managing water supply in their villages.

Jal Shakti Abhiyan

Introduction

- Finite availability and competing demands make water management a complex issue with increasing conflicts between water users and its uses.
- In pre-independent India, local communities have been known for designing their systems using traditional knowledge and wisdom to fulfill the needs of the community in different climatic conditions.
- Taking over water management by colonial rule led to the decline in community participation and made them dependent on the Government for meeting both drinking water and agriculture requirements.
- Any solution to the water management issue has to be planned with a people-centric strategy that encourages and ensures their participation.

Jal Shakti Abhiyan

- The Department of Drinking Water & Sanitation, Ministry of Jal Shakti on July 1, 2019 launched Jal Shakti Abhiyan (JSA), in coordination with States/ UTs, as a time-bound campaign in 256 districts covering 1,592 blocks, that were classified as water-stressed.
 - These blocks, as per the Central Ground Water Board were either critical or overexploited blocks.
 - Out of these districts, 23 are aspirational districts identified by NITI Aayog.
- In parallel, the Ministry of Housing and Urban Development identified 756 local bodies in urban areas for carrying out the activities under the Abhiyan.

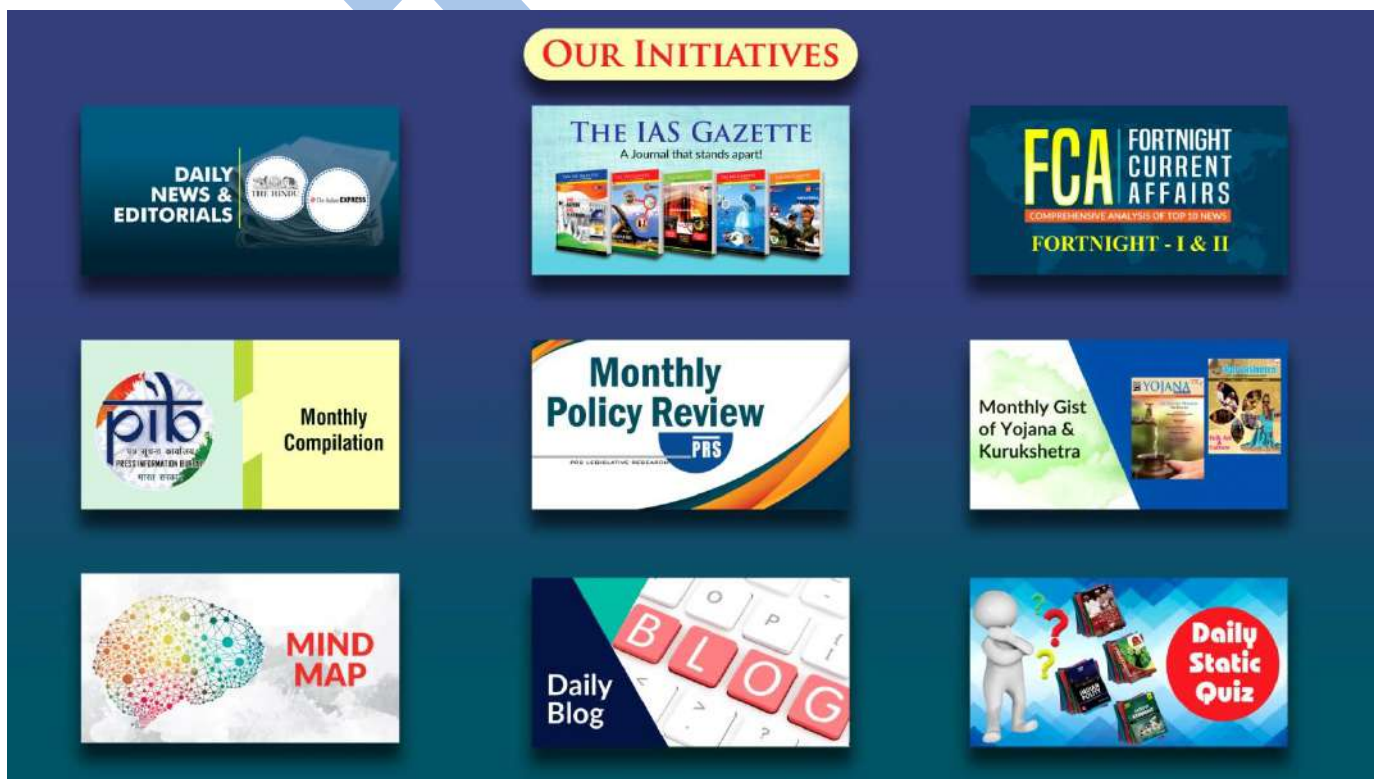
Implementation & Monitoring

- The campaign was carried out in two phases.
 - **Phase I** was carried out between July 1 and September 30, 2019, for all States, coinciding with the **South-West Monsoon period**.
 - For States and Union Territories receiving the **retreating monsoon (North-East Monsoon)**, the campaign continued as Phase II between October 1 and November 30, 2019.
- Under this campaign, targeted activities were undertaken under five key areas of interventions namely:
 1. **Water conservation and rainwater harvesting;**
 2. **Renovation of traditional and other water bodies/tanks;**
 3. **Re-use and recharge structures;**
 4. **Watershed development; and**
 5. **Intensive afforestation.**

- The funds allocated under various regular schemes (both Centrally Sponsored Schemes of Government of India and State Government Schemes having similar interventions as objectives) were dovetailed at the district level. There was no separate fund allocation for the campaign.
- A national-level JSA monitoring dashboard was developed to capture the progress of the States/ districts against JSA interventions.
 - A mobile app was created for assisting the visiting teams to share the progress of the campaign during their visit to States.

Way Forward

- Though JSA could not be carried out in 2020-21 due to pandemic, it is essential to consolidate the gains of the campaign by undertaking the following activities:
 1. **The digital inventory of all the water bodies/ resources** should be completed and shared with all stake-holding Departments and their headquarters.
 2. **The list of water bodies that were renovated, rejuvenated or the ones in which encroachments were removed** should be documented and recorded in the revenue records.
 - Such water bodies should be linked to people's livelihood so that the people's economic interest can protect them.
 - For example, fisheries can be encouraged and water bodies leased so that they can be maintained by communities that benefited out of them.
 3. **Encourage social water bodies policing** (volunteer Jal Rakshaks) for the sustenance of restored water bodies using the services of college and senior secondary students, volunteers, NGOs, etc.
 4. **Survival of plantations** has to be monitored periodically so that the original number is maintained. A protection mechanism needs to be adopted from grazing, while replacement of decayed plants should be covered by the department/ administration.
 5. **Incorporate voluntary Shramdan** as a means to build awareness as well as completing various works. The whole community can be involved.
 6. **Capacity building of farmers** on water conservation should go on simultaneously. The main focus should involve the usage of micro-irrigation for water-guzzling plants.
 7. The Government building should mandatorily include **rainwater harvesting** structures.
 8. **Create a dedicated JSA cell** at the district-level post Abhiyan period to complete the follow-up activities under Jal Shakti Abhiyan.



Safe, Adequate, and Sustainable Drinking Water

Introduction

- Water is lifesaving, yet it is also a **carrier of pathogens and toxic chemicals** which when consumed cause diseases and deaths.
- **Diarrheal diseases, cholera, typhoid, polio, hepatitis A& E** are water-borne diseases.
- The Covid-19 pandemic has highlighted the need to accelerate water goals as hand-washing is the key to preventing Covid-19 both in communities and in health care facilities.
- In Arsenic and Fluoride affected areas**, drinking water can expose people to these chemicals, and prolonged exposure could lead to **Arsenicosis and Fluorosis**.
- Also, safe drinking water has a positive impact on the nutritional status of children and prevents financial loss in the household and contributes to the overall economy of the country.

Background

- The Alma-Ata Declaration** on primary health care in 1978 identified the availability of safe water and basic sanitation as essential to achieve the **'Health for All' goals by 2000**.
 - Though countries have not yet achieved this ambitious goal, water, sanitation, and hygiene remain high on the international agenda, having been secured as targets under the **SDG6**.
 - ✓ **Target 6.1** aims to achieve universal and equitable access to safe and affordable water for all.
- Due to the direct impact, water has on health, countries have pledged **two targets on water under the health SDG i.e.**
 - to combat water-borne diseases by 2030 (3.3);
 - to substantially reduce the number of deaths and illnesses from water pollution and contamination (3.9)

India's achievement in drinking water

- As of 2019, more than 93% of the population has access to basic drinking water.
- The National Health Policy-2017** recognises access to safe drinking water and sanitation as a cross-sectoral goal and emphasises on the need to eliminate water and sanitation-related diseases.
- Government has targeted to provide safe and adequate water to every household in rural areas by 2024 through its **Jal Jeevan Mission**, six years ahead of SDGs, which is commendable.
 - Since its launch on August 15, 2019, the **Jal Jeevan Mission** estimates that it has provided household tap water connections to more than 37 million rural households, which is around 20% of rural households.

WHO Proposals

Convergence: Health and Water

- Prioritise water schemes in villages/blocks**, where water-related disease burden (diarrheal, soil-transmitted helminths, Lymphatic filariasis, kala azar, etc) is high.
- Strengthen current operation and management of water schemes** by introducing a systematic risk assessment and risk management approach aligning with the principle of Water Safety Planning.
- Develop surveillance of drinking water quality** by an entity independent of those charged with water service provision.

Swachhata Movement Continues

Introduction

- In February 2020, Union Cabinet approved **Phase II of the Swachh Bharat Mission- Grameen (SBM-G)**. It has a total outlay of Rs.1,40,881 Crore to focus on solid and liquid waste management (SLWM), and the sustainability of ODF status.
- The Department of Drinking Water and Sanitation (DDWS)** is implementing this in a **Mission Mode from 2020- 21 to 2024-25**.
- Phase II** will provide impetus to the rural economy through the construction of household toilets and need-based community sanitary complexes, as well as the infrastructure for solid and liquid waste management such as compost pits, soak pits, waste stabilisation ponds, bio-gas plants, material recovery facilities, etc.

Background

- India has achieved SDG Goal 6.2 declared by the United Nations for providing safe sanitation for all 11 years before the targeted year, 2030.
- The success of the programme is attributed to the **4Ps - political leadership, public financing, partnerships, and public participation.**

SBM Phase II: From ODF to ODF Plus

- The key objective of the SBM Phase II is to make villages across India ODF Plus villages.
 - An ODF Plus village is a village that sustains its free (ODF) status and also ensures solid and liquid waste management and is visually clean.
- In Phase II of SBM, visual cleanliness has also been defined.
 - A village is called visually clean if at least 80 per cent of its households and all its public places have a minimal litter and minimal stagnant water, and the village does not have any plastic waste dump.
- Various components which can help to convert a village ODF Plus status are:
 - Constructions of individual household latrines,
 - retrofitting of toilets,
 - need-based construction of community sanitary complexes,
 - biodegradable waste management,
 - GOBAR-Dhan (Galvanizing Organic Bio-Agro Resources-dhan),
 - plastic waste management,
 - greywater management, and
 - faecal sludge management.
- Thus, to become an ODF Plus village, a village has to ensure that:
 - All households have access to a functional toilet facility.
 - All schools, Anganwadi centres, and Panchayat Ghars have access to a functional toilet, with separate toilets for females and males.
 - Public places are visually clean.
 - At least 80% of households and all public institutions have arrangements for managing solid and liquid waste.
 - The village has a plastic segregation and collection system.
 - At least five ODF Plus IEC wall paintings per village on five key themes of ODF sustainability, hand-washing with soap, biodegradable waste management through compost pits, greywater management through soak pits, and plastic waste management.

Planning

- Swachh Bharat Mission promotes decentralised sanitation interventions.
 - Therefore, it is required that each Gram Panchayat prepares **Village Action Plans** for all of its villages in a convergent manner for the SBM (G).
 - The plan should be presented in the Gram Sabha and endorsement of the Gram Sabha should be obtained and recorded.
- At the district level, each district is required to prepare a district Swachhata Plan after consolidating its Village Action Plans.
 - Districts are expected to develop the plan as per a date decided by the State Water and sanitation Committee every year and upload it on MIS after obtaining approval from the State Government.
- States and UTs are required to develop a Project Implementation Plan (PIP) and Annual Implementation Plan (AIP) every year consolidating the District Swachhata Plans to achieve the objectives of SBM (G) Phase II.
 - The **National Scheme Sanctioning Committee (NSSC)** then considers and approves the PTPs and ATPs.
- The States and UTs are required to develop and upload these plans on the Integrated Management Information System (IMIS) by the 1st March of every year.

Role of Panchayati Raj Institution (PRIs)

- As per the **Constitution 73rd Amendment Act, 1992**, sanitation is included in the **11th Schedule**. Therefore, the role of Gram Panchayat (GP) is pivotal in implementing SBM (G).
 - PRIs play even a greater and very important role in Phase II, especially after the earmarked provision for sanitation activities by the **15th Finance Commission**.
 - All institutions and committees working within the GP framework have to prioritise sanitation within their programs.

Monitoring and Evaluation

- The monitoring and evaluation have two aspects:
 - Ensuring the status of ODF Plus villages.
 - Created assets and expenditure incurred.
- The monitoring framework should be able to identify whether:
 - adequate activities have been carried out for behaviour change,
 - ODF status of the village is sustained,
 - adequate SLWM has been ensured and
 - the village is visibly clean.
- Monitoring activities are aimed towards the attainment of programme results, both effectively and efficiently.
 - These include independent assessments, periodic reviews, field visits, and thematic consultations to ascertain the progress of the programme.
- Monitoring of both qualitative (outcomes) and quantitative (output) progress is provided in the operational guidelines.

Way Forward

- There is a new kind of enthusiasm and dynamism in villages ably led by sarpanches.
- India is hopeful that like ODF, its people will achieve the goals of **ODF Plus by 2025** as the Swachhata momentum accelerates.

Taking Water to Every Home and Soul

Department of Drinking Water and Sanitation and Swachh Bharat Mission

- The allocation of the Department of Drinking Water & Sanitation has been increased from Rs. 21,518 Crore in 2020-21 to Rs. 60,030 Crore in 2021-22.
- *As per one study conducted by WHO, the Mission resulted in averting more than 300,000 deaths (diarrhoea and protein-energy malnutrition) between 2014 and October 2019.*
- The "Environmental impact of the Swachh Bharat Mission on Water, Soil, and Food". study by UNICEF, found that, in terms of faecal contamination, non-ODF villages were, on average, 11.25 times more likely to have their groundwater sources contaminated (12.7 times more from contaminants traceable to humans alone).
- **The other three impact areas of Swachh Bharat Abhiyan 2.0 are**
 - **Bio-degradable Solid waste Management.**
 - **Greywater management.**
 - **Faecal Sludge Management.**

Department of Water Resources, River Development and Ganga Rejuvenation under the Ministry of Jal Shakti

- **Atal Bhujal Yojana**, with an outlay of **Rs.6,000 Crores** aims to facilitate sustainable groundwater management with an emphasis on community participation and demand-side interventions for sustainable groundwater management in identified water-stressed areas in 8,353 Gram Panchayats in 78 districts of seven states in the country.
 - **Atal Bhujal Yojana** was constituted to tackle demand side management amidst annual withdrawal exceeding annual replenishment of groundwater.
- It was also found that if only agriculture sector, the prime user of water resources in India, saves 10% water by water-efficient practices, water would be available to all for the next 50 years.
 - For this purpose, the grand vision of **Pradhan Mantri Krishi Sinchayee Yojana** was implemented.
 - **The centrally-sponsored Scheme on micro-irrigation** has an objective to enhance water use efficiency in the agriculture sector by promoting appropriate technological interventions like drip & sprinkler irrigation and encouraging the farmers to use water-saving and conservation technologies.
- **Along with other four important interventions** this scheme, set up with an **allocation of Rs.50,000 Crores**, aims to bridge the gap between the potential of Micro Irrigation potential of the country which stands at 6.95 Crore Hectares of which only 10% was achieved till 2014.
 - a. "Accelerated Irrigation Benefits Programme (AIBP),
 - b. Har Khet Ko Pani (HKKP)
 - c. Per Drop More Crop.

d. Watershed Development.

Technological Innovation for Assured Water Supply

Background

- **As per the report of NSS 76th Round:**
 - About 87.6 percent of the households in the rural areas and about 90.9 percent of the households in the urban areas, and about 88.7 percent of the households in total had sufficient drinking water throughout the year from the principal source.
 - Further, about 94.5 per cent of the households in the rural areas, about 97.4 percent of the households in the urban areas, and about 95.5 per cent of the households in total used 'improved source of drinking water'.
 - At the same time, the average annual per capita water availability is continuously decreasing.
- Thus, it is high time that we secure the water for drinking purposes else we will have to do it by compulsion. We should design the system in such a way that drinking water should never become a limiting factor for the growth, wellbeing, and development of our society.

Technological Intervention

- Recognising the need, the Government of India in 2019 announced Jal Jeevan Mission to provide all the households in villages with functional household tap water connection (FHTC) by 2024.
- The Jal Jeevan Mission is focusing on the use of technology in a significant manner to take into account these aspects both at the implementation as well as a post-implementation stage to achieve this objective.
 - **The information of every scheme** is being stored in a **central JJM-Integrated Management Information System** with details of cost, infrastructure, water-source for each habitation in villages.
 - The use of a **public fund management system (PFMS)** by States/UTs is being ensured for payment in an online manner.
 - The tap water connection provided to every household is being tagged with the Aadhaar number of the head of household.
- **Jal Jeevan Mission has advocated taking the digital route to effectively monitor water supply in each village.**
 - It was decided to explore the **Internet of Things (IoT) based remote monitoring** which provides real-time information by using sensors and communication infrastructure without any manual intervention.
 - This would not only allow effective monitoring and management on the ground, but also enable real-time 'visibility' to senior officials, people representatives, and citizens.
- For assurance of water quality at the household level all the water testing laboratories under the control of rural water supply/ public health and engineering department have been opened to public for testing of water samples.
 - The accreditation and recognition of all labs by NABL is being made compulsory so that improvement in the quality of testing at the laboratory level takes place.

Benefits of Technological Intervention

- Minimisation of Non-Revenue Water (leakage and unauthorized connections),
- Reduction in repair and maintenance costs with predictive maintenance and automation for pump,
- Reduction in excess manpower, efficient use of resources (water and electricity) and
- Reduction in wage loss and healthcare costs for villagers.
- The pilot studies undertaken has demonstrated that technology-enabled real-time monitoring leads to positive behavioral change thereby ensuring significant gains in socio-economic and health parameters for the village communities.

Ushering a Social Revolution

Introduction

- Providing water to every household is an inescapable duty of any Government.
- Water is the elixir of life and "is deemed to be a merit good that is something to which people have a right, regardless of ability to pay because it is essential for life."
- It is enshrined as a human right in resolution number 64/292 of the United Nations General Assembly, which calls upon Governments to ensure adequate and affordable quantities of safe water for domestic use.

Background and Issues

- **Women and girls in India spend a considerable time (up to 352 minutes/day) performing domestic chores.**
 - The magnitude of the problem can be imagined as over 11 Crore rural women are pegged to be below the poverty line in India (Planning Commission estimates, 2004-05).
- **Variability in water supply due to heavy dependence on monsoon rains and groundwater adds up to their vagaries. It exacerbates gender inequality.**
 - In India, about 70% of the rainfall is received during the monsoon season and its intensity varies each year, from one region to another.
 - As a result, 42% of the Indian landmass is rendered drought-prone (Drought Early Warning systems report: (March 2019).
- **Women and girl child, in particular, bear the brunt and are most adversely affected.**
 - It leads to their stunted growth, which further translates through generations.

Government Intervention

Jal Jeevan Mission

- In the year 2019, Prime Minister Shri Narendra Modi announced the Government's resolve to provide **tap water connections to every rural household** under the flagship program "**Jal Jeevan Mission**".
 - The newly created **Jal Shakti Mantralaya** is implementing the **centrally sponsored scheme** in partnership with States to provide "**Nal Se Jal**" and to secure the "**Har Ghar Jal**" target by 2024.
 - **Goa and Telangana** have emerged as the **first and second States** respectively, to achieve 100% coverage under Jal Jeevan Mission.

Societal Inclusion through Implementation

- However, the mission seeks to provide a platform for their participation as well as empowerment..
 - A tap water connection is being provided to one and all, with an approach i.e, "No one is left behind".
 - Priority has been given to villages with a majority SC/ST population to secure 55 lpcd.
- The entire Mission follows a bottom-up approach.
 - It requires the formation of Village Water & Sanitation Committees / Pani Samitis that will prepare a 5-year Village Action Plan.
 - These committees are mandated to have 50% women members, since women are the most affected stakeholders and their participation is seen as a crucial input for its effective implementation.
 - Further, a suitable representation of the weaker section of the society is there in the Pani Samiti.
- Information Technology has been leveraged to collate and display real-time nationwide water data on a portal www.ejalshakti.gov.in.
- **A Rashtriya Jal Jeevan Kosh (RJK) is set up for accepting contributions from corporates, organizations, and individuals, who have moved from villages but still nurture love for their native place.**

Conclusion

- Jal Jeevan Mission is not merely a scheme whose outcome is limited to the aggregate of tap water connections provided.
 - It aims to mitigate the economic, social, and physical hardships that the weaker most sections of our society have to endure in absence of a supply of regular, reliable, and safe drinking water at their doorsteps.
- It is ushering a social revolution marked by people's participation, empowerment, convergence, inclusion, and equity.

Water Future in a Climate-risked World: The Indian Experience

Introduction

- Water scarcity is growing and it is not inevitable that cities will run out of water or that we will not have any water to drink.
- However, water is a replenishable resource-it snows and rains each year.
 - More importantly, other than in the case of agriculture, we do use and discharge water.
 - Therefore, it can be treated and then re-used and recycled. So, this is one future we can change.
- Therefore having a proper Water Management Policy is very crucial.

Background

- **Till the late 1980s**, water management was largely confined to the issue of irrigation projects - the building of dams and canals to store and supply water long distances.
 - But then came the big droughts of the late 1980s and it became clear that it was not enough to plan for augmenting water only through large projects.
- **Centre for Science and Environment (CSE) published its report, Pring Wisdom**, which documented traditional technologies for rainwater harvesting in ecological diverse regions of India. The slogan was "Rain is decentralised, so is the demand for water",
- In the droughts of the late 1990s, state governments launched massive programmes to capture rainwater by building ponds, digging tanks, and building check-dams on streams.
- **By the mid-2000**, these efforts coalesced into the **Mahatma Gandhi Rural Employment Guarantee Act (MGRGA)** - investing labour into building rural water assets.
 - By this time, it was also understood that groundwater - considered a "minor" resource was the "major" supplier of water for both drinking water and irrigation in the country.
 - Over 50% of agriculture was still rainfed and so water conservation and decentralized rainwater harvesting - ensuring that every well and every waterbody was recharged - was critical for productivity and wellbeing.
- **In the decade of 2010**, the crisis of urban drought hit homes.
 - As water supply dried up, people turned to groundwater and without recharge-ponds and tanks has been decimated up by real estate or simply through neglect-meant declining water levels.
 - Water supply was linked to pollution the more the water supplied the more is waste water generation.
 - This, without adequate treatment, leads to pollution of rivers and water bodies, which in turn destroys available water and increases the cost of cleaning up drinking water.

Initiatives at Present Days

- The Government of India's ambitious and much-needed Har Char Jal mission has stressed that its objective is sustainability so that water continues to flow in pipes and taps.
- This requires focusing on improving the durability of the water asset that is created.
- **The problem lies in the fact that land and water bureaucracies are fractured** - somebody owns the pond; another agency the drain, and yet another, the catchment. Water security requires this to change.
 - This means giving much greater control over the water structures to the local community - deepening democracy and devolution of powers - is then the answer to water management.

Way Forward

- Our water future is about our water wisdom and in this we must recognise that water and culture go together.
- Water shortage is not about the mere failure of rain. It is about the failure of society to live and share its water endowment. So, we can be water-secure, because we are water-wise.

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Water Governance

Introduction

- While India has more than 18% of the world's population, it has only 4% of the world's renewable water resources.
- More than 50% of precipitation takes place in about 15 days and less than 100 hours altogether in a year.
- About 78% of water utilised goes for agriculture; 8% goes towards domestic use; 6% is used for industry, and the remaining 8% goes towards other uses.

Background

- We are already in a water-stressed situation defined by per capita availability of less than 1,700 cubic meters.
 - The per capita availability is projected to further reduce to 1,340 cubic meters by 2025 and 1,140 cubic meters by 2050.
- The finite water resources of the country are under pressure due to increasing population, urbanisation, industrialization, water pollution, and inefficient use. Climate change poses an additional challenge.

Issues related to Water Governance

- Making an adequate quantity of drinking water available to the people.
- Improving the low water-use efficiency in irrigation and industry - a drop of water saved is a drop added to the ecosystem.
- Tackling pollution of water bodies especially our rivers.
- Reusing and recycling water.

Initiatives Taken

- Water governance has been placed at the forefront of the country's development agenda.
 - **In May 2019**, a much-needed policy reform was undertaken with the creation of the **Jal Shakti Ministry** to give impetus to integrated management of water resources in India with a **special focus on the demand side and supply-side management**.
 - The main aim was to bring all aspects of water under a single umbrella in line with **India's National Water Policy** and shift from a compartmentalised approach to a comprehensive approach.
 - **The Jal Shakti Abhiyan (JSA), first launched in 2019**, is a **water conservation campaign**, under which officers, groundwater experts, and scientists from the Government of India work together with State and district officials in India's most water-stressed districts for the targeted interventions-
 - ✓ Water conservation and rainwater harvesting.
 - ✓ Renovation of traditional and other water bodies/ tanks.
 - ✓ Reuse and recharge structures.
 - ✓ Watershed development.
 - ✓ Intensive afforestation.
- Piped Water Delivery to Households
 - The Jal Jeevan Mission launched in 2019 aims to provide 55 litres of water per person per day to every rural household in the country by 2024, with a massive outlay of Rs.3.60 lakh Crore.
 - The announcement of Jal Jeevan Mission (Urban) in the Union Budget in 2021 with an outlay of Rs.2.87 lakh Crore would provide piped water to those 2.68 Crore urban households which do not have it.
- Improving Water Use Efficiency
 - The 'Per Drop More Crop' component of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) promotes water use efficiency through drip and sprinkler irrigation.
 - In the Union Budget for the financial year 2021-22, an announcement has been made to double the initial corpus of the Micro Irrigation Fund of Rs.5,000 Crore, created under NABARD, by augmenting it by another Rs.5,000 Crore.
 - The activities under National Water Mission (NWM) aim to optimise water use efficiency by 20% looks to conserve water and minimize wastage.
 - **'Sahi Fasal' campaign of NWM** is an initiative to nudge stakeholders in agriculture towards crops that use less water but more efficiently.

- **The National Project on Aquifer Management (NAQUJM)**, one of the world's biggest programmes of its kind, envisages the formulation of aquifer management plans to facilitate the sustainable management of groundwater.

Water Security

Introduction

- Water scarcity is precariously visible with the current population size of 1.3 billion which is projected to be increased to 1.6 billion by 2050.
 - With rising pollution levels and climate change, the water cycle is expected to undergo significant change all across the world.
- India consists of 16% of the world's population but with only 4% of the world's water resources.

Composite Water Management Index (CWMI) 2.0

- 2018 Composite Water Management Index (CWMI) 2.0 is a pan-India set of metrics that measures different dimensions of water management and use across the lifecycle of water.
 - It was released by the NITI Aayog in association with the Ministry of Jal Shakti and the Ministry of Rural Development.
 - It indicated that 21 major cities including Delhi, Bengaluru, Chennai, Hyderabad, and others are racing to reach zero groundwater levels by 2020, affecting access for over 100 million people.
 - The report also indicated that, by 2030, the country's water demand is projected to be twice the available supply, implying severe water scarcity for hundreds of millions of people which will lead to a 6% loss in India's GDP.
 - It is believed that water will also be a major source of geopolitical conflict in this century. It is therefore critical to manage this natural resource well.

Government Initiatives

Swachh Bharat Abhiyan

- India has made considerable progress especially in **SDG 6: Clean water and sanitation** by constructing over 11 crore toilets to become **open defecation-free (ODF)** in five years through **Swachh Bharat Abhiyan launched in 2014**.
- **The Prime Minister** was conferred the **"Global Goalkeeper"** award by the **Bill and Melinda Gates Foundation in 2019** for this campaign which also marked Mahatma Gandhi's 150th birth anniversary.
- Recently, Hon'ble PM was also conferred with the **Global Energy and Environment Leadership Award by Cambridge Energy Research Associates (CERA)** for his commitment to expanding India's leadership in sustainable development to meet the country's, and the world's, future energy needs.

Namami Gange

- Namami Gange Flagship Programme was launched in June 2014 with a budget outlay of Rs.20,000 Crore to accomplish the twin objectives of effective abatement of pollution, conservation, and rejuvenation of the National River Ganga.

Draft National Water Framework Bill, 2016

- A **draft National Water Framework Bill, 2016** containing provisions for an overarching national legal framework with principles for protection, conservation, regulation, and management of water as a vital and stressed natural resource was suggested.
- **The committee was constituted under the Chairmanship of Dr. Mihir Shah**, by the **Ministry of Water Resources, River Development, and Ganga Rejuvenation in 2016**.
- The Government is planning to update the 2012 version of the **National Water Policy (NWP)** and set up a **National Bureau of Water Use Efficiency** to bring a paradigm shift in water management.

Jal Jeevan Mission (JJM)

- The Government launched Jal Jeevan Mission (JJM) on India's 73rd Independence Day on August 15, 2019 to provide Functional Household Tap Connection (FHTC) at the rate of 55 litres per capita per day (lpcd) to every rural household (Har Ghar Nal Se Jal-HGNSJ) by 2024.

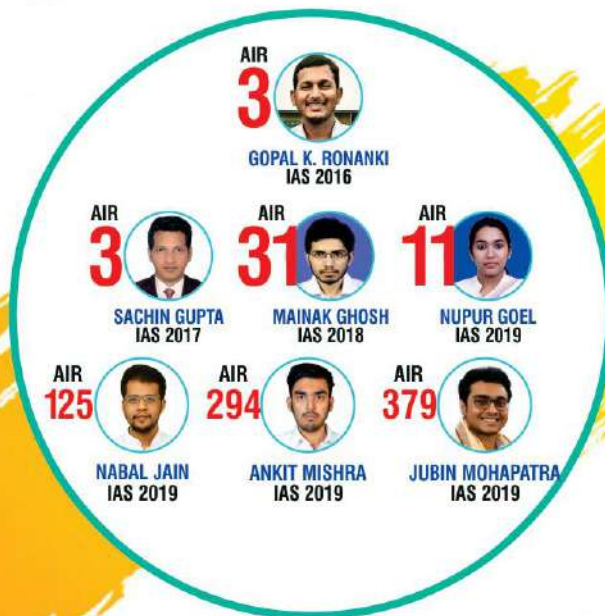
1. Atal Bhujal Yojana

- Atal Bhujal Yojana (Atal Jal), a groundwater management scheme was launched on the 95th birth anniversary of former Prime Minister Atal Bihari Vajpayee, on December 25, 2019.

- The purpose of the scheme is to improve groundwater management in seven states of India -Gujarat, Haryana, Kamataka, Madhya Pradesh, Maharashtra, Rajasthan, and Uttar Pradesh with a total outlay of Rs.6,000crore to be implemented over 5 years from 2020-21 to 2024-25.
- This scheme will benefit nearly 8350 Gram Panchayats in 78 districts of these seven states.
- 2. Inter-Linking of Rivers** : Inter-Linking of Rivers project comprises 14 rivers in the peninsular region and 16 rivers of Himalayan origin.
- 3. Nisarg Raksha**
 - On the occasion of the 72nd Republic Day of India Government has launched a nationwide movement (campaign) named 'Nisarg Raksha' on Environmental conservation and Water Rejuvenation.
 - This movement will be driven by people and it will be a people's movement.
 - It aims to train around 1 million Nisarg Rakshaks-One volunteer for every village in the country.
 - Further, government are creating a forum named 'Nature Protector forum' at the National and state level to monitor this project implementation.
 - Local stories of change like Chipko Andolan to save trees and themes on local culture will be used to strategise new initiatives for conserving water resources and protecting the environment.
- 4. 'Nature Protector App'**
 - 'Nature Protector App' has been designed to help any conscious citizen to participate in the nature conservation campaign.
 - Participating environmentalists will be able to combine time-tested experience and consistent entrepreneurship.
 - The app will continue to be an open platform for any citizen interested to participate in the campaign.

Conclusion

- It is high time for us to realise water's true, multidimensional value if we are to survive the future and build a sustainable world.



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MIND MAPS

Role of Women in Water Management

Usage of Water in Rural Areas

1. Drinking water for human.
2. Drinking water for livestock.
3. Water for irrigation.
4. Water for ecosystem balance and restoration (common lands, forests, etc).

Role of Women

- The collection of drinking water has been traditionally allotted to women.
- "Health care-takers of the family".
- They are also primarily responsible for managing the drinking water at home.
- Traditional knowledge bearers of the season-wise water availability and Sourcewise Water Quality in different water sources.

Ways in Which Women Participation may be Sought

1. Separate meetings with women during the mobilisation process.
2. Interaction with existing women's groups during the initial village visits.
3. Gender sensitisation of the implementation team staff.
4. Train village women for the supervision of implementation.
5. Develop women entrepreneurs and SHG-led enterprises.

Namami Gange**About Namami Gange**

1. Namami Gange was launched in 2014-15 for the rejuvenation of Ganga and its tributaries.
2. Assured funding of Rs 20,000crores.
3. National Mission for Clean Ganga (NMCG) is the implementing agency.
 - The Government notified NMCG as an authority under Environment Protection Act, 1986.
4. Components :
 - Pollution Abatement (Nirmal Ganga);
 - Improving flow and ecology (Aviral Ganga);
 - Strengthening People-River connect (Jan Ganga) and
 - Research, knowledge management (Gyan Ganga).
5. It is backed by Ganga River Basin Management Plan by a consortium of 7 IITs.

Nirmal Ganga

1. PPP for sewerage infrastructure.
2. 'One City One Operator'
3. Annual inspection of grossly polluting industries
4. Improving sanitation at ghats

Aviral Ganga

1. Notification of Ecological flow for river Ganga in 2018.
2. Sustainable Agriculture.
3. Demand-side management.
4. Afforestation along Ganga.
5. A comprehensive programme for fisheries and Biodiversity Conservation.
6. Conservation of Gaugetic Dolphin

Jan Ganga

1. Dedicated Cadres of Ganga saviors.
2. Several innovative public outreach activities
Ganga run, Ganga Utsav

Gyan Ganga

1. Centre for Ganga Management & study was set up at IIT Kanpur.
2. LIDAR mapping for high-resolution DEM & GIS-ready database
3. Planning for River Cities.
4. Arth Ganga model linking the economic development.

Jal Jeevan Mission

About the Scheme

1. Jal Jeevan Mission (JJM) was announced by the Prime Minister on August 15, 2019 to provide Functional Household Tap Connection (FHTC) to every rural home by 2024.
2. The outlay of JJM is Rs.3.60 lakh Crore, out of which Union Government's share is Rs.2.08 lakh Crore and State's share is Rs.1.52 lakh Crore.
3. The motto of Jal Jeevan Mission is 'Building Partnerships, Changing Lives'.
4. Jal Jeevan Mission has identified key priority areas such as
 - Water quality-affected habitations.
 - Villages in desert and Drought-prone areas.
 - SC/ST majority.
 - Sansad Adarsh Gram Yojana villages.
5. Presently, Goa and Telangana States have become 'Har Ghar Jal' States

Service Delivery

1. Supply of potable water to every home.
2. 112 Aspirational districts with low human development indices and 61 JE-AES affected districts have been given top priority.
3. All villages with water quality issues, have been prioritised for potable tap water supply.

Children Centric Approach

Andhra Pradesh, Goa, Haryana, Himachal Pradesh, Tamil Nadu, and Telangana have provided tap water supply to 100% of schools and Anganwadi centres

Mass Participation

1. Every village needs to prepare a Village Action Plan (VAP).
2. Involvement of women at every step

Technological Interventions

1. JJM-IMIS captures physical and financial progress.
2. A 'MobileApp' is for the use of all stakeholders.
3. Hydro-geomorphological (HGM) maps.
4. Household tap connections provided are linked with Aadhaar number

Phase II of the Swachh Bharat Mission- Grameen (SBM-G)

About the Mission

1. In February 2020, Union Cabinet approved Phase II of the Swachh Bharat Mission- Grameen (SBM-G).
2. Department of Drinking Water and Sanitation (DDWS) is implementing this in a Mission Mode from 2020-21 to 2024-25
3. Phase II will provide impetus to the rural economy through the construction of household toilets and need-based community sanitary complexes

An ODF Plus village is a village that sustains its free (ODF) status and also ensures solid and liquid waste management and is visually clean. Thus, to become an ODF Plus village, a village has to ensure that:

- All households have access to a functional toilet facility.
- All schools, Anganwadi centres, and Panchayat Ghars have access to a functional toilet, with separate toilets for females and males.
- Public places are visually clean.
- At least 80% of households and all public institutions have arrangements for managing solid and liquid waste.
- The village has a plastic segregation and collection system.
- At least five ODF Plus IEC wall paintings per village on five key themes of ODF sustainability, hand-washing with soap, biodegradable waste management through compost pits, greywater management through soak pits, and plastic waste management,

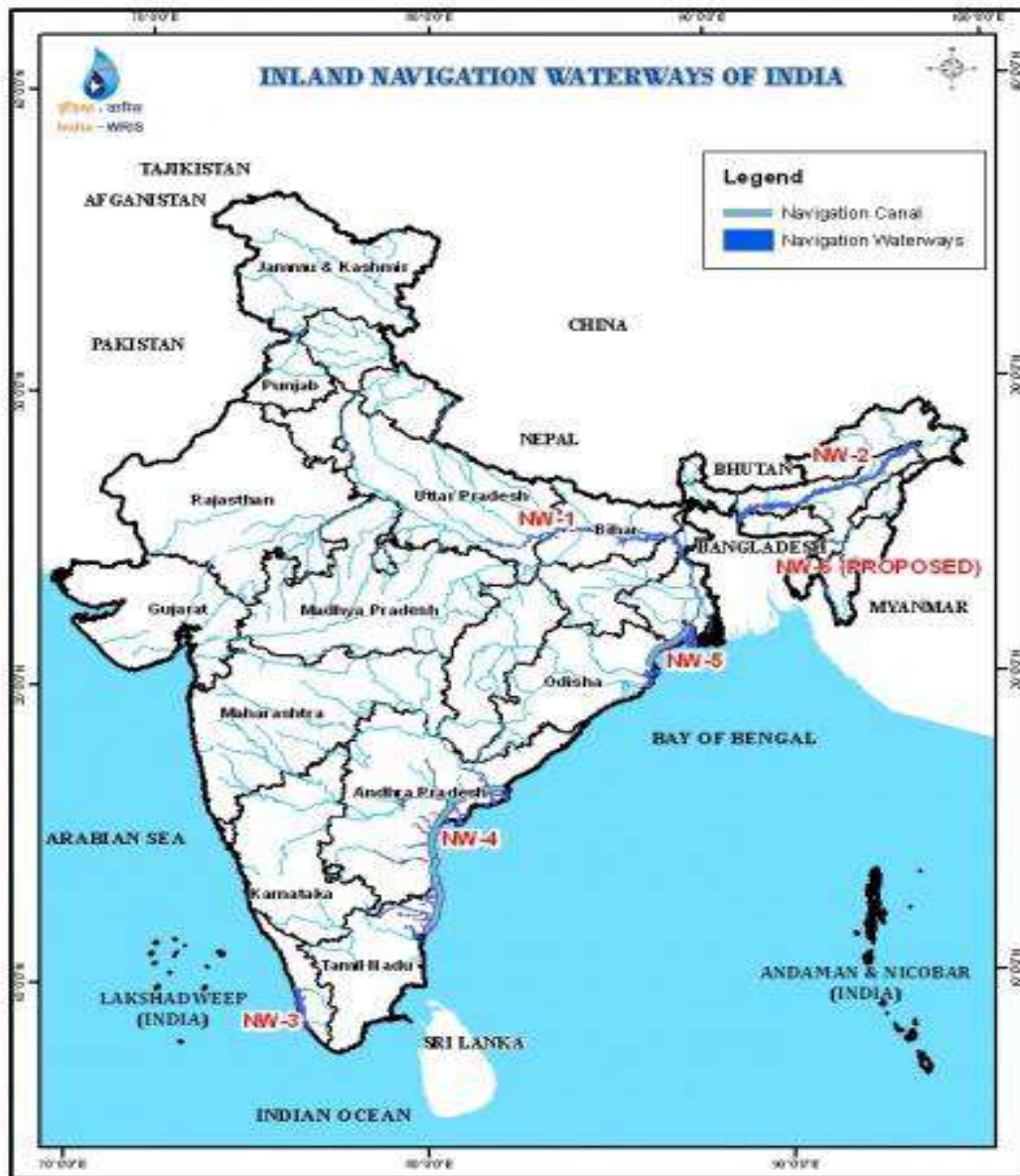
Inland Waterways Plan

About Inland Waterways

1. Ganga
2. Brahmaputra
3. West Coast Canal with Udyogmandal and Champakara Canals
4. Kakinada-Puducherry Canals system along with Godavari and Krishna rivers

** One more waterway namely Barak river is under consideration of the Central Government for declaration as a National Waterways.

*** East Coast Canal with Brahmani river and Mahanadi delta have been declared as National Waterways.



Important Facts

1. **As per the Constitutional provision**, Central Government can undertake development and regulation of an inland waterway for navigation,
 - only when it is declared as a National Waterway (NW) by an Act of Parliament.
 - 106 additional inland waterways were declared as national waterways through **The National Waterways Act, 2016**.
2. In 2020, the **Ministry of Shipping** declared that all usage charges from waterways would be removed, for an initial period of three years.
3. **Inland Waterways Authority of India (IWAI)** was constituted in **October 1986**, for the development and regulation of inland waterways for shipping and navigation.
 - Recently, a Memorandum of Understanding (MoU) was signed between the Inland Waterways Authority of India and the MOL Group, which is a global leader in gas carriers.

KURUKSHETRA

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MIND MAPS

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2. MSME
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Nurturing India's Rich Cultural Heritage

Introduction

- Heritage is the culture and people who live around it every day. There is history related to the place, culture way of life artisanship and economy developed based on the structure.
- They are not just reflectors of the past, but opportunities to generate employment and income in the present and future through heritage tourism.
- India with its glorious past has bequeathed a remarkable variety of monuments and sites spread all across the length and breadth of the country. XV
 - *There are 38 UNESCO World Heritage Sites in India (as of 2021), of which 30 are cultural sites, seven are natural sites and one mixed site.*
- It is necessary to identify the heritage assets and prevailing traditions, which is intrinsically related to the identity of the residents of those areas; and on the other, preservation, conservation and promotion of the places can play a substantial role in enhancing the quality of life.

How Can Heritage Structures Change the Rural Economy?

- *The rural per capita income in India in terms of Net Value Added (NVA) is Rs.40, 9251 in 2019.*
- Even though 70 percent of the population still lives in villages, more than half of them are depended only on agriculture or allied activities.
- Villages are experiencing out-migration and marginalisation, and loss of cultural and biological diversity. Growth of rural tourism and heritage tourism will enhance the employment and business opportunities in the villages in a big way.
- With the vaccine roll out for COVID-19 in the country, travel and tourism is now opening up. Due to the pandemic, people are now more interested in visiting less-crowded rural India.

Initiatives taken

Budget 2020-21

- Government of India in its budget 2020 -21, has proposed five archaeological sites, Rakhigarhi in Haryana Hastinapur in Uttar Pradesh, Shiv Sagar in Assam, Dholavira in Gujarat and Aadi Chanallurin Tamil Nadu.
- These 5 sites are going to be developed as iconic sites with on-site museum.
 - **Rakhigarhi**- This site belongs to the pre Indus Valley Civilization settlement dates back to 6500 BCE. This is located in the Hisar district of Haryana.
 - **Dholavira**- this is a site of ruins of ancient Indus Valley Civilization. Harappan city is located near Dholavira in Gujarat.
 - **Adichanallur**: This is one of the oldest iron age cemeteries to exist in South Asia. Small village in Tamilnadu.

Swadesh Darshan Scheme of Ministry of Tourism

- There are six Buddhist Circuits under Swadesh Darshan Scheme of Ministry of Tourism.
- To attract the Buddhist tourists, particularly from South Asian and South East Asian countries, composite development of Heritage and Tourism of Iconic Buddhist Sites of significance in India can be undertaken.
 - *Ten Buddhist sites particularly major Asoka edicts (Rock and Pillar), e.g., 5 rock edicts at Girnar, Sopara, Dhauuli, Jaugada, Sarnath, Yerragudi and five pillar edicts, namely Kalsi, Delhi, Vaishali, Rampurva and Lauriya can be developed in a circuit manner.*
 - Many of these edicts are in villages far away from the main city.
- Similarly, reviving the **lost traditional gardens**, for example, the **royal gardens of Bundelkhand** can be a boost to the local rural economy.

Cultural Landscape

- Rural heritage with tribal settlements is now also being recognised under the category of 'Cultural Landscape' with the World Heritage inscription of **Kanchendzonga National Park on 2016** on World Heritage list and **Apatani cultural landscape, Cold desert cultural landscape of Spiti-Ladakh** on the UNESCO's tentative list.
- The inhabitants in these places have unique ways of preserving ecology, using traditional methods to attain what the modern machines and systems have been unable to.

Policy Initiatives and their present status

National Conservation policy

- It is a comprehensive policy focusing on tourism and development (within and around a monument), capacity building, partnerships with multi-disciplinary organisations and institutions and the role of local communities.
- As per the Policy Guidelines,
 - Conservations works result in utilisation of over 70% of project costs for crafts people wages.
 - In projects such as archaeological excavations and de silting historic step-wells/tanks/wells almost 100% of the costs are for unskilled crafts people.
 - The Policy also acclaims available traditional craftsmanship in the country and the use of traditional building materials, practices and skills as an integral part of the conservation process.
- Some states have adopted it well, e.g., in 2014, it was adopted by the State Archaeology of Rajasthan for its World Heritage Sites, which also practices few of other national policy clauses such as, engaging local crafts people and drafting region wise conservation schedule of rates.

'Adopt a Heritage' Project

- It aims to develop the heritage sites/monuments, making them tourist-friendly and enhancing the tourism potential.
- This involves active participation of individuals, agencies to partner in the noble social responsibility initiative by becoming "Monument Mitra" through the innovative concept of Vision Bidding.
- Progress under Adopt a Heritage Scheme has been very slow, not much work can be seen in terms of on-site execution.
- A monitoring committee is required to review on-going works under signed Mo Us for their quality and adherence to timeline.
- Under the 'Hunar se Rozgar Tak' programme of the Government of India, training can be imparted to the rural youth belonging to the economically weaker strata of the society to become tourist escorts, event facilitators, security guards, tour assistants, transfer assistants and office assistants.
- Attempts should be made to increase the skills of local people under the schemes like Pradhan Mantri Kaushal Vikas Yojana (PMKVY), SANKALP (Skills Acquisition and Knowledge Awareness for Livelihood Promotion), UDAAN along with Polytechnic Schemes and vocationalisation of education at school and higher education level, with heritage tourism in mind, in order to engage them and crafts people in their home states.



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Way Forward

- An *overarching management plan* is required to revive the heritage structures with creating a National Archaeological Database at the outset.
- *Advanced technology* needs to be used for documentation, surveys, excavation, conservation, and promotion and marketing of the sites.
- *Heritage Tourism* needs to be promoted with a focused and professional marketing strategy.

- All heritage sites should develop special programmes for engaging school students' visits with a round the year calendar for children's workshops, activities and events.
- **Skilled staff** is required for managing the monuments at the ground level.
 - The posts of multi-tasking staff required for duties in monuments and gardens may be filled up through outsourcing by engaging local persons who feel more connected with the monuments located in their home state.
- **From 'crowd funding' to 'community funding'**: New funding models can be explored, the archaeology departments can consider opening up the heritage structures to local communities to make them stakeholders, community participation can provide solutions both in terms of visitor interest as well as financial support.
- **The 'Ruritage' programme**, promoted by UNESCO aims to create innovative, rural regeneration-based models for cultural and natural heritage.
 - Similar programme may be launched for India, bringing the role of culture as the fourth pillar of sustainable development and to contribute to socially inclusive economic growth and environmental sustainability in rural areas.

Indian Folk Art: An Information, Education and Communication Tool

Introduction

- The popularity of the folk media is rooted in its inexhaustible treasure of vivid forms, local aesthetics and meaningful themes.
- It draws its strength from age old traditional stories and mythology. Thus, remains forever young in its appeal.
- It provides entertainment in local dialect and has the aesthetic air of belonging and affinity in local cultural context, thus it touches hearts and minds so easily.
- Despite arrival of the mass media and new communication technologies it still exists as a vital mode of communication in rural hinterland.

What Makes Folk Media Popular

- Audience participation is an integral part of the folk media. Irrespective of the age group it provides them enhanced pride and honour.
- It's lively, dramatic and lyrical entertainment that satisfies the innate need of self-expression.
- Folk media techniques are simple and easy and reflect cultural ethos. Thus it touches people's heart.

Background

- For a long time, it was thought that since the folk media is an extension of the local culture, they might inhibit or discourage the modernisation.
 - It was thought as a reinforcement agent for traditional culture of the local community and thus naturally against the direction of modern attitudes and behaviour.
- As a result, most of development communication resources were devoted to technology based mediums like radio and television.
 - It was thought that new age information needs new age symbols. Thus entirely new paradigm was created that was almost alien to the local culture.
- The **Song and Drama Division (SOD) of the Ministry of Information and Broadcasting** was created in 1954 to meet the need to use folk media for development.
 - Since then it has been using folk media such as **theatre, mime, song puppetry, ballets and dances** for informing people about services and programmes made available by the government.

Examples of various Folk Art Forms

- a. **Tamashas**: People get attracted to **tamashas (musical dance shows with a comedian and associate troupe)** because of its lively performance, contemporary story line, colourful presentation, melody, dance and compatibility with local audience culture.
- b. **Bhajans** are quite popular because of familiar religious themes, melodious voice of the singer and again compatibility with local audience culture.
- c. **Kirtans** are a continuous flow of discourses of religious nature with contemporary sermons. The reasons for their popularity are almost same as those of bhajans.
- d. **Nautanki** is another popular folk media.

- Its operatic theatre performance traditions are popular in North India.
- It has intense melodic exchange among performers who do song, dance, skit, comedy and chorus singing.
- Nautankies were used extensively in family planning, anti-dowry campaigns.
- e. **Jatra** is a popular folk theatre in West Bengal, Odisha, Tripura, Assam and Bihar.
 - It is a very long play preceded by a musical concert.
 - Musical concert is often used to attract the audience.
 - Jatra is played on an open stage and enjoys a wide audience base.
 - These Jatras have been used to bring literary works to the villages.
- f. **Festivals and Fairs** : Every state or every region has culture or region-specific festivals for example **Onam in Kerala, Pongal in Tamil Nadu, Ganesh Chaturthi in Maharashtra, Rath Yatra in Odisha, Durga Puja in Bengal, Phool Dei in Uttarakhand, Baisakhi in Punjab** etc.
 - Festivals are the times when all kinds of folk art, dance, drama and other events are organised and experienced by millions.
 - Therefore, these festivals and fairs are great occasions to communicate the behaviour change messages.

Present Situation

Swachh Bharat Mission and Folk Media

- Folk painting styles, and all other mediums like katha-kirtan, nautanki, tamasha, jatra etc. were used by the swachhagrahis.
- Competitions like pangolin and apian, loti (a traditional art forms that uses rice paste) were organised for women, girls and children at OD sites after cleaning the place and planting basil or Tutsi saplings.
- In Odisha districts, parimal ghanta naada (clean sound of a local instrument) were carried out at dawn.

Koosu

- Following the Indian traditional custom of honouring a pregnant woman during the second half of her pregnancy, **Karnataka districts** such as in Kalaburgi an initiative **Koosu** was launched.
- **Koosu, meaning a child in Kannada**, campaign was launched to promote hygiene practice among women.
- Under this a small programme was devised, wherein after an antenatal check-up, a pregnant woman having a toilet was honoured and her baby shower was organised by the local gram panchayat.
- a. **In the districts of Maharashtra**, to promote swachhata with Ganesha Chaturthi, programmes like **Swachh Bail Pola, Swachh Ganeshotsava, Swachh Gauri Pujan** etc. were organised.
- b. **In Bihar, Goddess Durga (a girl dressed as the goddess)** visited homes with toilets during Durga Puja celebrations. Swachhata messages were broadcasted in Durga Puja pandals.
- c. 30 Sarpanches of Baran district **in Rajasthan** took vows to have just one meal per day until their villages became ODF.
- Initially people were sceptical but once they saw the determination of the Panchayat leaders they too joined the movement.
- d. **In Jharkhand**, village ODF declarations were often organised during cultural festivals. The day-long celebration had local sports, indigenous dances and songs to celebrate the swachhata.
- e. **In Madhya Pradesh**, the vanar sena comprising young boys monitored the common open defecation sites each morning. Inspired by the mythical army of Lord Rama, these children held communities accountable for any open defecation practice

Conclusion

- To use the folk media as an effective development communication tool, finer technical points such as selection of appropriate folk media, artistes and language are important but also equally important are the use of modern technology and aids.
- However, for effective large-scale behaviour changes such as usage of toilets, we must have a dedicated volunteer force on ground that keeps the flame burning.

Showcasing Folk Art and Culture at Global Stage

Introduction

- While maintaining consistency in its promotion of varied arts in the international domain, India looks forward hopefully and eagerly to UNESCO's **upcoming meeting of the Intergovernmental Committee for the Safeguarding of Intangible Cultural Heritage**.

Background

- Last year, the Ministry of Culture had launched a draft National List of Intangible Cultural Heritage (ICH) of India as part of its Vision 2024.
 - Through this, it aims to increase awareness about the various intangible cultural heritage elements from different states of India at the national and international level to ensure their protection and preservation.
- A decision will be taken at this meeting about including 'Durga Puja' in the Representative List of the Intangible Cultural Heritage of Humanity.

Historical Perspectives

- One can trace back the roots of the classical arts to 'Natya Shastra' by Bharata Muni, which was first compiled between 200 BCE to 200 CE.
- Through books like Abhinaya Darpana by Nandikeshvara or the Sangita Ratnakara by Sarngadeva, these 'cultured' audiences could understand art, breaking barriers.
- Bhimmas, a sect of Gonds in Chhattisgarh, played large single-headed drums to appeal to their god Bhim, third of the Pandavas for Rain.

Folk Art Forms during colonialism

- Colonialism to an extent has facilitated exclusivity.
- **The anti-naught movement** was not just successful in banning the classical art forms in India then, but also was successful in throwing the folk forms under the shadow of the then banned forms.
 - **Revivalist movements** that followed for their respective reasoning, focussed mostly on the banned forms.
 - Due to lack of support and encouragement and consequent lack of popularity and adequate recognition, several forms like **Lai Haraoba, Vilasini Natyam, Bor Geet, Gaudiya Nritya, Hari Katha, Mahari, Kuchipudi Yakshagana, Krishnanattam, Ramale, Hojagiri** have all been arrested to the geographical boundaries associated with the places of its origin.

Initiatives Taken

- **India is home to over 2500 tribes and ethnic groups that are both recognised and unrecognised.**
 - Art including music, dance, crafts, and paintings have found their way into these groups giving rise to at least a few thousand forms of art, yet only a few find their way into mainstream art.
 - Because of the better availability of standard codes for assessment and yardsticks to ensure quality, more efforts have been put to preserve Classical Arts over the other.
 - This has also pushed other art forms to take inspiration from the more economically rewarding and popular art forms, compromising the originality in the process when in reality it is difficult to pronounce where folk ends and classical begins, even if there was a systematic demarcation.
- The Government of India, through the Ministry of Culture, the Ministry of External Affairs through ICCR, the Ministry of Tourism, the Ministry of Minority Affairs, has actively intervened for the promotion of Traditional Folk Art and Culture.
 - Through **ICCR**, in the last six years alone, 1267.71 crores (ICCR Report, 2014-2020) was spent as Grant-in-Aid to various agencies for the promotion of Art.
 - The government has organised '**Festivals of India Abroad**' and '**Namaste India**' in countries like **Senegal, Cote d'Ivoire, Liechtenstein, Korea and Ukraine**.
 - **ICT initiatives** including the **Sanskriti Channel, Virtual Museums and the Indian Culture portal**, have tried reducing the distance between Art and Art enthusiasts overseas.
 - **Know India Programme**, a **three-week orientation programme by the Ministry of External Affairs**, has created a unique forum for youth diaspora to acquaint themselves with Indian Culture and Heritage.
 - **Promotion of Culture Ties with Diasporas (PCTD) schemes**, various commemorations and festivals establishments/renovations of cultural centres like the recent centre in Jaffna, Sri Lanka have all facilitated the showcasing of traditional Indian Culture at an international level.
 - India has signed several bilateral agreements with other countries for Cultural Exchanges and Promotion.
 - Various schemes through the **seven established Zonal Culture Centres with headquarters at Patiala, Nagpur, Udaipur, Prayagraj, Kolkata, Dimapur and Thanjavur** have also extended a helping hand in this effort.
 - Since 2015, eleven **Rashtriya Sanskriti Mahotsavs** have been organised under the **Ek Bharat Shreshtha Bharat** campaign.

- *Flagship programmes like Lok Kala Darshan, Lok Nritya Bharat Bharati, Tribal Dance Festival, Folk Theater Festival, Lok Gyan Parampara have also served a catalyst in the pursuit to protect and promote folk culture.*

Challenges

- Intricate and intangible elements of the form get neglected, diluting the grandeur and uniqueness of each folk form today.
- Preservation and conservation in India have been perhaps limited to that of the Traditional Tribal and Folk Art.
 - It has helped art forms like **Ganjifa painting, Bhil painting, Roghan Art, Champa Rimal** to return to popular culture.
- Many traditional cultures have been uprooted by war and also by the urge to move to urban areas where a more settled and reliable life can be practised.
- Showcasing the art forms may threaten their preservation process and purpose.

Way Forward

- Participatory movements and efforts involving documentation could facilitate the ambitious **National Mission on Cultural Mapping and Roadmap, launched by the Ministry of Culture.**
- Instead of taking art forms to people, initiatives like '**Dekho Apna Desh**' will help people go back to their roots, help appreciate that of others, and experience them in their natural setting so that torchbearers of culture needn't migrate from their habitat in search of opportunities.
- Establishments of more specialised agencies focussing purely on Folk Art and Culture headed by Scholars and gurus who have proved their prowess could catalyse the process of promotion and through it the preservation of Folk Culture without divesting it of its sanctity.
- There is an urgent need for various stakeholders, who are responsible for preserving arts, to ensure the preservation of the diverse folk arts and not just classical arts by setting up gurukuls where these traditions will be passed on in their original and purest versions to future generations with the freedom to gurus without being subjected to administrative slackening in the working.

MSME - A Powerful Engine of India's Economic growth

Introduction

- The MSME sector accounts for **29% of Indian GDP** and employs 11crore people in its 6.3crore enterprises. However, it is severely hit by COVID-19 and its aftermath.
 - The sector suffered the most in ensuring business continuity, challenged by severe liquidity crunch and dipping demand.
- MSME sector is next to agriculture in terms of providing employment.
 - It accounts for 48% of Indian exports.
 - With strong and complex backward and forward linkages, the sector provides essential support to large enterprises and their value chain.
 - One fifth of these MSMEs are based in rural areas. This also indicates the role they play in promoting sustainable and inclusive development and generating large scale employment in rural areas.



Government Initiatives Taken

- Union Budget 2021-22 brought relief to the capital starved MSM E's with government infusing Rs.15,700crore for the sector.
 - The decision to incentivise the incorporation of One Person Companies (OPCs) in the budget will feed the MSME eco-system.
- By redefining MSME's, the Central Government and the ministry of MSME have brought in a large number of micro and small units under the sector, benefitting them with measures, schemes and concessions.
- The government has also initiated numerous measures under **Aatmanirbhar Bharat Abhiyan**.
- The measures include Rs.20,000crore subordinate debt for MSMEs and Rs.50,000crore equity infusion through MSME fund of funds.
- MSME's also benefitted from **Rs.3 lakh crore Emergency Credit line Guarantee scheme (ECLGS)**.
- With a cumulative of Rs.2.9 lakh crore loan already being sanctioned as of January 29th, 2021, the collateral free automatic loan for businesses has been a major support to the sector.
- The rationalisation of taxes and duties (for various products from steel and alloys to garments and leather) favours domestic manufacturers and will further boost the sector.

Challenges posed by COVID-19

Impact of COVID-19 on different sectors

Sectors	Importance	Impacts of COVID 19
Textile and Apparel sector	It provides 45 million direct employment and contributes 2% of GDP	Demand shocks are expected to hurt the Indian Textile exports and employment
Auto and auto components sector	It provides 40million employment and contribute 7.1% of GDP	This will be impacted by people's purchasing power
Aviation and Tourism sector	It provides 42.7 million employment and contributes 2.4% of GDP	The tourism and the hospitality sector will see a huge job loss.
Real estate sector	It is one of the biggest employment generator in the country and has a multiplier effect on around 250 allied industries.	Housing is expected to have a muted demand and significant reduction in new launches.
Consumer, retail and Internet business	It contributes 10% of the GDP and provides 8% employment	The retailers need to be wary of the supply chain disruptions.
Education and Skilling sector	It has a market size of \$101.1 billion dollars.	The sluggish human resource requirement is likely to increase un-employment and even after the operations resume, there will be issues relating to sustainability of MSMEs, thus leading to large number of layoffs.
Food and Agri sector	It contributes to 16.5% of GDP and provides 43% of the total employment.	The impact is likely to be low on both primary agricultural produce and usage of agri inputs like seeds, pesticides and fertilisers.
Transport & Logistics sector	Contributes 14% of GDP and provides employment to 8.27 million people, will see a medium impact.	Reduced demand for logistics due to reduced production across all sectors will put a downward pressure across

Opportunities

Health and Wellness

- The healthcare industry has three major problems-affordability, reach and trust.
- Due to poor healthcare infrastructure, and low doctor patient ratio, not everyone has access to healthcare facilities in the country.
- Understanding the needs, a number of start-ups have come up using Pandemic as an opportunity.

- Few examples include,
 - Bengaluru based start-up Biodesign Innovation Labs, which has come up with a portable ventilator.
 - Hyderabad based Aerobiosys Innovations has come up with an IOT enabled ventilation system 'JEEVAN Lite'.
 - Along with start-ups, Indian car maker Maruti had announced that it is teaming up with AGVA to manufacture ventilators.

Digital Education

- Starting from online teaching platforms to assessment of assignments and online exams. The pandemic has made it essential for educators and learners to adopt more efficient digital processes and tools.
- As the economy normalises, the disruptions and innovations coming to the fore during this phase will become key industry growth drivers in future.
- Companies like BYJU's, Whitechat Jr, Unacademy, Toppr, Vedanta, etc. have gained up to a three times surge in usage since the first phase of lockdown.

E-commerce and Delivery Based Services

- The recent turn of events have further catalysed the entire game to unprecedented levels.
- People who refrained from using online ordered utilities, services and commodities, are now adapting to procure their daily needs e-commerce and delivery based services.
- India's online grocers, Big Basket and Grofers, have nearly doubled the number of daily deliveries and both are expected to hire new workforce to meet the increasing demand.

OTT platforms and Online Gaming

- With cinema halls facing closure, movies are being released online through partnerships with media streaming applications.
 - The online platforms and online gaming has surfaced above the conventional ways of entertainment.
- These platforms have proven to be time and cost efficient, providing a more personalised version of the same experience, and at the comfort of home.

Alternative Medicine

- **Self care industry** has seen growth during pandemic, and consumption of motivational contents, exercises, healthy diets, mind management, etc., has increased exponentially.
 - Immunity will be the buzzword in the post COVID- 19 era and the industry that has benefitted the most is that of alternative medicine.
 - Ayurveda market is continuously growing and along with that there is growing market for healthy snacks.

Policy Intervention Required

- It is time for Indian businesses to transform and take a positive approach towards investment for building 'AatmaNirbhar Bharat'.
- Entrepreneurs need to take advantage of the opportunity thrown up by COVID-19 crisis.
- As far as government is concerned, along with facilitating entrepreneurs to capitalise on opportunities, it is imperative that government increases investment in the social sector including healthcare, education, environment and rural infrastructure.
- There is need to look at sustaining demand and the government should plan to push demand through another stimulus down the road.
- It is pertinent to note that **India's Research and Development spending is 0.6% of GDP**, whereas for **China it is 2.1% and South Korea 4.55%**.
- However, amidst the economy being in technical recession, the sector still needs a much stronger policy thrust to maximise its potential.
- The sector will benefit if a considerate view is taken and changes happen, making credit and capital easily accessible to MSMEs.
 - The lending eco-system, therefore, needs to be eased and strengthened by leveraging digital technologies for seamless lending process and for assessing credit risk of potential borrowers.
- Incentivising digital adoption within the sector
- Promoting digital literacy
- Addressing skilling challenges
- Reducing GST
- Easing various licencing and compliance regulation
- Making interventions that would guide the sector to wider markets, through e-commerce

MSME centric initiatives which need to be addressed

- It is important that the Ministry of MSME draws up a policy framework with multiple scenarios on how to continue business operations commensurate with the spread of the virus. **The proposed policy framework, could consider the following.**
 - Wage support or subsidy package** could be made available to employers to pay salaries and other statutory dues specially to the contractual / daily wage workers.
 - There may be room to compensate (subject to a cap) self employed businesses who can prove a decrease in turnover.
 - Treatment of commercial electricity, water and other utility bills** could be examined specifically in the scenario where lockdown has been further extended.

Way Forward

- The Ministry of Micro, Small and Medium Enterprises (MSMEs) adopted the cluster approach as a key strategy for enhancing the productivity and competitiveness as well as capacity building of small enterprises (including small scale industries and small scale service and business entities) and their collectives in the country.
- For MSMEs to recover from the COVID-19 crisis and identify opportunities, they need to:
 - Embrace technology and digitisation
 - Change mindset and focus on business innovation
 - Monitor labour productivity on a daily basis
 - Think of strategies that can revive revenues of the businesses within a short span of time. Launching an e-commerce vertical is a good example
 - Building resilient and local supply chain
 - Digitising supply chain completely
 - Divesting unprofitable verticals of business
 - Sticking to core and focussing on strengthening it

Warlis: Life around Nature

Introduction

- Warlis are adivasis who live in the North Sahyadri mountain range of Maharashtra.**
 - The word 'warli' originates from the word 'waral' which means a piece of land.
 - This place is known as Waral, and since they resided there, they took the name of warli.
 - They were hunters and food gatherers living in the forest.
 - With time they were forced to settle down at the base of the hills and so they adopted an agro pastoral life style.
 - Even after the Britishers came to India, many changes in their lifestyle were seen.
- Warlis are considered as one of the most significant tribes of Maharashtra as they share one of the most unique relationship which makes them different in comparison with other tribes of Maharashtra.
- The Warlis have a close relationship with the nature and it is reflected in their art, communicated, through their paintings on the wall in the form of story and happenings of their daily life.

Geographical Distribution

- The Warlis are mainly found in
 - Thane, Palghar, Morkhada, Talasari, Vikramgad, Vada, Jawahar, Dahanu, Cosbad, Nashik and Dhule districts in Maharashtra.
 - Valsad district in Gujarat.
 - Union Territories of Dadra and Nagar Haveli and Daman and Diu.

Language

- Warlis speak in unwritten Warli language. Marathi, Gujarati, Sanskrit and an Indo-Aryan dialect (mix of Khandeshi Bhilli and Marathi) are the languages widely used for communication by them.

Occupation

- They are seen as a self-sufficient community who make the best of everything they get from nature. This makes them highly dependent on nature and natural products.

- **Agriculture and allied activities**
 - The Warlis worship the earth and treat it as mother goddess as they grow crops on this ground for survival.
 - They cultivate, gather and grow a single crop for subsistence and also gather forest produce in form of fruits and herbs.
- **Forest and forest products**
 - Bamboo which is available from forest are used by warlis to make baskets, mats to meet their basic necessities at home.
 - They also collect seasonal fruits like bore, peru, oranges, chikku from the forest and sell it in the nearest local market.
 - Warli women pluck flowers from the forest and use it at the time of festivals and celebrations.

Life Style and Food Habit

- The warlis are non- vegetarians.
 - Fish is a staple food in warli community.
 - They consume meat of deer, goat, wild rabbits, and pigeons.
 - Rotis are made up of nagli, wheat, jowar and rice.
 - Leafy vegetables are very popular among tribal community of warlis.
 - The oils used by the warlis are very often either palmolein or groundnut oils for cooking.
- At the time of festivals, harvest time and celebrations among warlis, use of *tadi* is very common and it is consumed by everyone.
 - *Tadi* is prepared from Mahua which they use for their own consumption and supply it to others also during the time of celebrations.
- Generally, they don't make tea as the domestication of cow and buffalo is not available. This makes them highly dependent on nature and natural products.
- **There has been observed a habit of smoking bidi in the warli community.**
 - Bidi is made of Asitra (timroo) leaves.
 - Majority of tribal are habituated to bidi so they keep asitra leaves in their pockets and they just roll it and consume when they feel like smoking.
- **During the time of celebration, food is served on pattal (Plate made up of Sal Leaves).**
 - They use Pattal, which are plates prepared by stitching with fine, thin pointed bamboo stick of 6 or 8 leaves, for eating food.
- **Warlis enjoy and celebrate their comfortable and ethnic clothing.**
 - Normally, men wear a thin loin cloth and a turban, while women gracefully drape colourful knee-length saris.
 - On certain occasions, women glam up by wearing their hair in stylish and beautiful ways

Religious Beliefs

- **Warlis hold a very strong respect for their spirits and deities. For the warlis, Bhagat, is their guru.**
 - They believe in tantra, mantra and in re-birth.
 - In their culture, they cremate the bodies and, in this procedure to perform rituals, the Bhagat plays a crucial role.
 - The warli also worship the village god and strongly believe in customs and traditions.
 - They worship gods chiefly to avoid their anger.
 - They believe in *Jaldevta, Van devta and Vaayudevta*. They feel that if someone dies at a young age then that is due to the curse of these Gods.
 - They are well known to have a faith in *Tiger God (Vaghai)*.
- As they acknowledge waghoba and worship its role in balancing the food chain.
- They consider the tiger as a symbol of life and regeneration.
- They do not have well-built temples, but have carved wooden statues of tigers for worship.

Art and Culture

Warli paintings

- Its roots can be traced to the early 10th century AD.
- These paintings reflect their beliefs and traditions.
 - Homes of warlis have muddy walls and doors which are painted at the time of marriage, birth of children and new harvest.

- They use fine powder of Geru known as lalmati and mix it with water to form liquid color that makes muddy wall their canvas.
- Bamboo stick crushed at end to form as brush.
- The Warlis use only white colour for their paintings.
- The white colours are made using a mixture of rice dough and natural glues which are obtained from trees.
- In Warli painting, usage of basic geometric shapes like triangles, circles, squares and lines are used to add effect and beauty.
- All these shapes are influenced by the nature.
 - The triangle often symbolises hills and pointed trees.
 - The circles symbolise sun and moon god.
 - The squares symbolise chowks. Chowks are mainly used in marriage related paintings and it holds a significant value in marriage.
- '**Lagnacha Chauk**', meaning marriage paintings, are sacred and without them marriage cannot take place.
 - Warli women wear toe-rings and necklaces as a sign of being married.
 - By doing this, they attempt to invite all the gods and goddesses of their tribe to attend their family wedding to bless and protect the couple from the evil spirit.
- **The paintings highlight the struggles of their daily life.**
 - Activities of hunting, fishing, farming, festivals, dances, trees, snakes, ants and animals are depicted in their paintings.
 - The warli painting show the simple lives of the people in the region.
 - They live peacefully with their animals and give equal significance to its every aspect in their painting.
 - The paintings have no words yet tell stories through shapes which are used to draw human beings and animals.
 - Different shapes are used to tell different stories. Huts and trees are a prominent feature of their paintings.
- The warli painting depicts life and culture of warli community.

Tarpa (instrument) dance

- **The Tarpa (instrument) dance**, is one of the most famous dance forms.
 - The custom is that musician has to make his own instrument and so the instrument used while playing should not be made by others or outsiders.
 - The tarpa dance begins during the day and goes on for the entire night.
 - To the Warlis, tarpa symbolises the continuity of life.

Comment

- Today, warli painters are famous throughout the world.
- Warli paintings which were first made by women to communicate their daily social life situations, is now even done by men.
- **In 1970 when Jivya Soma Mashe**, started painting the daily life of warlis, the Government of India gave him the Master Craftsmen status.
- Stick figure art, which warli women used to paint on their walls during marriages for good luck, was shifted to paper and canvas by men, thus, giving it a new pathway.
- Due to this, warli painting is now a new source of income for the warli community.

Understanding Indian Classical Dance

Introduction

- The term 'Dance' is commonly perceived as the movement of body parts (hands, legs, waist, torso, along with movement of facial muscles and of sensory organs namely eyes) in a certain rhythm, based on the music, which entices 'feel good' factor to the dancer as well as to the viewers/ audience.
- Broadly, **it has two main categorisation: Western and Classical.**
 - While the latter has roots connected to Indian traditions, the Western Dance encompasses varied forms, originally from Western countries like the US, such as hip-hop, contemporary, jazz, ballet, etc.
- Overall, dance helps to keep our body in perfect shape, as it is equivalent to exercising, doing aerobics or yoga, and promotes fitness and flexibility, as well as allows us to connect with different societies.

Background

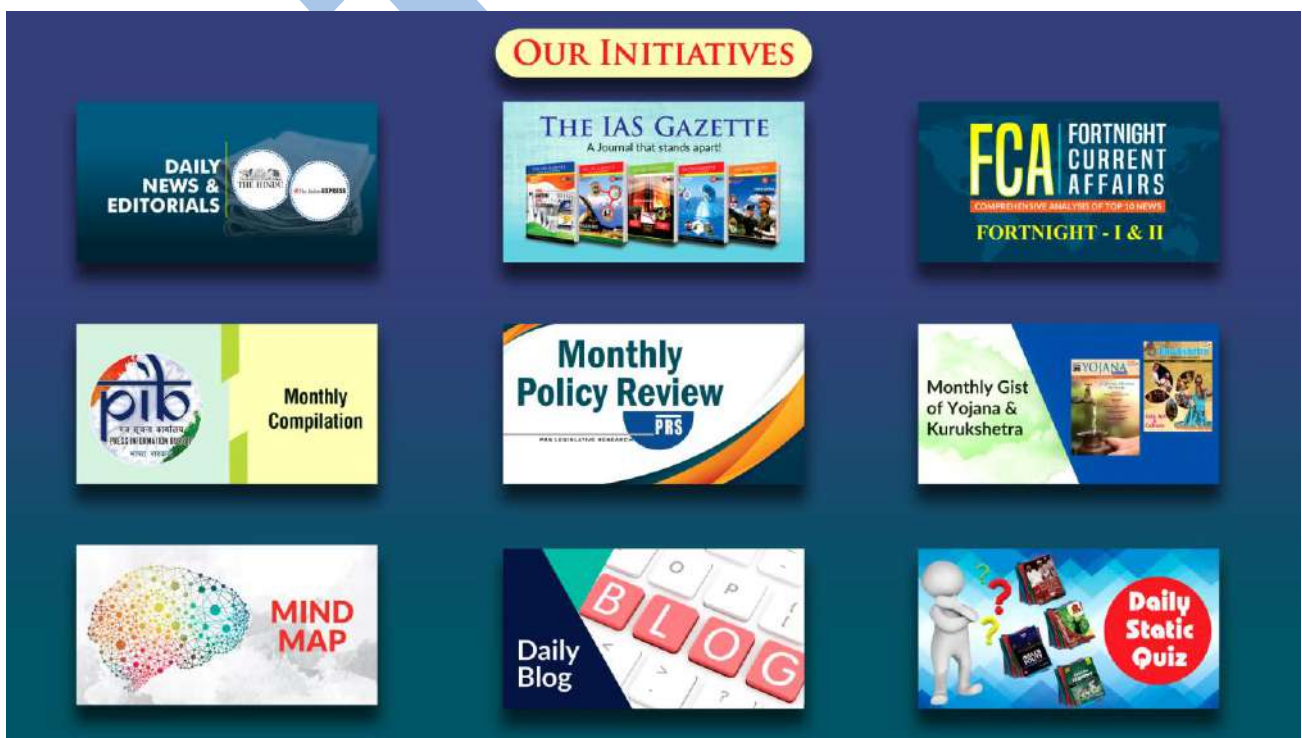
- Classical dance started out in the form of worship in temples, then in the kingdoms of Mughal Empire, and this even gained acceptance (since 18th-19th centuries) at international level in the field of 'Art and Culture'.
- This involve strict techniques and rules relating to body movements, bhava (expressions), costumes, hand and leg postures, etc., and its earliest evidence can be traced in Bharata Muni's Notya Sostra (believed to be written prior to 200 CE)

How are they different from Folk Dances

- Classical dances are different from folk dances, which lack strict rules.
- Latter have been created based on narrative of the region, based on how people live there, communicate with each other, enjoy festivals as per the seasons and agricultural harvest of the State/region, etc.
- These include **Bhangra from Punjab, Ghoomar from Rajasthan, Lavani from Maharashtra, Bihu from Assam, Garba from Gujarat, Chhau from West Bengal and Odisha, Bacha Nagma and Rouffrom Jammu and Kashmir**, etc.

Classifications

- Indian classical dances are broadly represented in two formats.
 - Tandava**, which is said to be originated by Lord Shiva (believed to be originator of dance and mudras as 'Nataraja'), and includes fast movements of body parts to show aggression, courage, etc.
 - Lasya**, which displays grace, love, beauty, gentleness (it is believed to be originated by Goddess Parvati), and is mostly performed by females.
- Performance or Abhinaya in this Art form is divided into three parts:**
 - Natya**, referring to imitation of a story;
 - Nritta**, implying actual dance movements; and
 - Nritya**, depicting usage of facial and hand gestures/motions.
- Classical dances have a deep-rooted devotional Guru-Shishya Parampara, involving blessings of Goddess Saraswati.
 - Ghungroos or ankle bells** are worn by the dancers as the pre-requisite, and are considered auspicious instruments that enable the dancers to perform as per the Taal/Tala (rhythm consisting of beats/matras) and Loya (tempo of rhythm) in Hindustani music.



Different Types of Classical dance

Bharatanatyam

- **Bharatanatyam** as one of the most famous Indian classical dances, **belongs to the State of Tamil Nadu** and has one of the toughest **leg postures (Mandala)**, i.e. **Aramandi**, where heels are put together, while toes point outwards and the knees remain bent in half-squat position.
- This is famous as **Ekaharya**, where a single dancer performs many characters.
- Kathak is a **popular dance form of North India** and has **three Gharanas: Lucknow, Jaipur and Banaras**.
- This involves telling a story through expressions, and footwork (Tatkar) and spins (Chakkar).

Kathakali

- Kathakali is from **Kerala** with a perfect blend of dance, music, drama, expressions, and the costumes which are huge and enchanting as they involve green colour **Paccha** make-up on face, **Kirita** (big golden headgear) and a long bellowing cushion-padded skirt.

Mohiniattam

- **Mohiniattam dance**, which is also from **Kerala**, is more subtle with delicate movements of body parts and is generally performed solo by woman (known as dance by the enchantress).

Manipuri dance:

- Manipuri dance from Manipur has more devotional form and is based on **Radha-Krishan's Rasila**.

Odissi Dance

- Odissi is one of the ancient dances which depicts archaeological culture of Odisha and has circular movement of legs.
- **Tribhailgo is its main standing posture** in which body bends at three levels: knees in one direction and hips/waist in second; and shoulders/neck in other form.

Kuchipudi dance

- Kuchipudi dance belongs to the **State of Andhra Pradesh** and has fast foot movements with dramatic expressions and dialogues.
- It is also performed on the edge of a brass plate (known as **Tarangam**) on the beats of Carnatic music.

Rasas of Classical Dance

- **Predominantly, there are nine Rasas in classical dance based on different emotions:** Hasya (Laughter), Shringar (Love, Beauty), Raudra (Anger), Veera (Bravery, Fearlessness), Bibhatsa (Disgust, Hate), Bhayanaka (Fearful), Karuna (Compassion, Sorrow), Adbhuta (Wonder, Surprise), and Shanta (Peacefulness).
 - These emotions are experienced at the mind level by a dancer and are spread to the audience through **facial expressions called as Bhava**.
 - While acting out all these Rasas in a subtle way through **Abhinaya**, the dancers become the observers, who no longer resist eruption of any kind of emotion, be it anger, sadness, etc.
 - The feeling of unconditional love and empathy towards each emotion is naturally generated, as most of the base of classical dance is Devotion and Surrender to God or Higher Power.
 - Spiritual growth is also thus stimulated without sacrificing joy and bliss in our day-to-day routine life.

Mudras of Classical Dance

- **Mudras** are the gestures done by hand, and their reference is generally obtained from **Abhinaya Oarpana** by **Nandikesvora**, "**Asamyutta**".
- **Mudras are done with one hand and are primarily 28 as per this ancient text**, i.e., '**Pataka, Tripataka, Ardha-pataka, Kartari• mukha, Mayura, Ardha-Candra, Arala, Suka• tundaka, Musti, Sikhara, Kapittha, Kataka-mukha, Suci, Candra-kala, (Padma-) Kosa, Sarpa-sirsa, Mrga-sirsa, Simha-mukha, Langula, Sola-padma, Catura, Bhramara, Hamsasya, Hamsa-paksa, Samdamsa, Mukula, Tamracuda, and Trisula**'.
 - **Patoka refers to cloud, river, horse, forest, night, etc.** and in this mudra, all the fingers are held closely yet straight, while the thumb bends.
 - **Mayura refers to peacock**, where tips of ring finger and thumb touch each other.
 - **Ardhachandra displays half-moon**, meditation pose, etc. and it is similar to Pataka but the thumb is stretched outside.
- **Conversely, using both the hands, there are mostly 24 "Samyutta" Mudras**, i.e., '**Anjali, Kapota, Karkata, Svastika, Dola, Puspaputa, Utsanga, Siva-linga, Kataka-varadhana, Kartari-svastika, Sakata, Sankha, Cakra**'.

Samputa, Pasa, Kilaka, Matsya, Kurma, Varaha, Garuda, Naga-bandha, Khatva, Bherunda, and Avahittha' to mark auspicious symbols, devotion to deity, convey messages, along with depiction of nature, birds, etc.

- Anjali is to offer salutation to God and Guru (hands in Namaste form).
- Kartari-svastika signifies trees, hills, etc. - hands are crossed where each one remains in Kartarimukha mudra (representing scissors, when index and middle fingers are stretched, whereas little and ring fingers bend to touch the tip of thumb).
- Garudarefers to the eagle or vehicle of Lord Vishnu (when both hands are in Ardhachandra mudras and are placed over each other by interlocking thumbs).

Significance of Mudras

- Each finger represents five elements of Nature:
 1. Air/Vayu (Index finger),
 2. Space/Akash (Middle Finger),
 3. Earth/Bhumi (Ring Finger),
 4. Water/Jal (Little Finger), and
 5. Fire/Agni (Thumb).
- In yoga, when their tips are touched thereby forming special mudras), then energy is generated and blood flow is improved, thereby benefiting the entire body and balancing Pancha Mahatattvas.
- Classical dance also becomes a yogic practice with use of all its Mudras.

For instance,

- **Kartarimukha Mudra** is similar to yoga's Prana Mudra which removes fatigue and heals deficiency of vitamins.
- **Jnana/Gyan Mudra** (where tip of index finger is firmly pressed with thumb tip to aid in better memory and insomnia) is similar to Hamsasya Mudra, representing Swan in dance.
- **Apana Mudra** (where tips of two centered fingers are touched with tip of the thumb) is immensely useful in curing constipation, diabetes, piles, etc. and resembles Simha-mukha Mudra (lion's face).
- **Mayura Mudra** is like Prithvi Mudra which heals earth element, helps in growth of hair, improves skin complexion, and boosts confidence.
- It may be challenging to perform yoga mudras daily, but these become pious and exciting when done with classical dances.
- **Kathak**
 - "The basic or standing position (Sthanak) of Kathak is in itself an 'Asana'.
 - It involves straight alignment of spine and neck as well as pressure on both the hands right from arms which can be used in the treatments of paralysis, spondylitis.

Benefits of Indian Classical Dance

- **It helps in proper Acupressure treatment**
 - Indian classical dances involve immense footwork whose pace differs as per the dance, viz. Kathak's Jaipur Gharana includes fast footwork and spins.
 - This helps to banish tension and pain in the body, heals organs of the body such as kidney and heart, resolves constipation, regulates blood pressure and diabetes, cures arthritis, and stimulates better coordination of neuro-motor skills.
- **It enables free expression of Creativity and Loving All Our Emotions**
- **It bestows on us Yogic Benefits of Different Hand Mudras as well as Connects us with Nature.**
- **It helps in perfect alignment of body and keeps us physically healthy.**
- **It Promotes Better Coordination of Left and Right side of Brain.**
- **It fills us with Natural and life-supporting Vitamins-Vitamin 02, Vitamin P2; and Provides Benefits of 'living in the Present Moment'.**
 - Vitamin 02 refers to regular dosage of Discipline and Dedication, and Vitamin P2 refers to Patience and Perseverance.
- **Releases Good Hormones and Aids in Mental and Psychological Health.**

Conclusion

- Indian classical dances have innate creative formula embedded in them, which can offer a better satisfied life, without compromising natural beauty within and around us.
- These are one of the best ways for doing inner-work, which pandemic has also enforced upon us.

Traditional Toy Industry-New India's Sunrise Sector

Introduction

- Toys are an important part of childhood, as they aid in physiological, mental, and emotional development.
- Traditional toys are also an important cultural asset as they depict ancient mythological stories and display the beliefs and traditions that exist among communities.
- Handmade toys are made of simple local materials like wood, bamboo, cloth, metal sheets, wire, paper, cardboard, etc.
 - Toymakers use of recycled materials has no overhead cost and hence enables artisans to manufacture and sell toys at an unbelievably low price.
 - It is a labour-oriented industry based on master craftsmanship and creative designing.

Background

- **The Indian toy manufacturing industry plays an important role in generating employment opportunities for women and providing a regular source of income for rural households.**
 - In the toy industry, over 60% of toy factory workers are women.
 - 90% of the Indian toy industry is unorganised, with more than 4,000 micro, small and medium enterprises operating across the country.
 - Currently, 85% of the domestic demand for toys is met through imports from China, Sri Lanka, Malaysia, Germany, and the US.
- In comparison to import volumes, India's toy exports merely stand at INR 730Crore (US\$ 100 Mn).
 - This trade deficit is alarmingly large, given the potential of India to be self-reliant in an industry that is likely to grow at 10-15% against the global average of 5%.
- **To further boost the toy industry, the Government has undertaken the following initiatives:**
 - National Action Plan
 - A comprehensive action plan to boost local manufacturing and incentivise toy and handicraft manufacturers in the country.
 - The '**National Action Plan**' will be implemented in collaboration with 14 Central Ministries, including Education, Textiles, Railways, Science and Technology, and Information and Broadcasting.
- **Toy Fair**
 - In line with the national initiative to promote the domestic toy industry, the government organised a **National Toy Fair from February 27 - March 03, 2021**.
 - The toy fair aimed to provide a platform to promote traditional, eco-friendly, and indigenous toys and to boost the Indian economy by supporting the local toy industry.
- **Toycathon**
 - To promote toy manufacturing among domestic players, particularly rural entrepreneurs, a Common Service Centre (CSV) and a Special Purpose Vehicle (SPV) under the Ministry of Electronics and IT, joined forces with the All India Council for Technical Education (AICTE) to organise 'Toycathon 2021'.
 - It aims to invite students, teachers, start-ups, toy experts and professionals to innovate and submit feasibility assessments for local manufacturing of creative toys, games and concepts.
- **Toy Cluster Programme**
 - Most toy manufacturers are in Delhi NCR, Maharashtra Karnataka, Tamil Nadu and small clusters across other Indian states.
 - To streamline this sector, the government announced the 'Product Specific Industrial Cluster Development Programme' in 2020 to build toy clusters in dedicated SEZs and help them become customised, self-sustained ecosystems catering to export markets.
 - Moreover, the government is also providing incentives at each step, from setting up a plant and facilitating key resources at subsidised rates to incentivising running costs with the single goal of attracting investments and building export capacity.
 - **Karnataka is creating India's first toy cluster in Koppal district**, designed with the view of housing an inclusive ecosystem of ancillary suppliers and industrial and social infrastructure.

Conclusion

- Thus, with the numerous government initiatives, growing awareness around traditional toys and a countrywide push for local handicrafts, New India's traditional toy industry is at the cusp of unprecedented growth.

- The industry is witnessing rapid transformation through a plethora of technological innovations and is likely to become a major contributor to the economy in the coming years.
- The growth of the traditional toy industry is truly a step towards the vision of a self-reliant New India.

Role of Folk Media in Nation Building

Introduction

- Folk media are the arts which have been transmitting values, thoughts, norms, beliefs and experiences of people in a homogenous society through its various forms.
 - Rural India is a treasure trove of folk art, theatre, music, dance, art and craft.
- In India, folk performance is a composite art. It is a total art created by the fusion of elements from music, dance, pantomime, versification, epic ballad recitation, religion and festival peasantry.
- This media can play an important role in nation building as it is depicting realistic culture of the people.

Background

- The immediate challenge after independence was to shape the nation and make it united through accommodation of existing diversity, and also eradication of poverty and unemployment.
 - The country was also focused on ensuring the development and well-being of the entire society and not only of some sections.
 - Its development journey after independence has seen significant milestones through reforms which has enabled the nation to achieve substantial progress in the context of rise in income levels, growth, literacy, life expectancy and a wide variety of other economic indicators.
- But the current requirement for the country is to make our country "**AatmaNirbhar Bharat**", which translates our nation into '**Self-reliant India**' related economic package on **12 May, 2020**.
 - Subsequently, two more AatmaNirbhar Bharat packages were announced on 12th October and 12th November 2020, bringing the total economic stimulus to Rs.29.87 lakh crore (US\$ 420 billion).
 - The phrase has been used by the government in relation to the 2021 Union Budget of India.

Role of Folk Media

- Traditional folk media originated as a consequence of people's need to express themselves.
 - Traditional folk media is not just confined to dance and music, but also includes art and crafts.
 - It absorbs ceremonials, rituals, beliefs and of course the social system. Hence, it has been noticed as a medium of developmental communication.
- Even in the era of advanced technology, the folk media have more propounded effect as we can use this media based on our flexibility of time, space and attract the audience via adequate idioms, purposeful significance and entertainment component.
- The reach of folk media is higher as it breaks the language and literacy barriers, and adds curiosity in the listeners, which can change the attitude and perception of people.

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Historical Perspective

During colonial Rule of British in India

- "Baul", "Kavigan", "Chhau" dance of Bengal, "Lavani" of Maharashtra, "Gee-Gee" of Karnataka, and "Villupattu" of Tamil Nadu, change their content and focus, depending on the contemporary needs, and were effective in arousing the conscience of the people against the colonial rule of the British.
- The traditional media were effective in many political and social campaigns launched by Mahatma Gandhi.
- Likewise, the eminent Tamil poet Sumbramania Bharati started using folk music to evoke patriotic feelings.
- Folk tunes were used to popularise songs and glories of spinning wheels and consequently boycotting British goods.
- In 1940's India People Theatre Association successfully handled some of the popular regional theatre like "Jatra" of Bengal, "Bavai" of Gujarat, "Tamsa" of Maharashtra, "Burkatha" of Andhra Pradesh, to increase social awareness and political education.

Post Independence Era

- The first significant international recognition of the traditional media in the communication and development strategies of the developing countries, came in the year 1972, when the international parenthood federation and UNESCO organised a series of meetings in London relating to integrated use of folk and traditional media in family planning communication programmes.

Prerequisites for Using Folk Media in Nation Building

- An understanding of the rural audience and Careful consideration of content of Folk Media.
- Integration of Folk Media with the customs and beliefs of the local communities
- Provide rural people with entertainment in order to attract their attention and to ensure their participation in developmental activities
- Preserve the originality of each folk form, and any adaptation, need not alter nor destroy the form
- For effective community-level communication strategies, the integrated and planned use of both folk and mass media is necessary
- Collaboration between the folk artistes and the media producers is absolutely essential.

Strategies for Promoting Role of Folk Media for Nation Building

1. Identifying Interest, Needs and Attitude of Rural community
2. Planning
3. Utilising the Social Structure of Village
4. Integration of Folk Media, Mass Media and Social Media

Way Forward

- The folk media in India seems to be used as supplements to the mass media rather than at the centre of communication efforts to reach 70% of India's total population who live in villages.
- Traditional performing arts being functional, interpersonal and having a contextual base would be able to carry the message, of change, development and growth.
- Rapid transformation of mass media can be used as an effective blend along with folk media for bringing about effective participation of people in nation building activity.

Preserving Performing Arts

Introduction

- Performing art is an art that is performed before the audience and is appreciated for its content, form, style, and the aesthetic approach.
 - Through the performing arts, artists keep on sharing the knowledge acquired from the elders.
- Music, dance, and drama are the forms of performing arts that are being traditionally performed on stage before the audience.
- Performing arts are the repository of "Cultural Heritage", the intangible cultural heritage.
 - Performing arts include traditions or living expressions inherited from our ancestors in the form of diverse performing arts like oral traditions, song, dance, and drama.
- Performing arts is a kind of intangible cultural heritage and is an important factor to showcase cultural diversity to the world.

- Performing arts makes a natural bonding between the generations by exploring the conflicting stories of human characters being told in the form of song, music, dance, and drama.

Background

- Even before the emergence of language, the forms of the performing arts were the medium to convey the experience, feelings, and expressions of human beings.
- In the 21st century, the content, form, and style of the performing arts are being changed as per the time.
- However, there is a need to maintain the basic traditions, philosophy, and the nuances of any performing arts.
- Preservation is a way to sustain the best quality of live representations, without losing their originality.
- Performing arts has deep connections with the oral traditions and expressions, verbal/non-verbal. Performing art explores human character and behaviour and the cultural ecology with social practices, rituals, and festivities.
- The song and dance use repetition of words, tune, and rhythm which makes them easily memorised by people to explore their imagination to express them in composition using the mind, body, and voice of a human being.
- Performing arts practices to express not only the abstract feelings of a human being, but, it also uses traditional as well as innovative craftsmanship to communicate expressions powerfully.

Performing Arts in India

- Bharatanatyam, Kathakali, Kathak, Manipuri, Odissi, Kuchipudi, Sattariya, Mohiniyattam** are recognised as classical dances of India.
- In music, we have Hindustani and Carnatic classical music divisions.
- Traditional, ritual, regional, and folk music, dance, and drama are also very attractive experiences for tourists coming to India.
- They go to enjoy performing art practices like-

Sl. No	State/Region	Performing Arts
1	Uttar Pradesh	Ras, Rasiya Geet, Nautanki, Birha, Sohar, Hori, Dhobiya Dance, Alha, Ramleela
2	Rajasthan	Pankhida, Lotia, Ghoomer, Kalbelia, Swang, Phad, Langa and Mangniyar, Khyal, Laavni.
3	Chattisgarh/MP	Pandvani, Baans Geet, Loriki, Nacha.
4	Kumaon	Ramleela, Shakunakhar, Mangalgeet, Devgeet Baramasa
5	Goa	Mando, Dasavatar
6	Jammu and Kashmir;	Chhakri, Bhand Pather, Rouf Dance, Bachnagama, Bhakha
7	Himachal Pradesh	Laman
8	Punjab	Tappa, Bhand Mirasi, Jugni, Dhad Sarangi, Algojha, Heer, Bhangra, Gidda, Sha badKirtan
9	Haryana	Sang/Swang ragini
10	Maharashtra	Powada, Laavni, Tamasha, Dasavatar, Jhadipatti
11	Andhra Pradesh	Burrakatha
12	Odisha	Daskathiya, Prahalad Natak, Bharat Leela, Ramleela, Daskathia, Chhau
13	Kerala	Bhuta Song, Kuttilyattam, Kathkali, Moiniattam, Mudiyaattu, Chavittnatam
14	Assam	Bihu, Sattariya, Gayan Bayan, Tokri Geet, Jikir Zari, Ojhapali, Dhulia Circus, Mobial Theatre, Devdhani, Bhavona
15	Manipur	Li Haroba, Manipuri Ras, Sumang Leela, Pung Cholan, Dhol Cholan, Moirang Parva
16	Garhwal	Saikuti Zai, Bamboo Dance of Mizoram, Basant Geet, Ghasiyari Geet
17	Bihar	Salhes Naach, Chandaini, Vidapat, Bhikhari Thakur's Bidesia, Chaiti, Jat Jatin, baramasa, Poorvi, Hori, Jogida.
18	Tamil Nadu	Villu Paatu, Ammanaivari.
19	Tripura	Hojagiri.
20	Jharkhand	Chhau
21	West Bengal	Jhumur, Chand Biwir PalaGaan, Baul, Chhau, Jatra.
22	Bhavai, Garba, Dandiya	Gujarat

Government Initiatives

1. The establishment of a performing arts council at the regional level will be helpful to take measures to ensure the substantial existence of the art form.
2. Ministry of Culture, Government of India with its regional, Zonal Cultural Centres, Sangeet Natak Akademi, National School of Drama, Centre for Cultural Resources and Training (CCRT), Kalakshetra and many state cultural bodies are giving grants to individuals and institutions for creation, research and organising festivals and celebrations of performing arts in India.
3. It is suggested to establish Indian Cultural Services, to bring some best administrative minds of the country to enhance the status and practice of performing arts.

Way Forward

- The performing arts create an intangible cultural experience that needs to be safeguarded, preserved, and recreated, and transmitted to the next generation as heritage.
- We must try to strengthen and reinforce the diverse and varied circumstances, tangible and intangible elements with evolution and interpretation.
- National, regional and local performing arts competitions, and creative workshops and productions may be felicitated by the government and local concerned bodies.
- National, regional and local channels to showcase, document, and disseminate the knowledge behind the practice of various performing arts can also be encouraged.
- Performing arts are the three-dimensional human idea in practice to keep the abstract creative urges and character transparent for the masses in a defined, disciplined space with the strength of content and the beauty of expression to keep the society in control of the body, voice, and mind to maintain peace and harmony in the locality and on the globe for a future generation living happily in harmony with nature and universe.

Art and Crafts of Northeast India

Introduction

- The North-eastern region of India bears a huge testimony to the country's colourful tradition and heritage.
- The seven states of the region is home to over 160 major Scheduled Tribes and over 400 other tribal and sub-tribal communities and groups, each having its own distinct and unique cultural tradition, replete with a rich history and folklore.
- Moreover, members of each tribe and community are born artisans, producing a wide range of art and craft products befitting their respective traditions.

Industries Developed

Hand Loom

- Every indigenous community of this region has its own range of handloom textiles, each also depicting the distinct identity of the tribe or community.
- While women of the tribal communities use the **loin-loom**, others use the **handloom** to produce a wide range of textiles.
- The **fabrics woven** for women also come in different colour combinations for different communities, **some made of cotton, some of muga (golden silk), endi (warm silk) and some others of paat (white silk)**.
- In Assam, Assamese women weave the **three-piece meknela-chador and riha**, while **Bodo women** produce the brilliant **dokhona-jwmgra and aronai**.
- Bhupen Hazarika, in one of his songs, had described the **jeinsem** as having been woven of strands of the lightning.
- The **gamosa** - a traditional hand-woven cotton towel - of Assamese women have remained so popular that the Prime Minister too is often seen with one around his neck.
- Women of the **Rabha community** on the other hand weave **khambung and riphon**, while **Mishing women** produce **sumpa and galuk**, to name a few.
- In Manipur, women of the Meitei community weave the **phanek**, Tangkhuls weave the **kasan**, Paite, Vaipheis and Zous produce different types of **puan**, Thadou the **khamtang** and Korns the **punkophoi**.
- In Nagaland too, women of different tribal communities weave their respective wrappers, loincloths, scarves and aprons.
- The Ao shawl thus is known as **tsungkotepsu**, and the Angami shawl is called **foramhousho**.

- In Arunachal Pradesh, Singpho women weave the pukang, Nyishi women the par-ij, Apatani women the biian-abi and chinyu-abi.
- In Mizoram, women weave different varieties of the puan - a drape and uncut rectangular fabric with well-crafted edges, as also the punchei and tuallohpuan.
- In Meghalaya, the jeinsem worn by Khasi women comes in different colours and materials including muga, silk and cotton.
- Garo women of Meghalaya weave the dakmanda, and occasionally an eking too.
 - Their counterparts in the Reang and other tribal communities of Tripura on the other hand are experts in weaving the rignai and pasara.

Bamboo and Cane

- North-east's artistic communities also have a wide range of handicraft products, mostly manufactured of bamboo, cane and reed.
 - The Northeast is home to at least 90 species of bamboos, of which 41 are endemic to the region.
 - There is a popular saying in Assamese - "jaar nai baanh, taar nai saanh" (One who doesn't have bamboo, has no courage").
- The husok of the Galo tribe, the bye of the Padams, the egin of the Miniyongs, the akhi and akha of the Angamis, the dowrawn and bontong of the Mizos - all depict the wide variety and rich creativity of the communities.
 - Similarly, the Adi bolup, the Apatani bopa, both of Arunachal Pradesh, and the Mizo varika - not only bear deep cultural significance, but have attracted both buyers and researchers as well.
 - In Arunachal Pradesh, they even make hanging bridges across swift-flowing rivers including the Siang (Brahmaputra) with cane and bamboo.
- With changing time and demand, bamboo and cane products like chairs, tables, stools, sofa • sets, beds and cots, shelves, besides lamp-shades, screens and hats etc have begun finding market not just within the country, but abroad too.

Woodcraft

- Besides bamboo and cane, the North-eastern region also abounds in a wide variety of trees that provide raw-material to the communities to make various items out of wood.
 - Wood-carving is popular across the region, and products range from human figures, replicas of birds and animals, door frames and furniture etc.
- Every Naga village has a highly decorative wooden gateway, while each village house is a piece of master woodwork.
- In **Arunachal Pradesh** also, wood carving varies from tribe to tribe.
- The Sherdukpen and Monpa artisans produce a variety of door and window, frames, boxes and wooden saddles, apart from beautifully painted household items like bowls, cups, plates and saucers.
- The magnificent wooden masks produced by the Monpa, Sherdukpen, Memba and Khamba tribes, used in ceremonial dances are really eye-catching.
- In **Assam**, the dhol played in Rongali bihu is made of wood, so are traditional drums of the Bodo, Rabha, Mishing and Karbi communities.
 - Monks in satra monasteries create sculpted wooden door-frames, and various kinds of guru-asana-the altar where the holy scripture is kept inside the naam-ghar, the traditional prayer-hall.

Masks

- As in most indigenous communities the world over, indigenous communities of North-eastern India also manufacture and use a variety of masks in their rituals and festivals.
 - Masks are also associated with various indigenous religious faiths and beliefs.
- In Assam, mask-making is particularly concentrated in the Satra institutions-Vaishnavite monasteries-in Majuli, the world's largest inhabited river island.
 - Artisans, mostly monks, use bamboo, cane, clay, cloth, jute, coir and paper pulp to make masks, which are integral part of traditional bhawana performance.
 - Various deities, demons, birds, animals, reptiles and some mythological characters are represented through these masks.
- The Monpas and Sherdukpens of Arunachal Pradesh use a wide range of masks in their traditional and ritual dances and vestivals.
 - These are made of handmade paper, cloth, fur, feathers, bamboo and cane.

Jewellery

- In **Assam**, traditional gold and silver jewellery has a special place in marriage ceremonies, as also part dancing girl's attire during Rongali bihu.
 - Traditional Assamese ornaments include dugdugi, jinbiri, dholbiri, lokaparo, golpata, kerumoni, thuriya, bana, gamkharu, muthikharu, jethipoti, to name a few.
- In **Nagaland**, different tribes make necklaces, earrings, bracelets and bangles out of beads, cowrie shell, brass and other metals including old silver coins, as also of ivory and teeth of various wild animals.
- In **Meghalaya**, traditional jewellery is integral part of dance and wedding ceremonies.
- In **Mizoram**, women wear necklaces made of amber, agate, carnelian, ivory and various sorts of bead necklaces.

Brass and bell Metal

- In **Assam**, two places-Sathebari and Hajo are traditional centres for manufacturing various brass and bell-metal products.
 - These include household utensils, as also ceremonial items like sarai, (a platter or tray) and bhog-jara (water vessel with a spout).
 - They also make bhor-taal (large cymbals) used during prayers in the naam-ghar and Satra, while smaller cymbals are musical instruments used with bihu and ija-pali songs.
 - Huge gongs and singing bowls manufactured in Assam go out to Buddhist monasteries in across the Himalayan region.

Pottery

- Pottery, especially based on clay, is more common in the plains of Assam, Manipur and Tripura, though tribal communities in Arunachal Pradesh, Nagaland and Mizoram too manufacture a variety of pottery with their limited clay resources.
- In **Assam**, one category of potters use the wheel for making various kinds of earthen utensils, while another category work without the wheel.
- Several villages in western Tripura too have a rich tradition of manufacturing various pottery products, which include toys and decorative items, apart from the earthen diya.
- Longpi, a village in Ukhrul district of **Manipur** stands out with its black earthenware.
 - The Tangkhul artisan make chamkha (water pot), Phampai (cooker), Kokthi (cup), Khoram (water pot) and other items which boldly compete with ceramic products.
 - In the Jaintia Hills of Meghalaya, the Larnai area excels in the blue-grey earthen pottery that is shaped by hand, without the aid of potter's wheel.

Conclusion

- Traditional artisans are increasingly facing a tough time, especially with production cost rising every passing day, while majority customers look for low-priced items.
- Therefore, the first step is to preserve these is a need to integrate the traditional technique with modern art form.
- Many of the art and craft products produced traditionally can be promoted as souvenirs, decorative items and collector's items alongside tourism, the greenest and most environment-friendly industry.



MIND MAPS

Indian Folk Art and Culture

There are 38 UNESCO World Heritage Sites in India (as of 2021), of which

- 30 are cultural sites.
- 07 are natural sites
- 01 mixed site



- **Budget 2020-21** Government of India has proposed
- 05 archaeological sites
- Rakhigarhi in Haryana
- Hastinapur in Uttar Pradesh
- Shiv Sagar in Assam
- Dholavira in Gujarat.
- Aadi Chanallurin Tamil Nadu.

Government Initiative

- National Conservation policy.
- 'Adopt a Heritage' Project.
- 'Hunar se RozgarTak'
- ICT initiatives including the Sanskriti Channel, Virtual Museums and the Indian Culture portal, have tried reducing the distance between Art and Art enthusiasts overseas.
- Know India Programme, a three-week orientation programme by the Ministry of External Affairs.
- Promotion of Culture Ties with Diasporas (PCTD) schemes.
- Since 2015, eleven Rashtriya Sanskriti Mahotsavs have been organised under the Ek Bharat Shreshtha Bharat campaign.

Swadesh Darshan Scheme

- 06 Buddhist Circuits are there.
- 5 rock edicts Gimar, Sopara, Dhauri, Jaugada, Sannati, Yerragudi.
- 05 pillar edicts, namely Kalsi, Delhi, Vaishali, Rampurva and Lauriyacan be developed in a circuit manner.

Regionwise Use of Folk Media

- **Koosu**, meaning a child in Kannada, campaign was launched to promote hygiene practice among women.
- 30 Sarpanches of Baran district in Rajasthan took vows to have just one meal per day until their villages became ODF
- In Madhya Pradesh, the vanar sena comprising young boys monitored the common open defecation sites each morning.
- In Bihar, Goddess Durga (a girl dressed as the goddess) visited homes with toilets during Durga Puja celebrations. Swachhata messages were broadcasted in Durga Puja pandals.

Global Initiatives

- Ministry of Culture had launched a draft National List of Intangible Cultural Heritage (ICH) of India as part of its Vision 2024.
- A decision will be taken at this meeting about including 'Durga Puja' in the Representative List of the Intangible Cultural Heritage of Humanity.

MSME

- The MSME sector accounts for **29% of Indian GDP** and employs 11 crore people.
- MSME sector is next to agriculture in terms of providing employment.
- It accounts for 48% of Indian exports.
- One fifth of these MSMEs are based in rural areas

Union Budget 2021-22

- Rs.15,700 crore Capital Infusion.
- Rs.20,000 crore subordinate debt for MSMEs.
- Rs.50,000 crore equity infusion through MSME fund .
- Rs.3 lakh crore Emergency Credit line Guarantee scheme (ECLGS).

Opportunities

- Health and Wellness
- Digital Education
- E-commerce and Delivery Based Services
- OTT platforms and Online Gaming
- Alternative Medicine

Warlis

Where do they Live

- Warlis are adivasis who live in the North Sahyadri mountain range of Maharashtra



About their Lives

- Warlis speak in unwritten Warli language.
- The Warlis worship the earth and treat it as mother goddess.
- The warlis are non- vegetarians.
- Generally, they don't make tea as the domestication of cow and buffalo is not available.
- During the time of celebration, food is served on Pattal (Plate made up of Sal Leaves).
- Warlis hold a very strong respect for their spirits and deities.
- They are well known to have a faith in Tiger God (Vaghai).
- The Tarpa (instrument) dance, is one of the most famous dance forms



- Its roots can be traced to the early 10th century AD .
- These paintings reflect their beliefs and traditions
- Usage of basic geometric shapes like triangles, circles, squares and lines are used to add effect and beauty.
- 'Lagnacha Chauk', meaning marriage paintings, are sacred and without them marriage cannot take place.
- The paintings highlight the struggles of their daily life.

Indian Classical Dance

- **Tandava** is said to be originated by Lord Shiva and includes fast movements of body parts to show aggression, courage, etc.
- **Lasya** displays grace, love, beauty, gentleness (it is believed to be originated by Goddess Parvati), and is mostly performed by females.

Performance or Abhinaya

- Natya, referring to imitation of a story;
- Nritya, implying actual dance movements; and
- Nritya, depicting usage of facial and hand gestures/motions.

Predominantly, there are nine Rasas in classical dance based on different emotions: Hasya (Laughter), Shringar (Love, Beauty), Raudra (Anger), Veera (Bravery, Fearlessness), Bibhatsa (Disgust, Hate), Bhayanaka (Fearful), Karuna (Compassion, Sorrow), Adbhuta (Wonder, Surprise), and Shanta (Peacefulness).



Nritya - just Beats & tempo



Nritya - Nritya + emotions



Natya - a complete dance

- **Mudras** are the gestures done by hand, and their reference is generally obtained from Abhinaya Oarpana by Nandikesvora', "Asamyutta".

- One Hand Mudra : 28.
- Two Hands Mudra : 24

