

National Strategy on Additive Manufacturing

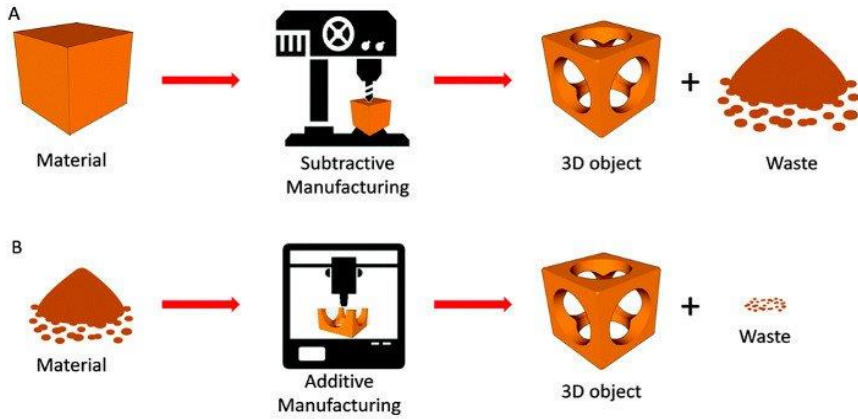
❖ Context

- Ministry of Electronics and Information Technology released the strategy.

❖ Key Highlights

❖ What is Additive Manufacturing?

- Additive manufacturing (AM), also known as **3D printing**, is a transformative approach to industrial production that enables the creation of lighter, stronger parts and systems.
- It is another **technological advancement made possible by the transition from analog to digital processes**. AM can bring digital flexibility and efficiency to manufacturing operations.
- Additive manufacturing **uses data computer-aided-design (CAD) software or 3D object scanners** to direct hardware to deposit material, layer upon layer, in precise geometric shapes. As its name implies, additive manufacturing adds material to create an object. By contrast, when you create an object by traditional means, it is often necessary to remove material through milling, machining, carving, shaping or other means.



❖ Aim of the Strategy

- To achieve **5% of Global AM market share** and thereto add nearly **US\$ 1Bn to the GDP by 2025**.

- This will create an **eco-system for creation of nearly 100 new Start-ups, 10 AM sectors and 1 lakh new skilled manpower**, besides, development of 500 AM products and 50 Indian AM technologies on material, machine, process and software.

❖ Challenges for the Development in India

- Most of the machines and raw material imported.
- Lack of formal AM standards.
- Lack of service providers and competitive AM technologies.
- Monopoly of market by OEMs.
- Lack of skilled manpower.
- Domestic market transition as adoption of AM will vacate large factory space and make traditional equipments obsolete.
- Legal and ethical issues especially related to IPR.

❖ Recommendation

- A dedicated agency, **National Additive Manufacturing Centre**, may be constituted through a PPP model that will spearhead the national initiative and act as an **aggregator of knowledge** and resources, and as an accelerator for technology adoption and advancement.
- An **apex body** should be established with subject matter experts/champions from local and global industry or consortium of companies, with capabilities to build products via AM, and end user agencies.
- **Conduct skill gap study**, identify new job roles and map them to **National skill Qualification Framework**
- **Strengthen existing cyber laws** to effectively ensure risk mitigation and safety of AM CAD files, software, and hardware along with security of AM database structures.
- **Timely detection & incidence response** of cyber attacks.

Draft India Data Accessibility & Use Policy, 2022

❖ Context

- Recently, **The Ministry of Electronics and Information Technology (MEITY)** released a policy proposal titled as, **“Draft India Data Accessibility & Use Policy, 2022”**.

❖ Key Highlights

- The policy aims to, **“radically transform India’s ability to harness public sector data”**.
- The proposals of the Draft Data Accessibility Policy **have been in the spotlight** for permitting the licensing and sale of public data by the Government to the private sector.

❖ Proposals

- The data, which has been **collected by the central government** and undergone some value addition, is **allowed to be sold** for some price.
- It suggests a new framework for identifying **“high value data-set”** on the basis of the data’s degree of importance in the market.
- All the ministries and departments of the Central government will have to **“identify, publish and maintain”** their high-value dataset.

❖ Concerns

- **No Data Protection Law**
 - The new draft policy has been announced at a time when the country is yet to finalize the contours of a data protection law.
- **Privacy**
 - India does not have a data protection law that can provide accountability and remedy for privacy violations such as coercive and excessive data collection or data breaches.

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| <ul style="list-style-type: none"> Setting up of a central India Data Office will be created under MeitY. All the central government's line ministries will have to form their respective Data Management Unit. <ul style="list-style-type: none"> These units will be headed by a Chief Data Officer. These chief data officers along with the India Data Officer will together form the India Data Council, which will decide on the policy matters of data accessibility and its usage. The draft also proposes a data sharing toolkit. <ul style="list-style-type: none"> It will be the broad umbrella to help respective central or state government ministries and departments "assess and optimally manage" the risks associated with the release and sharing of such data. | <ul style="list-style-type: none"> Apprehensive Big IT Companies <ul style="list-style-type: none"> The policy could also face pushback from big tech companies whose business model is based on the monetisation of a large-scale data collection model, similar to the one proposed by the IT ministry. Issues of Federalism <ul style="list-style-type: none"> The policy, even though it notes that State governments will be, "free to adopt portions of the policy," does not specify how such freedom will be achieved. There is also the absence of any comment on whether data gathered from States may be sold by the Central government and whether the proceeds from it will be shared with the States. It gives a "perverse incentive for the government to collect more citizen data". It in turn may lead to further imbalance of the power imbalance between the state and the citizens. No Proper Standards on Data Anonymisation <ul style="list-style-type: none"> Lack of proper standards and framework on data anonymisation. Such data may be "reverse-engineered", thereby making re-identification of the generators of the data very easy. Lack of Transparency <ul style="list-style-type: none"> Lack of details on what constitutes value addition and the pricing or licensing mechanism on the same. |
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Financial Stability and Development Council (FSDC)

❖ Context

- Recently, The **25th meeting** of the **Financial Stability and Development Council (FSDC)** was held in Mumbai under the Chairpersonship of Union Finance Minister.

❖ Key Highlights

- The Council deliberated on the **various mandates** of the FSDC and major macro-financial challenges arising in view of global and domestic developments.
- The Council noted that the **Government and all regulators need to maintain constant vigil** on the financial conditions and functioning of important financial institutions.
 - Especially considering that it could expose financial vulnerabilities in the medium and long-term.
- The **Council discussed measures required for further development** of the financial sector and to achieve an inclusive economic growth with macroeconomic stability.
- The Council discussed operational issues relating to currency management.
- It also took note of the activities undertaken by the **FSDC Sub-Committee chaired** by the RBI Governor and the action taken by members on the past decisions of FSDC.

❖ About FSDC

- It was **constituted in 2010** by an Executive Order as a **non-statutory apex body** under the Ministry of Finance.
- Members:**
 - Chairman-** The Finance Minister
 - Other Members (Total 12 Members) of FSDC include Heads of the Financial Sector Regulators listed below:
 - Reserve Bank of India (RBI) Insurance
 - Regulatory and Development Authority (IRDA)
 - Securities and Exchange Board of India (SEBI)
 - Pension Fund Regulatory and Development Authority (PFRDA)
 - Other members are Finance Secretary, Chief Economics Advisor and Secretary of the Department of Financial Services.
- Objectives:**
 - Its objectives are to **strengthen and institutionalize the mechanism** for maintaining financial stability and Enhancing inter-regulatory coordination.
 - It also **focuses on financial literacy and financial inclusion.**

News in Between the Lines

Jaladhara Skittering Frog

❖ Context

- Recently, Researchers have discovered another **new frog species** from the **freshwater bodies** of the western coastal plains of India.

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❖ Key Highlights

- **Scientific Name:** Euphlyctis Jaladhara
- **Found by-**
 - Scientists of the Zoological Survey of India (**ZSI**), Mount Carmel College (**MCC**), Bengaluru, and the National Institute of Science Education and Research (**NISER**), Bhubaneswar.
- **Habitat -**
 - A Small body of water or reservoir of Fresh water
 - Initially, it was **first spotted in fresh water bodies** around the Thattekad Bird Sanctuary in Ernakulam, and then multiple populations were **identified all along the western coastal plains from Kerala to Gujarat.**
- **Significance**
 - Amphibians like frogs are the **living link between vertebrate life in water and land.**
 - Since this frog species was predominantly a freshwater frog, they were the first vertebrate organisms to get affected due to water pollution due to their primitive body plan.
- **Need for Conservation**
 - New species like 'Jaladhara skittering frog' special conservation plans need to be focused as **their distribution is flanked** between the salt waters of Arabian Sea and the foothills of the Western Ghats
- **Previous Discovered Species**
 - This is the second new species of skittering frog detected from the locality. The earlier species, the Kerala pond frog (*Phrynoderma Kerala*) was also discovered in the same region by the same group of researchers in 2021.

Byanjana Dwadashi Festival



❖ Context

- The Byanjana Dwadashi **festival of Odisha** is seen as a great step towards promoting food security.

❖ Key Highlights

- Byanjana Dwadashi is celebrated by adherents of **Vaishnavism**, the largest sect within Hinduism.
 - It considers Vishnu and his incarnations such as Krishna as the Supreme Godhead.
- The festival **celebrates a variety of food** (Byanjana in Odia) on the 12th day (Dwadashi) of the Sukla Paksha or waxing phase of the moon in the month of Margashira (mid-December to mid-January).
- Vaishnavites, through this festival, **commemorate an episode of the Mahabharata** where Yashoda observes that her son Krishna is pale and weak.
 - She realizes that this is because of lack of proper nutrition at a time when Krishna has devoted all his energy in fighting demons.
 - In order to fulfill his nutritional requirements, she prepares a lot of delicacies and feeds him.
 - Krishna is not the only consumer of these delicacies.
 - His friends – the Gopala Balakas or cowherd boys — also eat with him.

Char Chinari

❖ Context

- Recently, two tall chinari trees were planted on the iconic island **Char Chinari** in the middle of the Dal Lake in Srinagar with the Zabarwan hills in the backdrop.

❖ Key Highlights

- Earlier, the **2014 floods left two mighty chinars damaged**, denting its iconic view from the boulevard around the lake.
- The island **owes its name to Chinari trees**, as Char Chinari means four Chinars.
- Char Chinari, also sometimes called Char Chinari, **Ropa Lank, or Rupa Lank**, is an island in Dal Lake, Srinagar, Jammu and Kashmir.

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- Dal Lake includes 3 islands, 2 of which are marked with beautiful Chinar trees.
- The island located on the Lakut Dal (small Dal) is known as Roph Lank (Silver Island), is marked with the presence of majestic Chinar trees at the four corners, thus known as Char-Chinari (Four Chinars).
 - Murad Baksh, brother of the Mughal emperor Aurangzeb, constructed the Roph Lank.

Ombudsman App for MGNREGA



❖ Context

- **Ministry of Rural Development** launched Ombudsperson App for Mahatma Gandhi NREGA.

❖ Key Highlights

- It has been developed for **smooth reporting and categorization of grievances** by Ombudsperson based on complaints received from various sources viz. physical, digital and mass media, related to the implementation of the scheme
- At present, the reporting of complaints, passing awards and disposal of complaints are in physical form.
- After joining the Ombudsperson, the **Registration** of Ombudsperson is done **by the State**. On registration, Ombudsperson will use the Username and password to use this App.
- The app will enable **easy tracking and timely passing of awards** by Ombudsperson on each case as per the guidelines. Ombudsperson can also easily upload the quarterly and annual reports on the website through the app.
- The app will help the ombudsperson to a greater extent in discharging her/his duty towards transparency and accountability.

Sustainable Cities India Program



❖ Context

- The **World Economic Forum** and the **National Institute of Urban Affairs (NIUA)** today signed aMoU to collaborate on a jointly designed 'Sustainable Cities India program'.

❖ Key Highlights

- The program intends to enable **cities** to **decarbonize** in a systematic and **sustainable way** that will reduce emissions and deliver resilient and equitable urban ecosystems.
- The Forum and NIUA will adapt the Forum's **City Sprint Process** and **Toolbox of Solutions** for decarbonization in the context of five to seven Indian cities across two years.
- The City Sprint process is a **series of multi-sectoral, multi-stakeholder workshops** involving business, government, and civil society leaders to enable decarbonization, especially through clean electrification and circularity.
- The **outcome** of the workshop series will be a **shortlist of relevant policies and business models**, which not only reduce emissions but also maximise System Value, such as improved air quality or job creation.
- The City Sprint process uses the **Toolbox of Solutions - a digital platform containing over 200 examples** of clean electrification, efficiency and smart infrastructure best practices and case studies across buildings, energy systems and mobility from over 110 cities around the world.
- The **World Economic Forum's Net Zero Carbon Cities' mission** is to create an enabling environment for clean electrification and circularity, resulting in urban decarbonization and resilience. The program aims to do this by fostering **public-private collaboration** to bridge the gap across the energy, built environment and transport sectors.

SPARSH

❖ Context

- **Defence Accounts Department (DAD)** of Ministry of Defence has signed an MoU with **CSC e-Governance Services India Limited**, a special purpose vehicle (SPV) under Ministry of Electronics and Information Technology, to onboard pension services under the **System for Pension Administration**

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(Raksha) {SPARSH} initiative across more than four lakh Common Service Centres (CSCs) all over the country.

❖ **Key Highlights**

- The MoU will provide **last mile connectivity to pensioners**, especially those who reside in remote areas of the country and those who do not have the means or technical wherewithal to log on to SPARSH.
- For these pensioners, the **Service Centres will become an interface for SPARSH** and provide an effective medium for pensioners to perform profile update requests, register grievances and seek redressal, digital annual identification, pensioner data verification or simply fetch detailed information regarding their monthly pension.
- SPARSH is an **initiative of the Ministry of Defence** which aims at providing a **comprehensive solution to the administration of pension** to the defence pensioners in line with the Government's vision of 'Digital India', 'Direct Benefit Transfer (DBT)' and 'Minimum Government, Maximum Governance'.

Dry Root Rot Disease



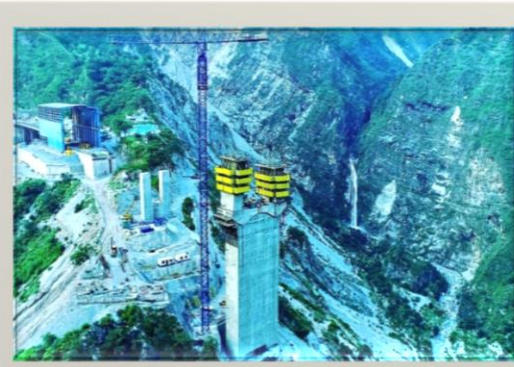
❖ **Context**

- Indian scientists have found that the **climate change** is likely to **favour soil-borne plant pathogens** for diseases like dry root rot of chickpea in future.

❖ **Key Highlights**

- The team identified that **high temperatures** ranging between 30 to 35 degrees, drought conditions, and **less than 60% soil moisture** content are favourable conditions for dry root rot (DRR).
- Dry root rot (DRR) disease **damages the roots or girdles the trunk** in chickpea. If extensive root damage occurs, the leaves suddenly wilt and dry on the tree.
- The **increasing global average temperature** is leading to the **appearance of many new plant disease-causing pathogens** at a rate hitherto unheard of, one of them being *Macrophomina phaseolina*, a soil-borne **necrotrophic (a parasite that kills its host and then feeds on the dead matter)** that causes root rot in chickpea.
- Currently, the **central and southern states of India** have been identified as the **prime chickpea DRR hotspots** with an overall 5 – 35% disease incidence.

India's First Cable-Stayed Railway Bridge



❖ **Context**

- Railway shared a glimpse of construction work underway for **India's first cable-stayed railway bridge** in **Jammu and Kashmir's Reasi district**.

❖ **Key Highlights**

- "**Situated over Anji river, Anji Khad Bridge will connect Katra & Reasi Section as, a part of Udhampur-Srinagar-Baramulla railway link, J&K**".
- The single pylon of Anji Khad bridge with a height of 331 metres above the river bed.
- Udhampur-Srinagar-Baramulla Rail Link (USBRL) is a milestone project of the Indian Railways.
- "All phases of the pylon work stand completed, and we are ready to move ahead to complete the bridge,".
- The official mentioned that the bridge has a total length of 473.25 metres, while the length of the viaduct is 120 metres and the central embankment 94.25 metres, supported by 96 cables.

❖ **World's Highest Railway Bridge Under Construction In J&K**

- The arch of the bridge once fully constructed would be around 35 meters higher than the iconic **Eiffel Tower** in Paris.
- The bridge has been designed to be built 1315 meter in length on the **Katra-Banihal rail section** in **Reasi district of Jammu and Kashmir** with a 359-meter high main arch span from the **Chenab river** bed level, at the cost of Rs 27949 crore. This bridge is world's highest railway bridge as a part of the ambitious **Udhampur-Srinagar-Baramulla rail link (USBRL) project** will be an **Engineering Marvel** of Indian Railways.

