

NEWS TODAY

Researchers finds cost-effective alternative to metal 3D printing technology


- IIT-Mandi researchers have found that **extrusion-based metal Additive Manufacturing (AM) process** is cost-effective method in comparison to other approaches in metal 3D printing.
 - Metal AM utilises fine metal powders to construct robust, intricate components through Computer-aided design (CAD) programmes or 3D scanning.
- 3D printing (AM) uses CAD to make prototypes or working models of objects by laying down successive layers of materials** such as plastic, resin, thermoplastic, metal, fiber or ceramic.
 - It is the **opposite of subtractive (traditional) manufacturing** which is cutting out / hollowing out a piece of metal or plastic with for instance a milling machine.
 - India's first 3D-printed post office was created in Bengaluru.**
 - Telangana unveiled world's first 3D-printed temple** at Burugupally, Siddipet district.
- Applications of 3D Printing:** Medical and allied sector; Produce advanced aerospace components like airframes; Consumer electronics, Jewellery sector etc.
- Benefits of 3D Printing**
 - Lower inventory costs due to on-demand printing.
 - Reduced time and can print complex designs.
 - Little or no wastage as compared to other methods.
- In 2020, Ministry of Electronics and Information Technology released **"National Strategy for Additive Manufacturing"** to tap its potential.



Central Trade Unions (CTUs) urge Government to ratify ILO Conventions on workers' Health and Safety

- CTUs have expressed their **concern regarding the workplace safety of workers** in the light of recent **Silkyara Tunnel collapse** in Uttarakhand.
 - CTUs are organizations that **aim to protect and promote the interests** of their members, which are **workers or employers**.
 - Examples:** All India Trade Union Congress (AITUC), Indian National Trade Union Congress (INTUC), **Bharatiya Mazdoor Sangh (BMS)**, etc.
- In India, workers' safety is covered under the **Occupational Safety, Health and Working Conditions Code (OSHWCC) 2020**.
- Few concerns with respect to the OSHWCC** such as:
 - Size-based thresholds:** Code covers **workers employed** in establishments with at least **10 workers or more**.
 - Bars **civil courts on hearing matters** under Code.
 - It does not cover **all branches** of economic activity.
- India's current status regarding ratification** of the various conventions of ILO, is as follows:

Conventions Ratified by India	Conventions not ratified by India
<ul style="list-style-type: none"> Forced Labour Convention (No. 29) Abolition of Forced Labour Convention (No.105) Equal Remuneration Convention (No.100) Discrimination (Employment Occupation) Convention (No.111) Minimum Age Convention (No.138) Worst forms of Child Labour Convention (No.182) 	<ul style="list-style-type: none"> Freedom of Association and Protection of Right to Organise Convention (No.87) Right to Organise and Collective Bargaining Convention (No.98) C155 - Occupational Safety and Health Convention, 1981 C187 - Promotional Framework for Occupational Safety and Health Convention, 2006


Geneva, Switzerland

International Labour Organization (ILO)

Established: In 1919.

About: The only tripartite U.N. agency, since 1919 the ILO brings together governments, employers and workers

Members: 187 Members India is a founding member ✓

Objective: To promote rights at work, encourage decent employment opportunities, enhance social protection and strengthen dialogue on work-related issues.

Reports: Renewable Energy and Jobs: Annual Review 2023, The road to decent work for domestic workers, etc.

Prime Minister of India announces launch of Global Digital Public Infrastructure Repository (GDPIR) and Social Impact Fund (SIF)

- Both GDPIR and SIF are India led initiative, announced during **Virtual G20 Leaders' Summit**.
 - Earlier, consensus was achieved at G20 Digital Economy Working Group on creation of a GDPIR for exchange of information and best practices.
- GDPIR, developed by **Ministry of Electronics and Information Technology**, is a comprehensive resource hub, pooling essential lessons and expertise from G20 members and guest nations.
 - Its aim is to **bridge knowledge gap** required for design, construction, deployment, and governance of DPIs.
 - GDPIR **showcases information in a standardized format from countries** that have developed DPIs at scale, incorporating governance frameworks etc.
 - Currently, **GDPIR features 54 DPIs from 16 countries**.
- SIF is envisioned as a government led multi-stakeholder initiative to **fast-track DPI implementation in global south**.
 - India has pledged an **initial commitment of 25 million USD** to SIF.
 - It will **offer financial support** to provide technical and non-technical assistance to countries in developing DPI systems.
 - It offers a **platform for all relevant stakeholders**, to contribute to this fund and help **accelerate achievement of Sustainable Development Goals in Low- and Middle-Income Countries** through DPIs.

Digital Public Infrastructure (DPI)

- DPI is described as a **set of shared digital systems that**
 - should be **secure and interoperable**,
 - can be **built on open standards** and specifications to deliver and **provide equitable access** to public/private services and
 - are **governed by legal frameworks to drive development, inclusion, innovation, etc.**
- Examples of DPI:** Aadhaar, UPI, DigiLocker etc.
- DPI is seen as **critical enabler of digital transformation** and is helping to improve public service delivery at scale.

World Health Organization and UN Partners launched the first Progress Report for 2021-2023 on UN Decade of Healthy Ageing 2021-2030

- UNDHA (2021–2030) aims to **give everyone the opportunity to add life to years**, wherever they live.
 - It is a **global collaboration** that enhances **older people's lives** and recognizes **fundamental health rights**.
 - Guiding Principle** for UNDHA (see image).

Healthy Ageing is developing and maintaining the **functional ability that enables well-being in older age**. It is critical for:

Guiding principles for UNDHA

Inclusive and Universal
Leaving no one behind
Equity and intergenerational solidarity
Multistakeholder partnerships

- Preventing older people from falling into **poverty**.
- Reversing **patterns of malnutrition** and **preventing dependence** on care.
- Longer contribution** to society and **increasing productivity**.
- Pursuing **gender equality**.

Findings of report

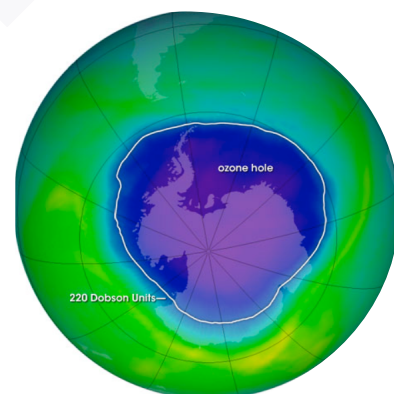
- 87% of countries reported** having a policy or strategy for healthy aging in 2022, an increase from **73% in 2020**.
- Informal, unpaid carers** have insufficient support. **Only 16% of low-income countries** provide such support.
- Resources for work towards **healthy aging remain limited**, and **more investments** are still needed.

UNDHA targets Four action areas for Health Ageing

- Changing **perspective towards age and Ageing**.
- Communities foster the **abilities of older people**.
- Delivering person-centred**, integrated care and primary health services **responsive to older people**
- Providing access to long-term care** for older people.

Large Ozone holes reappear over Antarctica: Study

- As per recent study, from 2020-22, **ozone hole has grown larger and thinner** over Antarctica. Since 2004, researchers saw a **total reduction of 26% at the core of ozone hole**.



- Ozone hole is a region of **exceptionally depleted ozone** in the **stratosphere** over Antarctic.
 - Ozone is a **highly reactive molecule formed of three oxygen atoms** found primarily in two regions of atmosphere.
- Potential drivers of ozone hole over Antarctica**
 - Changes in Antarctic **polar vortex** (Stratospheric wind pattern with a vast swirl of low pressure and very cold air, high above South Pole).
 - Aerosols** from wildfires and volcanic eruptions.
 - Changes in **solar cycle**.
 - Climate change** and increased **atmospheric abundance of Chlorofluorocarbons (CFCs)**.
- Ozone layer** is a thin shield of gas in Earth's atmosphere that protects the Earth, **absorbing the sun's ultraviolet rays**.
 - Human-made greenhouse gases** known as **Ozone-Depleting Substances (ODSs)** have been destroying the ozone layer.
 - Major ODSs** includes chlorine, bromine, CFCs, carbon tetrachloride, halons etc.
 - Montreal Protocol on Substances that Deplete Ozone Layer, 1987** aims to phase out production and consumption of ODSs.
 - According to United Nations Environment Programme, ozone layer is on track to **recover within four decades**.

India votes in Favor of UNGA resolution to establish a UN "Convention on International Tax Cooperation"

- The resolution titled "Promotion of Inclusive and Effective International Tax Cooperation at the United Nations," was introduced by Nigeria.
- **Objective of resolution**
 - ⊕ Mandates forming a **member state-led, open-ended intergovernmental ad hoc committee** to develop a **comprehensive UN Tax Convention**.
 - ⊕ Prioritizes international tax cooperation, aiming to finalize the **UN Tax Convention by June 2025**.
- **Significance/ Need of the move**
 - ⊕ Address various issues related to **global taxation**, viz.
 - ◆ **Aggressive tax avoidance,**
 - ◆ **Illicit financial flows,**
 - ◆ **Recovery of stolen assets,**
 - ◆ **Fair taxation of the digital economy etc.**
 - ⊕ Prevent over **\$480 billion in loss in tax income** every year due to **international tax abuse**.
 - ⊕ Ends the **Organisation of Economic Cooperation and Development monopoly** in tax-related policy.
 - ⊕ Allows all countries to participate in **developing the rules**, by respecting **tax sovereignty**.
 - ⊕ **Promotes cooperation** for a fair, sustainable, **modern international tax system**.

UN General Assembly (UNGA)

- It is the main policy-making organ of the United Nations.
- It provides a forum for multilateral discussions on international issues.
- Each of the **193 Member States of the United Nations** has an **equal vote**.
- It makes key decisions for the UN, including:
 - ⊕ **Appointing the Secretary-General** on the recommendation of the **Security Council**
 - ⊕ **Electing the non-permanent members** of the **Security Council**
 - ⊕ **Approving the UN budget**.

Also in News



E-commerce cargo movement via National Waterway-1

- **Inland Waterways Authority of India (IWAI)** and e-commerce company Amazon signed an MoU for **customer shipments** via inland waterways using the river **Ganga (National Waterway 1)**.
- **Ganga (National Waterway 1)** stretch from **Haldia (Sagar)** and **Prayagraj (1620 km)**
 - ⊕ It was declared as **National Waterway-1 (NW-1)** in **1986**.
- **24 waterways** are already operational to date which are planned to be increased to **more than 50 by 2047**.
- **Benefits of waterways:** cost and fuel-efficient, **environmentally friendly**.



Indian Green Building Council (IGBC)

- IGBC has introduced **new green rating tools** as part of its **Net Zero mission** to accelerate the uptake of green building projects in country.
 - ⊕ They include **Net Zero Carbon Rating and upgraded rating systems** - Green Existing Building Rating Version 1.0, Green Factory Rating Version 2.0, and Green Campus Rating Version 1.0.
- IGBC (HQ: Hyderabad) was established by **Confederation of Indian Industry** in **2001**.
 - ⊕ It is **India's Premier Certification Body** for Greening of Projects.
 - ⊕ **IGBC vision:** To facilitate **India emerge as a global leader in green buildings and green built environment by 2025**.
 - ⊕ IGBC is **founding member of World Green Building Council** discussing global issues at COP and similar global platforms.



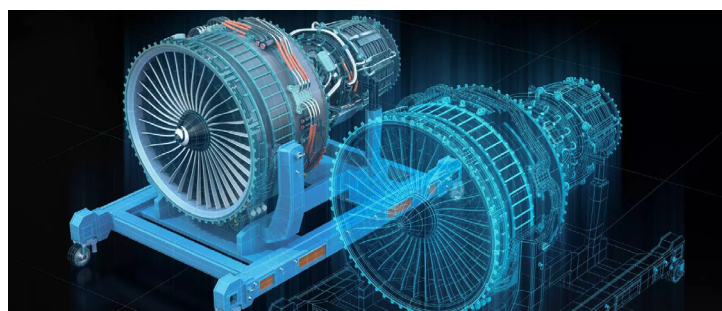
DESI (Digitalisation, Education, Sustainability and Innovation) Initiative

- India and Finland hold talks on Finland's DESI initiative.
- DESI initiative is a **programme of Embassy of Finland** to strengthen preferred partnership between Finland and India.
 - ⊕ It is **Finland's first export promotion programme** with India that spans across sectors



Digital Twins

- Genesys International (3D mapping company), and **Survey of India (Sol)** announced a partnership to create **digital twins** of major cities and towns.
 - ⊕ It will **provide previously unavailable data layers**, including **high-precision 3D data**, digital terrain models, digital surface models etc.
- **Digital twin** is a **digital representation of a physical object, person, or process**, contextualized in a digital version of its environment.
 - ⊕ It can help an organization simulate real situations and their outcomes, ultimately allowing it to **make better decisions**.
- Sol is **National Mapping Agency** of country under **Department of Science & Technology**.





Investor Risk Reduction Access (IRRA) platform

- Securities and Exchange Board of India has launched IRRA platform at Bombay Stock Exchange (BSE).
- IRRA platform has been developed to **reduce risks faced by investors in eventuality of technical glitches at the trading member's end** at both the primary site and disaster recovery site.
 - ⊖ It is **available to trading members supporting internet-based trading and security trading** through wireless technology for their investors.
 - ⊖ It has been **jointly developed by all stock exchanges** – BSE, NSE, NCDEX, MCX and Metropolitan Stock Exchange of India.



Kambala Festival

- Bengaluru to host maiden Kambala.
- **Kambala Festival:**
 - ⊖ It is an annual **buffalo race** and is observed by the **farming community of coastal Karnataka**
 - ⊖ It begins after the **paddy harvest is done**.
 - ⊖ In **Tulu-speaking regions in South Canara districts** celebrated between November and March.
- It is **believed to be observed to commemorate Lord Kadri Manjunatha**, a manifestation of Lord Shiva, for a bountiful crop.



James Webb Space Telescope (JWST)

- **JWST took an image of the dense heart of Milky Way Galaxy** and revealed its new features.
 - ⊖ **This star-forming region** is called **Sagittarius C** and is about 300 light-years away from **Sagittarius A*** (the supermassive black hole at the galaxy's center.)
 - ⊖ It includes **protostars** - stars that are still forming and gaining mass.
- **A successor to Hubble telescope, JWST is the largest and most powerful space telescope.**
 - ⊖ It is a collaboration between **NASA, the European Space Agency and the Canadian Space Agency.**
 - ⊖ Established in **Lagrange Point 2** between the Sun and Earth, it is probing the cosmos to uncover the **history of the universe.**



Sangai Deer

- Manipur Government raised concern that Loktak Lake's hydroelectric plan may affect Sangai deer.
- **Sangai Deer**
 - ⊖ **Keibul Lamjao National Park** last natural habitat of **Sangai Deer.**
 - ⊖ IUCN Status: **Endangered**
 - ⊖ Wild Life (Protection) Act, 1972: **Schedule I**
- **Loktak Lake**
 - ⊖ It is the largest freshwater lake in **North-East India** and is famous for **Phumdis** (floating circular swamps).
 - ⊖ Loktak lake is Ramsar site.

Personality in news



Justice (Retd.) Fathima Beevi (1927-2023)

- India's first woman Supreme Court Justice Fathima Beevi passes away.
- **About Fathima Beevi**
 - ⊖ Born in **Pathanamthitta, Travancore** (present-day Kerala).
 - ⊖ In 1950, became the **first woman law graduate** to get the gold medal from Bar Council.
 - ⊖ Became a **district sessions judge** in 1974 and later as a judge of **Kerala High Court** in 1983.
 - ⊖ She was **Supreme Court judge** between 1989- 1992.
 - ⊖ Served as a **member of National Human Rights Commission** and also as **governor of Tamil Nadu.**
- **Ethical values:** Courage, Honesty, Equality, etc.



AHMEDABAD



BHOPAL



CHANDIGARH



DELHI



JAIPUR



JODHPUR



GUWAHATI



HYDERABAD



LUCKNOW



PRAYAGRAJ



PUNE



RANCHI



SIKAR