

TARGET4IAS: TOGETHER WE CAN



Target4IAS
Together We Can

Weekly Current Affairs

Sources: The Hindu+IndianExpress+PIB

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Contents

1. Digital Millennium Copyright Act
2. Triboelectric Nanogenerator(TENG)
3. Agni-P
4. Draft Cinematograph (Amendment) Bill, 2021
5. COWIN
6. Exercise Sea Breeze
7. Baihetan Dam
8. The World Drug Report 2021
9. Heat Dome
10. NATRAX
11. PradhanMantri Formalisation of Micro food processing Enterprises
12. Statistics Day
13. UDISE+ 2019-20
14. Digital India Abhiyan
15. One Nation One Ration Card
16. Indrajeal
17. INOS
18. BharatNet Project
19. ZYCOV-D
20. Black carbon could lead to premature mortality: Study
21. Matera Declaration
22. Cyber Security Index (GCI) 2020
23. Reform Based Power Distribution Scheme
24. Important Terms in News

Digital Millennium Copyright Act (DMCA)

In news

The union minister for Electronics and Information Technology was locked out of his Twitter account for an hour allegedly over a notice received for violation of the DMCA.

About Digital Millennium Copyright Act or DMCA

- It is a 1998 law passed in the US and is among the world's first laws recognising intellectual property on the internet.
- The law oversees the implementation of the two treaties signed and agreed upon by member nations of the World Intellectual Property Organisation (WIPO) in 1996.
- **Two treaties of WIPO:->** In 1996, WIPO member countries agreed upon two treaties namely the **WIPO Copyright Treaty** and the **WIPO Performances and Phonograms Treaty**.

About WIPO:

- It is one of the 15 specialized agencies of the United Nations (UN).
- Created to promote and protect intellectual property (IP) across the world by cooperating with countries as well as international organizations.
- Its mandate of governing bodies and procedures are set out in the WIPO Convention which had established WIPO in 1967.
- Headquarters: **Geneva, Switzerland.**

Source: [Indian Express](#)

Triboelectric Nanogenerator (TENG)

In news

A team of Indian scientists have developed a transparent triboelectric nanogenerator device.

About Triboelectric Nanogenerator (TENG)

- It is a self-powered device. It makes use of mechanical energy in the form of vibrations, which is present everywhere in different forms to generate electricity.
- It works on the principle of creation of electrostatic charges via instantaneous physical contact of two dissimilar materials. It is followed by generation of potential difference when a mismatch is introduced between the two contacted surfaces through a mechanical force.
- The device was developed using the simpler doctor's blade technique along with polyethylene terephthalate (PET) as tribo layers.
 - **Doctor's blade technique** is one of the widely used techniques for producing thin films on large area surfaces.
- The device could light up 11 LEDs by gentle hand tapping and could be a potential candidate for use in optoelectronics, self-powered devices and other biomedical applications.

Note: Optoelectronics is the field of technology concerned with electronic device application to the sourcing, detection and control of light.

Source: [PIB](#)

Agni-P

- Agni P is a new generation advanced variant of the Agni class of missiles.
- It is a canisters based missile.
- It is a completely new missile, the smallest and lightest among the entire Agni series.
- Range between 1000km to 2000km.
- Its range is too short to reach targets in the Chinese mainland but can cover all Pakistan territory.
- The Agni-P will replace the Prithvi, Agni-1 and Agni-2



Shot in the arm

▶ Agni-P's range of 1,000–2,000 km is too short to reach targets in China's mainland, but can cover all of Pakistan's territory

▶ Being a canisterised missile, it can be transported easily and fired at very short notice

▶ It will replace the Prithvi, Agni-1 and Agni-2 missiles in India's arsenal that were built two decades ago with tech now considered obsolete

▶ It will enter service as a two-stage, solid propellant missile. Both stages will have composite rocket motors and guidance systems with electro-mechanical actuators

▶ Agni-P and Agni-5 originate from the Integrated Guided Missile Development Programme launched by then DRDO chief Dr APJ Abdul Kalam in the early 1980s

missiles that were built two decades ago with technologies that are now considered outdated.

About Agni Missiles:

- Agni Missiles trace their origins back to the Integrated Guided Missile Development Programme (IGMDP).
- IGMDP was conceived by APJ. Abdul Kalam in the 1980s to enable India to attain self-sufficiency in the field of missile technology.
- The missiles developed under this programme include (a) Agni (b) Akash, (c) Trishul (d) Prithvi and (e) Nag.

Source: [PIB](#), [The Hindu](#)

Draft Cinematograph (Amendment) Bill, 2021

In news

The Film Fraternity has written a letter to the Ministry of Information and Broadcasting (I&B) to withdraw the Draft Cinematograph (Amendment) Bill, 2021.

About the Draft Cinematograph (Amendment) Bill 2021

- It has a provision that allows the Government to order recertification of a film already certified by the CBFC.
- Proposes to certify films for perpetuity. Currently a certificate issued by the CBFC is valid only for 10 years.
- Proposes to insert Section 6AA which prohibits unauthorised recording.
- Introduce age-based categorisation and classification such as U/A 7+, U/A 13+ and U/A 16+. Currently, films are certified into three categories: 'U', 'U/A' and 'A'.

Concerns

- Power of the Centre to order for recertification may lead to an additional layer of direct government censorship.
- With the implementation of the proposed new rules, films could be held up longer for re-certification based on random objections, even if it is already certified by the CBFC.

Source: [Indian Express](#)

CoWIN

In news

India will soon provide an open-source version of its CoWIN application to nearly 50 countries from Central Asia, Africa and Latin America that have indicated an interest in the technology.

About CoWIN

- It is an extension of an electronic vaccine intelligence network, eVIN, which is used to collect real-time feedback of the vaccination programmes.
- It is a cloud-based IT solution for planning, implementing, monitoring and evaluating COVID-19 vaccination in the country.

Source-> The Hindu

Exercise Sea Breeze

In news

Ukraine and USA launched joint naval Exercise 'Sea Breeze' in the Black Sea to show Western cooperation with Ukraine as it faces off with Russia.

About Sea Breeze

- The exercise Sea Breeze has been held since 1997, involving NATO states and their allies.
- This edition (2021) will be the largest in Exercise's history that will involve some 5,000 military personnel from more than 30 countries.
- **Aim:** Improving naval and land operations
 - Improving cooperation among participating countries.
 - Sending a powerful message to maintain stability and peace in the region.

Source->The Hindu

Baihetan Dam:

- It is the world's second-biggest hydroelectric dam under construction in southwestern China.
- The dam is being constructed on Jinsha river, a tributary of the Yangtze.
- The 289-m-tall Baihetan Dam will have 16 generating units with a capacity of 1 million kilowatts each.
- Three Gorges Dam, opened in 2003 on the Yangtze, is the world's biggest hydroelectric dam.

Source->Indian Express

The World Drug Report 2021: UNODC

In news

Recently, UNODC, in its World Drug Report 2021, has highlighted that the lockdown restrictions during Covid-19 have accelerated drug trafficking using the Internet.

Key takeaways

- Between 2010-2019, the number of people using drugs increased by 22%, owing in part to an increase in the global population.
- Opioids continue to account for the largest burden of disease attributed to drug use.
- A rise in the non-medical use of pharmaceutical drugs was also observed during the coronavirus pandemic.
- Access to drugs has also become simpler than ever with online sales, and major drug markets on the dark web are now worth some \$315 million annually.

About United Nations Office on Drugs and Crime (UNODC)

- It was established in 1997 and was named as a United Nations Office on Drugs and Crime (UNODC) in 2002.
- It acts as the Office for Drug Control and Crime Prevention by combining the United Nations International Drug Control Program (UNDCP) and the Crime Prevention and Criminal Justice Division of the United Nations Office at Vienna.

Source->PIB

Heat Dome

In news

Canada is reeling under a severe heat wave. The weather experts have blamed the heat dome effect.

About heat dome

- It occurs when the atmosphere traps hot ocean air like a lid or cap.
- The phenomenon begins when there is a strong change (or gradient) in ocean temperatures. In the process known as

Heat Dome

High-pressure atmospheric conditions combine to act as a lid on the atmosphere.

In a process known as **convection**, warm air attempts to escape but the high-pressure dome causes it to sink back down to earth.



As winds move the hot air east, the jet stream traps the air where it sinks, resulting in **heat waves**.

CBC NEWS

Source: NOAA

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convection, the gradient causes more warm air, heated by the ocean surface, to rise over the ocean surface, according to NOAA.

- The condition also prevents clouds from forming, allowing for more radiation from the sun to hit the ground.
- The western Pacific ocean's temperatures have increased in the past few decades and are relatively more than the temperature in the eastern Pacific. This strong change in ocean temperature from the west to the east is what a team of scientists believe is the reason for the heat dome.

Effects of Heat Dome

- Damage crops, dry out vegetation and droughts.
- Rise in energy demand, especially electricity, leading to pushing up rates.
- Fuel to wildfires, which destroys a lot of land area in the US every year.

Source->[Indian Express](#), [Hindustan Times](#)

NATRAX

In news

Minister of Heavy Industries and Public Enterprises inaugurated NATRAX- the High Speed Track (HST) in Indore which is the longest such track in Asia.

Key takeaways:

- The National Automotive Test Tracks (NATRAX) is an 11.3 kms long High-Speed Track (HST) facility.
- It is a one stop solution for all sorts of high speed performance tests for widest categories of vehicles from 2 wheelers to heavy tractor trailers.
- The track has been designed for neutral speeds up to 250 kmph and a maximum speed of up to 375 kmph on curves. There is no limit to maximum speed on the straight patch.
- It is built under NATRIP (National Automotive Testing and R&D Infrastructure Project) of the Heavy Industries Ministry.
- HST is used for measuring the maximum speed capability of high-end cars.

Source->[PIB](#)

Pradhan Mantri Formalisation of Micro food processing Enterprises (PMFME)

In news

PMFME Scheme under Aatmanirbhar Bharat Abhiyan Completes One Year

About PMFME

- Centrally sponsored scheme, launched on 29th June 2020.
- **Aim:** to enhance the competitiveness of existing individual micro-enterprises in the unorganized segment of the food processing industry and to promote formalization of the sector.

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- Provide support to Farmer Producer Organizations, Self Help Groups, and Producers Cooperatives along their entire value chain.
- With an outlay of Rs. 10,000 crore over a period of five years from 2020-21 to 2024-25, the scheme envisions to directly assist the 2,00,000 micro food processing units for providing financial, technical, and business support for upgradation of existing micro food processing enterprises.

Source->[PIB](#)

Statistics Day

- It has been designated as one of the Special Days to be celebrated at the national level and is celebrated on the birth anniversary of Late Prof. P C Mahalanobis, on 29th June, in recognition of his invaluable contribution in establishing the National Statistical System.
- The theme for the “Statistics Day” 2021 was Sustainable Development Goal (SDG) - 2 (End Hunger, Achieve Food Security and Improved Nutrition and Promote Sustainable Agriculture).

Source->[PIB](#)

UDISE+ 2019-20

In news

Union Education Minister has released the Report on Unified Information System for Education Plus (UDISE+) 2019-20 for School Education in India.

Key takeaways:

- Gross Enrolment Ratio at all levels of school education has improved in 2019-20 compared to 2018-19. Pupil Teacher Ratio (PTR) has improved at all levels of school education.
- Between 2012-13 and 2019-20, the Gender Parity Index (GPI) at both Secondary and Higher Secondary levels have improved.
- Remarkable improvement in the number of schools with functional electricity, with functional computers, internet facility in 2019-20 over the previous year.
- Another major improvement is seen in the number of schools with hand wash facility.
- The latest data confirm that a mere 22% of schools across the country on average had Internet access, while government institutions fared much worse at 11%.
- On the second metric of functional computer access, the national average was 37% and for government schools, 28.5%.
- Beyond the averages, the range of deficits reflects deep asymmetries: 87.84% of Kerala schools and 85.69% in Delhi had an Internet facility, compared to 6.46% in Odisha, 8.5% in Bihar, 10% in West Bengal and 13.62% in Uttar Pradesh.

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About UDISE:

- Unified District Information on School Education (UDISE) is one of the largest Management Information Systems on school education.
- It was initiated in 2012-13 by the Ministry of Education by integrating DISE for elementary education and SEMIS for secondary education.
- It helps measure the education parameters from classes 1 to 12 in government and private schools across India.
- UDISE+ is an updated and improved version of UDISE. It was developed in the year 2018-19 to speed up data entry, reduce errors, improve data quality and ease its verification.
- The present publication relates to the data for the reference year 2019-20.

Source->[PIB](#), The Hindu

Digital India Abhiyan

Prime Minister Narendra Modi has interacted with the beneficiaries of 'Digital India' on the occasion of 'Digital India' completing six years since its launch.

About 'Digital India' programme

- The initiative taken by the Government of India for providing high-speed internet networks to rural areas. Launched on 1st July 2015.
- The programme has been enabled for several important Government schemes, such as BharatNet, Make in India, Startup India, industrial corridors, etc.
- Digital India has **three core components**.
 - The creation of digital infrastructure,
 - Delivering services digitally and
 - Digital literacy
- **Objectives** - To provide high-speed internet in all gram panchayats.
 - To provide easy access to Common Service Centre (CSC) in all the locality.
- The Digital India Programme also focuses on restructuring many existing schemes that can be implemented in a synchronised manner.

Source->[PIB](#)

One Nation One Ration Card (ONORC)

In news

The Supreme Court has directed all states and UTs to implement the One Nation, One Ration Card system.

About ONORC

- **Aim:** enabling migrant workers and their family members to buy subsidised ration from any fair price shop anywhere in the country under the National Food Security Act, 2013.
- ONORC was launched in August, 2019.

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- ONORC is based on technology that involves details of beneficiaries' ration card, Aadhaar number, and electronic Points of Sale (ePoS).
- The system identifies a beneficiary through biometric authentication on ePos devices at fair price shops.
- The system runs with the support of two portals —Integrated Management of Public Distribution System (IM-PDS) and Annavitran, which host all the relevant data.
- To promote this reform in the archaic Public Distribution System (PDS), the government has provided incentives to states.
- The Centre had even set the implementation of ONORC as a precondition for additional borrowing by states during the Covid-19 pandemic last year.

Source->The Hindu

Indrajaal

In news

A Hyderabad-based technology R&D firm Grene Robotics has designed and developed India's first indigenous drone defence dome called "Indrajaal".

About Indrajaal

- It has the capability to autonomously protect an area of 1000-2000 sq km against the aerial threats by assessing and acting on aerial threats.
- The ANTI-UAV systems will not only provide protection to defence bases but it will be beneficial for linear infrastructures like international borders against advanced weaponry.
- Indrajaal comprises all current weapons suite and infrastructure along with a honeycombed cell structure to provide a seamlessly built over a combination of 9-10 technologies for 24x7 persistent monitoring, tracking and action.

Source-> [Newsonair](#)

Indian Ocean Naval Symposium (IONS)

In news

The 7th edition of IONS was hosted by the French Navy at La Réunion.

About Indian Ocean Naval Symposium(IONS):

- It is a biennial forum conceived by the Indian Navy in 2008.
- It is a voluntary initiative that seeks to increase maritime cooperation among navies of the littoral states of the Indian Ocean Region. It provides an open and inclusive forum for discussion of regionally relevant maritime issues.
- **Chairmanship:** The chairmanship of IONS has been held by India (2008-10), and the Islamic Republic of Iran (2018-21).Currently, France has assumed Chairmanship for a two-year tenure.

- **Members:** IONS includes 24 nations that hold territory within the Indian Ocean and 8 observer nations:

Source: [PIB](#)

BharatNet Project

In news

Union Cabinet has accorded approval for the revised implementation strategy of BharatNet through PPP mode in 16 States of the country.

About BharatNet Project:

It was originally launched in 2011 as the National Optical Fibre Network (NOFN) and renamed as Bharat-Net in 2015. Aims to connect all the gram panchayats of the country through optic fiber for providing broadband services;

Revised implementation strategy of BharatNet

- It will be implemented through PPP model with a total cost of ₹29,430 crores. Of this, the Government will provide the viability gap fund of ₹19,041 crores.
- it will now have two new components:
 - BharatNet will now extend up to all inhabited villages beyond the gram panchayats (GPs) in the 16 states.
 - It will also now include the creation, upgradation, operation, maintenance, and utilization of BharatNet by the private sector partner who will be selected by a competitive international bidding process.

Expected Benefits of the Project:

- Use of innovative technology by the Private Sector Provider for the consumers.
- Competitive tariffs for services.
- Bridge the rural-urban divide of digital access and accelerate the achievement of Digital India.
- Expected to increase direct and indirect employment and income generation.

Source: [PIB](#)

ZYCOV-D

- It is a “**plasmid DNA**” vaccine, which means it uses a genetically engineered, non-replicating version of a type of DNA molecule known as a ‘plasmid’.
- The plasmids are coded with the instructions to make the spike protein of SARS-CoV-2.
- Vaccination gives the code to cells in the recipient’s body, so they can begin making the spiky outer layer of the virus.
- The immune system is expected to recognize this as a threat and develop antibodies in response.

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- The vaccine will come with PharmaJet, a needle free applicator that will ensure painless intradermal vaccine delivery.
- ZyCoV-D has been developed with the support of Department of Biotechnology and the ICMR.

Decoding plasmid DNA vaccine

What is it?

- This is a novel approach of vaccination to induce an immune response in the body. It involves direct introduction of a plasmid – a genetic structure that contains DNA sequence encoding the antigen(s) against which an immune response is sought – into tissues. It relies on the in situ production of the target antigen
- A plasmid DNA vaccine offers advantages over traditional approaches. It provides stimulation of both B- and T-cell responses, and improved vaccine stability. It is also marked by the absence of any infectious agent and is easier to produce in a large-scale
- The plasmid DNA when introduced into the host cells would be translated into the viral protein and will elicit a strong immune response mediated by the cellular and humoral arms of the human immune system, which play a vital role in protection from disease as well as viral clearance

How ZyCoV-D is different from other vaccines?

- Indigenously developed by Ahmedabad-based Cadila Healthcare Ltd, ZyCoV-D vaccine uses non-replicating and non-integrating plasmid carrying the gene of interest. This makes the vaccine very safe
- ZyCoV-D is a three-dose, intradermal vaccine, which is applied using The PharmaJet needle-free system, Tropis. It can significantly reduce side effects
- ZyCoV-D is stored at 2-8 degrees Celsius but shows stability at 25-degree temperatures for at least three months. It has much-improved vaccine stability and requires lower cold chain infrastructure. Becomes easy for transportation to remotest regions
- In the cases of virus mutation, the platform can be rapidly used to modify the vaccine to ensure that it elicits protections against variants

Source : WHO & Zydus Cadila

Source->The Hindu

Black carbon could lead to premature mortality: Study

In news

According to a study, Black Carbon has a significant adverse effect on human health and leads to premature mortality.

Key takeaways:

- The Indo-Gangetic plain has a high burden of black carbon with serious implications for regional climate and human health.
- A 10-point increase in air pollution from black carbon led to an average 5% increase in mortality.
- On the other hand, a similar rise in PM 2.5 led to an average 1% increase in mortality. Nitrogen dioxide (NO₂) and Sulphur Dioxide (SO₂) were both associated with a 2.3% and 1.3% increase in mortality.

About Black Carbon (BC):

- Short-lived climate pollutant. It is the second-largest contributor to warming the planet after CO₂.
- It is formed through the incomplete combustion of fossil fuels, biofuel, and biomass.
- Primary sources include emissions from diesel engines, cook stoves, wood burning and forest fires.
- Black carbon can have significant direct and indirect impacts on the climate as it influences cloud formation and atmospheric heat absorption processes.

Source: [PIB](#)

Matera Declaration

The first joint meeting of G20 Foreign Affairs and Development Ministers ended with the adoption of the “Matera Declaration.

Key takeaways:

- Declaration reflects the Indian concern for the welfare of small & medium farmers, promoting local food cultures and recognizing agri-diversity.
- Calls upon the international community to step up efforts to contain the effects of the COVID-19 pandemic on lives and livelihoods, and build inclusive and resilient food chains and ensure adequate nutrition for all, in line with the “Zero Hunger” goal set for 2030.
- They also called for implementing effective actions for the empowerment of women and youth in the rural-urban continuum.
- The declaration underlined the need for much higher investments for food security, nutrition, and sustainable food systems and territorial development.
- Enhancing social-protection measures and programs, with a focus on people living in vulnerable situations, of which large shares depend on the agriculture and food sector for their livelihoods.
- Keeping international food trade open and strengthening global, regional and local diversified value chains for safe, fresh and nutritious food.
- Promoting a science-based holistic One Health approach, by integrating it into national policies and international action.

Source->The Hindu

Global Cybersecurity Index (GCI) 2020

- Released by **International Telecommunication Union (ITU)**.
- The index is a trusted reference that measures the commitment of countries to cybersecurity at a global level.
- Countries are measured along **five pillars**, namely, legal measures, technical measures, organisational measures, capacity development, and cooperation to generate an overall score.
- **India is placed on the 10th spot.** It was ranked rank 47 in 2019.

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- In the Asia-Pacific region India secured the 4th spot.
- Neighbours China and Pakistan were ranked at 33 and 79, respectively.

Source->[Indian Express](#)

Reform Based Power Distribution Scheme

In news

The Union Cabinet has approved a Reforms-based and Results-linked, Revamped Power Distribution Sector Scheme.

About Reform Based Power Distribution Scheme

- **Aim:** To improve the operational efficiencies and financial sustainability of DISCOMs/ Power Departments excluding Private Sector DISCOMs by providing conditional financial assistance for strengthening of supply infrastructure.
- Nodal agencies for the implementation of the scheme: Power Finance Corporation (PFC) and Rural Electrification Corporation (REC) have been nominated.
- The Scheme would be available till the year 2025-26.
- The financial assistance under the Scheme will be based on meeting pre-qualifying criteria as well as upon achievement of basic minimum benchmarks by the DISCOM.
- Major focus on improving electricity supply for the farmers and for providing daytime electricity to them through solarization of agricultural feeders.
- The central schemes, Integrated Power Development Scheme (IPDS), Deen Dayal Upadhyaya Gram Jyoti Yojana and Pradhan Mantri Sahaj Bijli Har Ghar Yojana (Saubhagya) will be merged under this scheme.

Source: [PIB](#)

Important Terms in news

Méndez Principles: Aim to provide a cohesive blueprint of practical measures to replace torture and coercive interrogation with “rapport based” interviews, reinforced through legal and procedural safeguards at every step. They offer practical guidance for non-coercive interrogations.

Bdelloid rotifers: Microscopic creature that was slumbering for at least 24,000 years, was unearthed from the permafrost, which is melting in places due to climate change.

EU’s green pass: Europe’s new ‘vaccine passport’ programme is also called Green Pass. It is a digital or paper document that indicates whether individuals have received a COVID-19 vaccination or, in some cases, recently tested negative for COVID-19. This document facilitates easy travel within and to the group of countries in European Union.

Ambergris: generally referred to as whale vomit. It is a solid waxy substance originating in the intestine of the sperm whale. It is used in the perfume market, especially to create fragrances like musk. The sperm whale is a protected species. IUCN status: Vulnerable