

# My Notes....

## NATIONAL

### SDG INDIA INDEX 2020-21

**Kerala has retained the top rank** in Niti Aayog's **SDG India Index 2020-21**, while **Bihar has been adjudged as the worst performer**, according to a report released on 3 June 2021. The **Index for Sustainable Development Goals (SDGs)** evaluates progress of states and union territories on **social, economic, and environmental parameters**.

#### What report said?

- Kerala retained its rank** as the top state with a score of 75. Both **Himachal Pradesh and Tamil Nadu took the second spot** with a score of 74. **Bihar, Jharkhand and Assam were the worst-performing** states in this year's India index.
- The **third rendition of India's SDG Index** was launched by Niti Aayog Vice Chairman Rajiv Kumar; **Chandigarh maintained its top spot** among the UTs with a score of 79, followed by Delhi (68).
- Mizoram, Haryana and Uttarakhand** are the **top gainers** in 2020-21 in terms of improvement in score from 2019, with an increase of 12, 10 and 8 points, respectively.
- While in 2019, 10 states/UTs belonged to the category of front-runners (score in the range 65-99, including both), 12 more states/UTs find themselves in this category in 2020-21.
- Uttarakhand, Gujarat, Maharashtra, Mizoram, Punjab, Haryana, Tripura, Delhi, Lakshadweep, Andaman and Nicobar Islands, Jammu and Kashmir and Ladakh graduated to the category of front-runners** (scores between 65 and 99, including both).
- The country's overall SDG score improved by 6 points – from 60 in 2019 to 66 in 2020-21.
- This positive stride towards achieving the targets is largely driven by **exemplary country-wide performance in goal 6** (clean water and sanitation) and **goal 7 (affordable and clean energy)**, where the composite goal scores are 83 and 92, respectively.

#### Flashback

- The index, **developed in collaboration** with the **United Nations in India**, measures the progress at the **national and sub-national level** in the country's journey towards meeting the global goals and targets and has been successful as an advocacy tool to propagate the messages of **sustainability, resilience, and partnerships**, as well.
- From covering 13 goals, 39 targets, and 62 indicators** in the **first edition in 2018-19** to 17 goals, 54 targets, and 100 indicators in the second; this **third edition** of the index **covers 17 goals, 70 targets, and 115 indicators**.
- The SDGs constituted through an unprecedented consultative process, have **17 goals and 169 related targets** to be achieved by 2030.
- The goals are an ambitious commitment by world leaders which set out a universal and unprecedented agenda that embraces economic, environmental, and social aspects of the wellbeing of societies.

## INDIA'S ENVIRONMENT REPORT 2021

India's rank has slipped by two places from last year to **117 on the 17 Sustainable Development Goals (SDGs)** adopted as a part of the **2030 agenda** by 193 United Nations member states in 2015, The State of **India's Environment Report 2021** has said. **India ranks below four South Asian countries -- Bhutan, Nepal, Sri Lanka and Bangladesh.** The overall SDG score of India is **61.9 out of 100.**

### What

- The **State of India's Environment Report 2021** revealed that **India's rank was 115 last year and dropped by two places** primarily because major challenges like **ending hunger and achieving food security (SDG 2), achieving gender equality (SDG 5) and building resilient infrastructure, promoting inclusive and sustainable industrialisation and fostering innovation (SDG 9)** remain in the country.
- Elaborating state-wise preparedness, the report said **Jharkhand and Bihar** are the least prepared to meet the SDGs by 2030, which is the target year. **While Jharkhand lags in five of the SDGs, Bihar lags in seven.**
- It said the states/UTs with the best overall score which are on the path to achieving the SDGs are **Kerala, Himachal Pradesh and Chandigarh.**
- The **2030 Agenda for Sustainable Development**, was adopted by **all United Nations Member States in 2015**, which provides a **shared blueprint for peace and prosperity for people and the planet, now and into the future.**
- There are **17 SDGs** which are an urgent call for action by all countries - **developed and developing** - in a global partnership.
- The **17 SDGs** adopted by UN member states are **SDG1- no poverty, SDG 2-zero hunger, SDG3-good health and well-being, SDG4- quality education, SDG 5- gender equality, SDG 6- clean water and sanitation, SDG 7- affordable and clean energy, SDG 8 – decent work and economic growth, SDG 9- industry, innovation and infrastructure.**
- SDG 10 – reduced inequalities, SDG 11- sustainable cities and communities, SDG 12- responsible consumption and production, SDG 13- climate action, SDG 14- life below water, SDG 15- life on land, SDG 16- peace, justice and strong institutions and lastly SDG 17- strengthening global partnerships** for the goals.

### Flashback

- The report also said that **India ranked 168 out of 180 countries** in terms of **Environmental Performance Index (EPI)** which is calculated on various indicators, including **environmental health**, climate, air pollution, sanitation and drinking water, ecosystem services, biodiversity, etc.
- India's rank was 172 in the environmental health category**, which is an indicator of how well countries are protecting their populations from environmental health risks.
- According to the **EPI 2020** report by Yale University, **India ranked 148**, 21 positions behind Pakistan which was at 127th position in the category of biodiversity and habitat which assesses countries' actions toward retaining natural ecosystems and protecting the full range of biodiversity within their borders.

## PGI 2019-20 APPROVED

Union Education Minister Ramesh Pokhriyal on 6 June 2021 approved the **Performance Grading Index (PGI) 2019-20** for States and Union Territories, which was introduced with a **set of 70 parameters** to bring about change in school education.

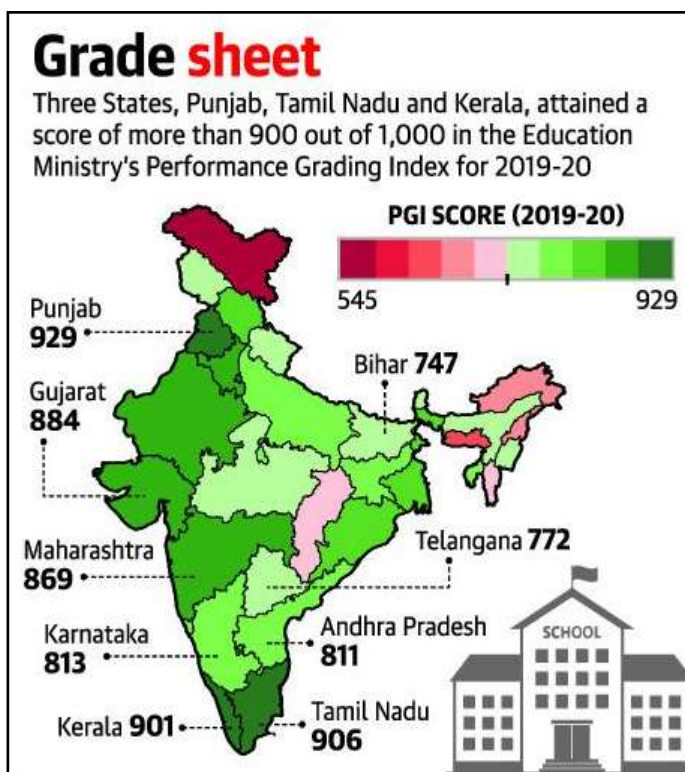
### What

1. The **PGI for States and Union Territories was first published in 2019** with reference to the year 2017-18. The PGI: States/UTs for 2019-20 are the **third publication** in this series.

2. The **PGI exercise** 'envisages that the **index would propel States and UTs** towards undertaking multi-pronged interventions that will bring about the much-desired optimal education outcomes'.

3. The PGI helps the States/UTs **to pinpoint the gaps and accordingly prioritise areas** for intervention to ensure that the school education system is robust at every level.

4. **Punjab, Chandigarh, Tamil Nadu, Andaman & Nicobar Islands and Kerala** occupy the **highest grade (Grade A++)** for 2019-20, adding that Andaman and Nicobar Islands, Arunachal Pradesh, Manipur, Puducherry, Punjab and Tamil Nadu have improved **overall PGI score by 10 per cent**.



5. **Thirteen states and UTs** showed improvement by 10 per cent or more in the PGI domain: **Infrastructure and Facilities**. Andaman & Nicobar Islands and Odisha have shown improvement by 20 per cent or more.

6. **Arunachal Pradesh, Manipur and Odisha** have shown more than **10 per cent improvement** in the PGI domain: **Equity**.

7. **Nineteen States and UTs** have shown **improvement by 10% (36 points)** or more in the PGI domain: **Governance Process**.

8. **Andaman & Nicobar Islands, Andhra Pradesh, Arunachal Pradesh, Manipur, Punjab, Rajasthan and West Bengal** have shown **improvement by at least 20 per cent**.

## INDIA ELECTED TO UN ECOSOC

India has been elected to the **Economic and Social Council**, one of the six main organs of the United Nations, **for the 2022-24** terms. The **54-member Economic and Social Council (ECOSOC)** is at the **heart of the United Nations system** to advance the

three dimensions of sustainable development **economic, social and environmental.**

#### What

1. It is the **central platform** for fostering debate and innovative thinking, forging consensus on ways forward, and coordinating efforts to achieve **internationally agreed goals.**
2. It is also responsible for the **follow-up to major UN conferences and summits.**
3. **India was elected in the Asia-Pacific States category** along with **Afghanistan, Kazakhstan and Oman** in the elections held on 7 June 2021.
4. From the **African states, Cote d'Ivoire, Eswatini, Mauritius, Tunisia** and the **United Republic of Tanzania** were elected while from the **eastern European states**, Croatia and the Czech Republic and from the **Latin American and Caribbean states, Belize, Chile and Peru** were elected.
5. India is currently serving the 2021-22 terms as a **non-permanent member of the powerful UN Security Council** and will assume the Presidency of the **15-nation UN organ** in August.

#### Flashback

1. The **UN Charter established ECOSOC in 1945** as one of the six main organs of the United Nations.
2. **ECOSOC's 54 members** are elected for **three-year terms** by the General Assembly.
3. Seats on the Council are allotted based on **geographical representation** with **14 allocated to African states, 11 to Asian states, six to eastern European states, 10 to Latin American and Caribbean states and 13 to western European and other states.**

### FIRST TO JOIN 'ONE NATION, ONE STANDARD' SCHEME

**Lucknow-based RDSO**, which sets **standards for the railway sector**, has become the **first standards body in the country** to join the central government's '**One Nation, One Standard**' scheme that aims to ensure quality products to Indian consumers. The **Research Design and Standards Organisation (RDSO)** has now been recognised as a '**Standard Developing Organisation**' by the Bureau of **Indian Standards (BIS)**, which is implementing the scheme.

#### What

1. The partnership will help RDSO, the **sole R&D wing of the railways ministry**, to realign its standard formulation procedures as per the code of good practices mentioned under the **WTO-Technical Barriers to Trade (WTO-TBT)**. The recognition will be **valid for three years.**
2. The objective of the government's '**One Nation, One Standard**' scheme, launched in **2019**, is to ensure there is a synergy and no overlap in the **standardisation work in the country**, thereby building a '**Brand India**' identity in the long run.
3. The **BIS**, under the aegis of the **consumer affairs ministry**, has experience of more than three decades and that will be of help to other standards developing organisations working in specific areas across the country.

4. BIS is making efforts to **encourage other standard developing organisations** like **Directorate of Standardisation under the defence ministry** and Directorate of Marketing and Inspection (DMI) under the agriculture ministry to be part of this voluntary scheme.
5. This partnership will **help RDSO to take the opinion of all experts** so that time taken in standards making is reduced as well as to have the best quality product at a cheaper cost.
6. RDSO has formulated **over 1,000 standards for railways and many more** are under process.

## CAPACITY FOR RENEWABLE ENERGY ROSE BY 250%

Prime Minister on 5 June 2021 said that **India has set an example in the world** when it comes **to protecting the environment**, adding that the country's capacity for renewable energy has **increased by more than 250 percent** in 6-7 years. Addressing a virtual meeting on **World Environment Day**, Prime Minister Narendra Modi said.

### What

1. **India is today in the top-5 countries of the world** in terms of installed **renewable energy capacity**.
2. Today, India is setting an example in front of the world that when it comes to protecting the environment.
3. It is not necessary **to block development works** while doing so. **Economy and Ecology** both can go together can move forward, this is the path India has chosen.
4. **21st century India will get energy only from the modern thinking** and modern policies of the 21st century. With this thinking, our government is continuously taking policy decisions in every field.
5. India is moving ahead with a great global vision, be it the **International Solar Alliance**, realizing the vision of **One Sun, One World, One Grid** or the **Coalition for Disaster Resilient Infrastructure initiative**.
6. India is also aware of the challenges that are being faced due to **climate change** and is also working actively.
7. An **ambitious E-100 pilot project** related to the **production and distribution of ethanol across the country** has also been launched in Pune.
8. **Now ethanol** has become one of the major priorities of **21st century India**.

### Flashback

1. **World Environment Day**, which is celebrated **annually on 5 June across the globe**, is one of the biggest events organised by the **United Nations (UN)** to generate awareness about the significance of nature.
2. The day is celebrated to tell people that **nature should be respected for its values**.

## MODEL TENANCY ACT APPROVED

The **Union Cabinet** on 2 June 2021 approved the **Model Tenancy Act**, a move that **will help overhaul the legal framework** with respect to **rental housing across the country**. The government said that it is expected **to give a fillip** to private participation in **rental housing as a business model** for addressing the huge housing shortage.

### Salient features

1. The Union Cabinet, chaired by Prime Minister has approved the **Model Tenancy Act** for **circulation to all states/union territories** for adaptation by way of enacting fresh legislation or **amending existing rental laws suitably**.
2. The **Act will enable institutionalisation of rental housing** by gradually shifting it towards the formal market.
3. **The Model Tenancy Act** aims at creating a vibrant, sustainable and inclusive rental housing market in the country.
4. It will enable **creation of adequate rental housing stock for all the income groups** thereby addressing the **issue of homelessness**.
5. The Act will **facilitate unlocking of vacant houses for rental housing purposes**, that it is expected to give a fillip to private participation in rental housing as a business model for addressing the huge housing shortage.

## PMGKAY EXTEND TILL DIWALI

Prime Minister on 7 June 2021 announced that the government will distribute **free foodgrains** to around 80 crore people till Diwali for providing **relief to the poor** amid the **second wave of COVID-19**. In April, the Centre had announced **distribution of free foodgrains for the months of May and June** under the **Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY)**.

### What

1. **Last year** when the lockdown was imposed due to coronavirus, free ration was provided **to more than 80 crore people** for eight months under the PMGKAY.
2. This year too due to the **second wave (of the pandemic)**, the scheme was implemented for May and June. Today, the government has decided to **extend PMGKAY till Deepawali**.
3. **Under the PMGKAY**, the Centre is distributing **5 kg foodgrains per person per month free of cost** to approximately 79.39 crore beneficiaries, who are covered under the **National Food Security Act (NFSA)**.
4. This distribution is **over and above the regular allocation to beneficiaries** under the NFSA.
5. The PMGKAY scheme was also implemented during April-November period of 2020.
6. The scheme was **reintroduced for May-June 2021** to deal with the impact of the second wave of the pandemic.

## INTERNATIONAL

### HISTORIC AGREEMENT OVER GLOBAL CORPORATE TAX

Finance ministers from **wealthy G7 nations** on 5 June 2021 pledged to commit to a **global minimum corporate tax** of at least **15 percent**, rallying behind a US-backed plan. The **G7 hopes to reach a final agreement** at the July gathering of the **expanded G20 finance ministers group**.

#### What

1. The landmark move is aimed at **getting multinationals** -- especially tech giants -- to **pay more into government coffers**, which have been severely hit during the pandemic.
2. The talks have prepared the ground for a broader **summit of G7 leaders in Cornwall, southwest England**, starting 4 June 2021.
3. **Corporate tax is one of two pillars** in efforts for **global fiscal reform**, the other being a "**digital tax**" to allow countries to tax the profits of multinationals headquartered overseas.

#### Why a Global Minimum Tax?

1. **Major economies** are aiming to **discourage multinationals from shifting profits** - and tax revenues - to low-tax countries regardless of where their sales are made.
2. Increasingly, **income from intangible sources** such as **drug patents, software and royalties on intellectual property** has migrated to these jurisdictions, allowing companies to avoid paying higher taxes in their traditional home countries.
3. With its proposal for a **minimum 15% tax rate**, the Biden administration hopes to reduce such tax base erosion without putting American firms at a financial disadvantage, allowing competition on innovation, infrastructure and other attributes.

#### How would A Global Minimum Work?

1. The **global minimum tax rate** would apply to **overseas profits**.
2. Governments could still set whatever **local corporate tax rate** they want, but if companies pay lower rates in a particular country, their home governments could **"top-up" their taxes to the minimum rate**, eliminating the advantage of shifting profits.
3. The OECD said last month that governments broadly agreed on the **basic design of the minimum tax but not the rate**. Tax experts say that is the thorniest issue.
4. Other items still to be negotiated include whether **investment funds** and **real estate investment trusts** should be covered, when to apply the new rate and ensuring it is compatible with U.S. tax reforms aimed at deterring erosion.

### WORLD'S FIRST COUNTRY TO ADOPT BITCOIN

El Salvador has become the **first country in the world** to **formally adopt bitcoin as legal tender** after Congress approved President Nayib Bukele's proposal to **embrace the cryptocurrency**. A **majority of lawmakers** voted in favor of the initiative to create a law that **will formally adopt bitcoin**, despite concern about the potential impact on **El Salvador's program** with the **International Monetary Fund**.

## US SUSPENDS TARIFFS IN DIGITAL TAX DISPUTE

The US government announced 2 June 2021 it is **suspending for six months punitive tariffs** on **Britain, India** and **four European nations** while it works to resolve a dispute over digital services taxes. The decision comes at the conclusion of a **year-long investigation into taxes** that Washington says discriminated against big US tech companies like Apple, Amazon, Google and Facebook.

### What

1. The **25 percent duties were never imposed**, but were intended to also target **Austria, Italy, Spain** and **Turkey**.
2. The **United States** is focused on finding a **multilateral solution** to a range of key issues related to **international taxation**, including our concerns with digital services taxes.
3. President Joe Biden's administration is pushing for a **15 percent global minimum corporate tax** that aims to resolve the issue of corporations sheltering profits in low-tax nations.
4. **USTR** made clear it still has the option to **impose the punitive duties** on goods from the countries that adopted the digital services taxes.
5. The United States remains committed to reaching a consensus on **international tax** issues through the **OECD and G20 processes**.
6. In March, **USTR terminated investigations of Brazil, the Czech Republic, the European Union and Indonesia**, since those governments did not implement a digital services tax.

### What are the digital services taxes in India?

1. The NDA government had moved an amendment in the **Finance Bill 2020-21** imposing a **2 per cent digital service tax on trade and services** by non-resident e-commerce operators with a turnover of over Rs 2 crore, effectively expanding the scope of equalisation levy that, till last year, only applied to digital advertising services.
2. The new levy that became applicable from **April last year** has expanded the ambit of the **equalisation levy** for non-resident e-commerce operators involved in supply of services, including online sale of goods and provision of services.
3. **E-commerce operators are obligated to pay the tax** at the end of each quarter.

## FIVE COUNTRIES WIN UN COUNCIL SEATS

The **United Nations** elected **five countries** to join the powerful **U.N. Security Council** on 11 June 2021 with no suspense because all were unopposed -- **Brazil, the United Arab Emirates, Albania, Ghana** and **Gabon**. Winning a seat on the **15-member Security Council** is considered a **pinnacle of achievement** for many countries because it gives them a strong voice on issues of **international peace and security** ranging from conflicts in **Syria, Yemen, Mali and Myanmar** to the nuclear threat posed by **North Korea and Iran**, and attacks by extremist groups such as the **Islamic State and al-Qaida**.

### What

1. It will be **Albania's first time serving on the council** and **Brazil's 11th time**,



which will tie Japan as the country elected to the council for the most two-year terms. There had been a three-way race for two African seats but **Congo dropped out**.

2. The **five new council members** will start their terms on 1 January, **replacing five countries whose two-year terms end** on 31 December -- **Estonia, Niger, Saint Vincent and the Grenadines, Tunisia and Vietnam**.
3. They will join the **five veto-wielding permanent members of the council** -- the **United States, Russia, China, United Kingdom and France** -- and the **five countries elected last year: India, Ireland, Kenya, Mexico and Norway**.

#### Flashback

1. **Last year**, the election for **new council members** was held under dramatically different voting procedures because of the **COVID-19 pandemic**.
2. The **10 non-permanent seats** on the council are allotted to **regional groups**, who usually select candidates, but sometimes cannot agree on an uncontested slate.
3. Even if a country is running unopposed, it must obtain the votes of two-thirds of the member states that voted in order to win a seat on the council.

## ECONOMY

### EXPERT PANEL TO FIX MINIMUM WAGES

The government has **constituted an expert group** on 3 June 2021 led by **Professor Ajit Mishra** that will give recommendations on **fixation of minimum wages and national floor minimum wage**. **Minimum wage is different for different categories** of workers.

#### What

1. The group has been constituted for a **period of three years** from the date of notification.
2. To arrive at the wage rates, the group will look into the **international best practices on the wages** and evolve a **scientific criteria and methodology** for fixation of wages.
3. The decision is part of the **Centre's implementation of the Code on Wages, 2019**, which mandates a **statutory national level floor wage**.
4. **National floor** refers to the **minimum level of wage** that is applicable to all categories of workers across the country.

### COMPENSATION UNDER CODE ON SOCIAL SECURITY

The **labour ministry** has notified draft Rules for **providing compensation to workers** under the **Code on Social Security, 2020**, a move aimed at ensuring payments are made **within 30 days** to the workers or to their families in case of death or disability. In case the payments are delayed, the employer **will be liable to pay interest** at the **rate of 12% per annum** from the due date till the time the compensation is made.

### What

1. The proposed draft Rules will **supercede the Employee's Compensation Rules, 1924**, the **Employee's Compensation (Transfer of Money) Rules, 1935** and the **Employee's Compensation (Venue of Proceedings) Rules, 1996** under the erstwhile **Employee's Compensation Act, 1923**.
2. The Act has been **repealed by section 164 of the said Code on Social Security, 2020** passed by the Parliament in **September 2020**.
3. The labour ministry has sought comments from the stakeholders on the proposed draft Rules within 45 days following which it will be notified and become effective.

## MILLION TONNES OF OIL SAVED UNDER PAT SCHEME

India has saved **17 million tonnes of oil equivalent every year** and **reduced 87 million tonnes of CO2 emissions** per annum under the **Perform Achieve and Trade (PAT) Scheme**, the power ministry said on 8 June 2021. Besides, India saved 56 billion units of electricity during 2020-21, worth over Rs 30,000 crore under **energy efficiency standards (or Star) labelling programme** for appliances.

### What

1. The **PAT initiative** is currently leading to energy savings of about 17 MTOE (million tonnes of oil equivalent) and has resulted in mitigation of **about 87 million tonnes of CO2 per year**, a figure close to total CO2 emissions of country like Bangladesh, the ministry said.
2. By the year 2020, the scheme coverage has been extended to **13 most energy intensive sectors**, including cement, iron and steel, fertiliser, thermal power plants, refineries, petrochemicals, railways and others.
3. The ministry of power is implementing **measures to save energy** with an objective to **reduce CO2 emission levels in the environment** from industries, establishments and by using equipment/ appliances.
4. In this regard, the **PAT scheme is a key programme for large industries** and establishments.
5. This scheme aims **to enhance the cost-effectiveness of energy savings** by

#### Flashback

1. To enable market transformation of efficient products, **Standards and Labeling (S&L) Program** was introduced by the **Bureau of Energy Efficiency (BEE)**.
2. The **objective of S&L** is to provide the consumers an informed choice about the **energy savings potential** and thereby the cost saving due to the products available in the market.
3. The scheme includes **display of energy performance labels** on key energy consuming equipment and appliances, with stipulation for minimum energy performance standards.
4. The **scheme has now included 28 appliances till March 2021** and over 15,000 models of energy efficient products have been awarded Star labels, a popular symbol among the consumers for endorsing energy savings.

- upgrading technologies or by taking in-house actions to minimise energy consumption.
6. The scheme **provides mandatory targets for the identified large units** and the excess energy saved by them is issued as **Energy Saving Certificates**, which are tradable instruments.
  7. The different industries and establishments are **assigned separate energy efficiency targets** based on their levels of energy consumption and the potential for energy savings.
  8. **Appliances are the main points for electricity consumption** at household level or at office and commercial establishments.

## SCIENCE AND TECHNOLOGY

### FIRST HUMAN CASE OF H10N3 BIRD FLU

A 41-year-old man in China's eastern province of Jiangsu has been confirmed as the **first human case of infection with the H10N3 strain of bird flu**, China's National Health Commission (NHC) said on 1 June 2021. He was diagnosed as **having the H10N3 avian influenza virus** on 28 May 2021, it said, but did not give details on **how the man had been infected with the virus**.

#### What

1. **H5N8 is a subtype of the Influenza A virus** (also known as the bird flu virus). While **H5N8 only presents a low risk to humans**, it is highly lethal to wild birds and poultry.
2. **H10N3 is a low pathogenic**, or relatively less severe, **strain of the virus in poultry** and the risk of it spreading on a large scale were very low.
3. Only around **160 isolates of the virus were reported in the 40 years to 2018, mostly in wild birds or waterfowl in Asia** and some limited parts of North America, and **none had been detected in chickens so far**.
4. **Many different strains of avian influenza** are present in China and some sporadically infect people, usually those working with poultry.
5. There have been **no significant numbers of human infections with bird flu** since the **H7N9 strain killed around 300 people during 2016-2017**.
6. **No other cases of human infection with H10N3 have previously been reported globally**.

### WHO TURNS TO GREEK TO NAME VARIANTS

The World Health Organization (WHO) has **switched to naming variants** of the Covid-19 virus **after letters of the Greek alphabet**, with the **B.1.617.2 variant** of concern to be **now known as the "delta" variant** to guard against stigmatisation of countries or communities.

## What

1. The WHO said the names were chosen after discussions with experts from around the world who considered “**easy-to-pronounce and non-stigmatising labels**” that would be practical for “**non-scientific audiences**”.
2. This comes at the back of a lot of criticism from the Indian government against referring to it as a **variant associated with India**. However, it is crucial to understand if this is a first for the global organisation?
3. While the move has little historical precedent, it does fall in place with the **WHO’s new naming conventions**, which advises **neutral and generic terms** that contain the disease and an arbitrary identifier like **alpha and beta** or **1, 2 and 3**.
4. In the recent past the only popular use of this system has been to **name the variants of the H1N1 flu**, commonly called **swine flu**, with the other subtypes **H1N2, H3N1, H3N2 and H2N3** commonly found circulating in pig populations all over the world.
5. The Indian government has been campaigning to scrub all references to **B.1.617 variant as Indian** as the WHO does not identify variants with countries as per the **United Nations agency’s 2015 guidelines**.
6. The practice of naming **diseases or variants after their place of origin** has been known to stigmatise people from those places and incite racist attacks.

### How will variants be named according to this system?

1. Under the new naming system, the variants **first discovered in the United Kingdom (B.1.1.7), South Africa (B.1.351) and Brazil (P.1)** will now be known as “**alpha**”, “**beta**” and “**gamma**”, respectively.
2. In fact, the **next six letters of the Greek alphabet** have been used to name other variants of interests, including those that were first found in **India, the United States, the Philippines and Brazil**.

## FIRST INDIGENOUS HYDROGRAPHIC SURVEY SHIP

**India’s first of its class indigenously designed** and built **Hydrographic Survey Ship INS Sandhayak** is getting decommissioned from the service on 4 June 2021. The ship which has been in service for four decades will be decommissioned in a ceremony at **Naval Dockyard Visakhapatnam**.

### More about INS Sandhayak

1. This ship was conceptualised by then Chief Hydrographer, Rear Adm FL Fraser, who also designed and built this **hydrographic survey vessel** in India.
2. The construction of the ship began at **GRSE Kolkata** (then Calcutta) by laying the keel in 1978, after the design was finalized by Naval Headquarters.
3. The ship was commissioned to the Indian Navy on 26 Feb 1981 by Vice Adm MK Roy, who was the then Flag Officer Commanding-in-Chief Eastern Naval Command (ENC).
4. The ship has been the **Alma-Mater**, and has played a very important role in laying the foundation of complete hydrographic coverage of the peninsular waters.
5. The design of this first ship was a major success which paved the way for all the Survey ships of the Indian Navy in modifications till recently.

## SPACEX'S CARGO CAPSULE TO THE SPACE STATION

**SpaceX** sent its **latest Dragon cargo capsule** to the **International Space Station**, successfully launching on the company's two-stage Falcon9 rocket on 4 June 2021. The mission, **called CRS-22**, is currently in orbit and includes **3,311 kg of research material** and supplies to the ISS. The mission is **transporting living specimens for biological experiments**, new **high-tech solar panels** to install outside the station, and regular supplies including food.

### What

1. The Dragon is expected to autonomously dock to the space station's Harmony module on 5 June 2021.
2. It is the **fifth Dragon capsule** to fly to the station in the past 12 months. Another Dragon, which launched the **Endeavour crew in April**, is still parked at the station.
3. Nine minutes after the launch, SpaceX also successfully steered the booster stage of its rocket, **called B1067**, to land on the sea barge named **'Of Course I Still Love You'** in the Atlantic Ocean.
4. This is the **86th recovery of a Falcon first stage** in the past six years.
5. The **solar panels** to be delivered in this mission are the first of three sets of high-powered, state-of-the-art panels that will **augment the station's power needs**.
6. **Astronauts onboard the ISS** will conduct **two extra-vehicular activities** in the form of spacewalks to install the two roll-out panels.
7. The existing, rotating panels on either side of the ISS have been in continuous operation for over 20 years and can be seen from earth with the naked eye as they reflect sunlight when the ISS passes within line of sight.

## SCIENTISTS FINISH SEQUENCING OF HUMAN GENOME

The **process of human genome sequencing is finally complete** 20 years after researchers **first cracked the human gene code**. This should usher in a **new era of genomics** and sharply increase our understanding of a **wide variety of disorders affecting people**. It could also lead to better genetic screening that enables quick and specific diagnostic tests to treat various maladies.

### What

1. **In 2001, Celera Genomics and International Human Genome Sequencing** published the **first drafts of the human genome**. That was a breakthrough moment in genomics, allowing scientists **to understand human evolution and biology better**.
2. But scientists at that time were **not able to decode 15% of the genome sequence** because they didn't have the technology. They made more progress over the years, but even **by 2013, 8% of the genome** (all genes together) still had not been sequenced.
3. Now, researchers at the **Telomere-to-Telomere (T2T) consortium**, an international collaboration, have sequenced the **"first truly complete human reference genome"**.
4. Preprint paper titled 'The complete sequence of a human genome' which dubs the **new sequence T2T-CHM13**.

### Flashback

1. **Human genome** is the **complete set of the DNA**. DNA strands are like a **four-letter language** — **four chemical units or bases** that are the alphabet.
2. The **'letters' combine specifically with 'letters'** in the opposite strand to form **'words', encoding information**.
3. **All these 'words' are stored in the chromosomes** in human cells. If a **human genome were a book**, it would have around **3-billion words** (base pairs) **across 22 chapters (chromosomes)**.
4. So, with **8% of the genome not sequenced**, it meant some pages of this book were missing. This has now been plugged.

## VENUS AS HOT SPOT FOR TWO NEW ROBOTIC MISSIONS

**NASA is returning to sizzling Venus**, our closest yet perhaps **most overlooked neighbor**, after decades of exploring other worlds. The space agency announced **two new robotic missions** to the **solar system's hottest planet** on 2 June 2021. These **two sister missions** both aim to understand how Venus became an inferno-like world capable of melting lead at the surface.

### What

1. One mission named **DaVinci Plus** will **analyze the thick, cloudy Venusian atmosphere** in an attempt to **determine whether the inferno planet** ever had an ocean and was possibly habitable.
2. A small craft will plunge through the atmosphere to measure the gases. It will be the **first U.S.-led mission to the Venusian atmosphere** since 1978. **DAVINCI+** could conclusively confirm the **presence of phosphine**.
3. DAVINCI is a shortening of **Deep Atmosphere of Venus Investigations of Noble Gases**, Chemistry and Imaging. The plus sign indicates enhancements over a previous proposal, DAVINCI.
4. Concentrations of **krypton, argon, neon and xenon** — the noble gases that do not react with other elements —

### Flashback

1. Venus is in many ways a **twin of Earth** — it is **comparable in size, mass and composition**, and it is the planet whose orbit is the closest to Earth's. But the history of the two planets diverged.
2. While **Earth is moderate in temperature** and largely covered with water, **Venus**, with a **dense atmosphere of carbon dioxide**, is a hellishly hot **900 degrees Fahrenheit** at the surface.
3. The **U.S. and the former Soviet Union** sent multiple **spacecraft to Venus** in the early days of space exploration.
4. **NASA's Mariner 2** performed the **first successful flyby in 1962**, and the Soviets' **Venera 7** made the **first successful landing in 1970**.
5. In 1989, NASA used a **space shuttle to send its Magellan spacecraft** into orbit around Venus.
6. The European Space Agency put a spacecraft around Venus in 2006.

- may provide hints about how Venus and its atmosphere formed.
5. The measurements might also find signs of whether water has escaped from Venus into space and whether oceans ever covered the surface.
  6. The other mission, called **Veritas**, will seek a **geologic history by mapping the rocky planet's surface**.
  7. VERITAS, short for **Venus Emissivity, Radio Science, InSAR, Topography & Spectroscopy**, will send an orbiter that would produce high-resolution **three-dimensional global maps** using radar, and a spectrometer will identify what the surface is made of.
  8. It will also **precisely measure variations in the planet's gravitational pull**, which will offer clues to its interior geological processes.

## ISRO DEVELOPS 3 TYPES OF VENTILATORS

The **Indian Space Research Organisation (ISRO)** has developed **three types of ventilators**, and has come forward to **transfer the technology to industry** for clinical usage as the country battles the **second wave of Covid-19 pandemic**.

### What

1. A low-cost and portable critical care ventilator, '**PRANA**' (**Programmable Respiratory Assistance for the Needy Aid**) is based on the automated compression of an **AMBU (Artificial Manual Breathing unit)** bag.
2. The system has a **sophisticated control system** that includes airway pressure sensor, flow sensor, oxygen sensor, servo actuator as well as expiration and **PEEP (Positive End Expiratory Pressure) control valves**.
3. ISRO said **PRANA supports both invasive and non-invasive ventilation modes** and is capable of giving mandatory breaths (controlled by ventilator) as well as spontaneous breaths (controlled by the patient).
4. A robust algorithm for controlled and safe ventilation of the patient is implemented which raises alarm and opens safety valves to **prevent barotrauma, asphyxia and apnoea** during the ventilation.
5. The ICU grade positive pressure mechanical ventilator titled '**VaU**' (**Ventilation assist Unit**) can assist or replace the spontaneous breathing in patients under respiratory distress.
6. **VaU is based on a centrifugal blower** which draws in filtered ambient air, compresses it and delivers it to the patient to achieve ventilation and can therefore operate without a compressed pneumatic source.
7. Gas-powered ventilator '**Space Ventilator Aided System for Trauma Assistance (SVASTA)**', a basic mode for non-invasive ventilation, is well-suited for emergency use for first line treatment and as transit ventilators inside vehicles.
8. The **prototype of the three ventilators** developed at Thiruvananthapuram-based **Vikram Sarabhai Space Centre (VSSC)**, a major space research centre of ISRO, has undergone in-house test and evaluation, and meets various specifications.

## MISCELLANEOUS

### QS WORLD RANKINGS 2022

The **Indian Institute of Science (IISc)**, Bengaluru, has been ranked the “**world’s top research university**,” in the **Quacquarelli Symonds (QS) World Rankings 2022**, an annual publication of university rankings. According to the **Citations Per Faculty (CPF) indicator**, when universities are adjusted for faculty size (the size of the institution is taken into account for calculating the CPF), **IISc Bangalore is the world’s top research university**, achieving a perfect score of 100/100 for this metric, a press statement issued by QS stated.

#### What

1. **A citation per faculty is** one of the **six broad parameters** on which the QS rankings are based and measures research impact.
2. It **divides the total number of citations received by a university’s research papers** over a five-year period by the number of faculty at an institution.
3. **In overall rankings**, however, **IISc has been judged the third best institution in India**, the **Indian Institute of Technology (IIT) Bombay and Delhi** being in first and second positions, respectively.
4. **All three Indian institutions** have made it among the **top 200 in the world**, according to the rankings released 9 June 2021.
5. The **top three institutions globally** are — **Massachusetts Institute of Technology (MIT)**, **University of Oxford** and **Stanford University** ranked at number one, two and three respectively.
6. The **other Indian institutes** that have made it to the **top 500 in the ranking** are **IIT Madras**, which has improved 20 places from its last year rank and now ranks in the 255 bracket.
7. **IIT Kanpur, Kharagpur, Guwahati** and **Roorkee** are the other institutes in the 500 bracket, in that order.

### FIRST CITIES TO GET MOBILE CNG FILLING SERVICE

**Delhi and Mumbai** became the **country’s first cities** to get **mobile CNG filling service**, a move that will spare consumers from standing in long queues at gas stations for refuelling by making the **clean-burning fuel** available at their doorstep and expand access in areas with a scanty number of stations.

#### What

1. **IGL** designed the **mobile refuelling units for Delhi-NCR** and **Mahanagar Gas Ltd for Mumbai**, with Petroleum and Explosive Safety Organisation as the co-developer for both.
2. Each mobile refuelling unit carries 1,500 kg of CNG and can refuel 100-150 vehicles at an average of 10 kg each.



3. In Delhi, the service has been kicked off with deployment of one unit in Vasant Kunj area, which has a paucity of CNG stations. The number of mobile dispensers will be ramped up gradually.
4. The **future of fuel** retail lay in mobile dispensing and advised IGL to target shopping malls, office complexes and housing societies so that CNG car owners or taxi operators can refuel without having to waste time and fuel in visiting a filling station.
5. **Mobile dispensing service** will enhance customer experience by bringing CNG at the doorstep of consumers and expand coverage in areas where the **number of CNG stations is low** or non-existent due to land issues.

#### Flashback

1. **CNG**, also known as **compressed natural gas**, is an **eco-friendly alternative to gasoline**.
2. Made by **compressing natural gas (methane)** down to **less than 1%** of its volume, CNG fuel is safer than gasoline and diesel because it is **non-toxic** and **does not contaminate ground water**.

## INDIA'S FIRST EVER TAEKWONDO ENTRY

**Aruna Tanwar** has been awarded a wild card entry for the upcoming **Tokyo Paralympic Games**, which will make her the **first Indian** to compete in the **global multi-para sport event**, the national federation said on 9 June 2021. **She is the first Taekwondo athlete from India** to qualify for the Paralympics.

#### What

1. **India Taekwondo has extended all support** for her preparation for **Tokyo Paralympics** and have also recommended her name for TOPS for extended necessary support to make the dream of Paralympic medal a reality.
2. A **five time national champion**, she has finished on podium in the last four years at both Asian Para Taekwondo Championships and World Para Taekwondo Championships.
3. The **Tokyo Paralympics** will be held from 24 August to 5 September.

## DECLASSIFICATION OF WAR HISTORIES AFTER 25 YRS

**Defence Minister** Rajnath Singh has approved a **new policy** on the archiving, **declassification and publication of war/operations histories**, the Ministry of Defence (MoD) announced on 12 June 2021. The policy requires **MoD organisations**, such as the **army, navy, air force, coast guard, Integrated Defence Staff** and **Assam Rifles**, to transfer their records -- including **war diaries, letters of proceedings** and **operational record books** -- to the **ministry's History Division** for proper upkeep, archival and recording of history.

#### What

1. The requirement of... clear cut policy on **declassification of war records** was recommended by the **Kargil Review Committee** headed by **K Subrahmanyam** as well as the **NN Vohra Committee**, in order to analyse lessons learnt and prevent future mistakes, said the MoD release.

2. **War histories** are henceforth to be formulated by the **MoD's History Division**, in coordination with various departments. A **joint secretary from the MoD will head the committee**, which will include military, foreign ministry and home ministry representatives and prominent military historians.
3. The above-mentioned committee should be formed **within two years of completion of war/operations**. Thereafter, collection of records and compilation should be completed in three years and disseminated to all concerned.
4. The **MoD's Historical Division** has painstakingly compiled **histories of the 1947-48 Jammu & Kashmir war, the 1962 Sino-India war and the 1965 and 1971 Indo-Pakistan war**. However, for decades, the MoD has withheld permission to publish them.
5. In addition to war histories, other important studies remain classified more than half a century after they were completed. **In 1962**, after the **Indian army's defeat** by the People's Liberation Army of China, a high-powered committee, led by Lieutenant **General TB Henderson Brooks**, comprehensively investigated the debacle. The so-called **Henderson Brooks Report** remains "**Top Secret**" till today.

#### Flashback

1. In the National Archives in New Delhi, most of the post-1914 correspondence relating to the **border between China and India remains classified** and inaccessible even to accredited scholars.
2. The responsibility for declassification of records is specified in the **Public Record Act 1993** and **Public Record Rules 1997**. The policy mandates that records should ordinarily be **declassified in 25 years**.
3. **Records older than 25 years** should be **appraised by archival experts** and **transferred to the National Archives of India** once the war/operations histories have been compiled, said the MoD.

## FIRST WOMAN TO HEAD UN TRADE BODY

The **U.N. General Assembly** on 11 June 2021 approved the **nomination of Costa Rican economist Rebecca Grynspan** to **head the U.N. agency promoting trade and development**, the **first woman and Central American** to lead the Geneva-based organization. She was nominated by Secretary-General Antonio Guterres as secretary-general of the **United Nations Conference on Trade and Development**, known as **UNCTAD**.

### What

1. It supports developing countries in their efforts to benefit from the **globalized economy** and to deal with **potential drawbacks from economic integration**.
2. **Since 2014**, Grynspan has been secretary-general of the Ibero-American General Secretariat, which supports preparations for **Ibero-American summits**. From 2010 to 2014, she was the deputy administrator of the **United Nations Development Program**.
3. She previously served as **UNDP's regional director for Latin America** and the Caribbean, a member of the high-level panel on financing for development, and

second vice president of **Costa Rica from 1994 to 1998**.

4. **Grynspar called UNCTAD a key partner for all countries** facing the challenges of post-pandemic recovery, at this critical time, UNCTAD can make an essential contribution for a more just, **sustainable and inclusive recovery for all**.

## SC CLOSES PROCEEDINGS AGAINST ITALIAN MARINES

The **Supreme Court** on 15 June 2021 **closed all criminal proceedings** against **two Italian marines**, who were **accused of killing of two Indian fishermen** off Kerala coast in 2012, after payment of **10 crore compensation by Italy**. A bench of Justices **Indira Banerjee** and **MR Shah** noted that as the **international tribunal order**, India has agreed to the compensation of 10 crores and Italy has already deposited the amount.

### What

1. This is a fit case to close all proceedings in India **under Article 142** of the Constitution, the bench said.
2. The bench also said **Italy must start criminal proceedings against the two marines** under its jurisdiction immediately as per the international tribunal's order.
3. The case details along with evidence will be **provided by the Centre** and the **Kerala government**.
4. **In February 2012**, India had accused two Italian marines, **Salvatore Girone** and **Massimiliano Latorre**, on board the **MV Enrica Lexie** -- an Italian flagged oil tanker - - of killing two Indian fishermen who were on a fishing vessel in **India's Exclusive Economic Zone (EEZ)**.
5. The **international tribunal's finding** that the **marines have immunity** came **seven years after the Supreme Court ordered** the Centre to "proceed with the investigation and trial of the marines" in a decision on 18 January 2013.
6. The Supreme Court had ordered the Centre to **set up a Special Court to try the case**. Prior to the Supreme Court verdict, the Kerala High Court too had found that the marines enjoyed no immunity.
7. However, **in 2014**, the marines had successfully **gained a stay order** on the investigation by the **National Investigation Agency**.
8. A year later, the **Supreme Court froze its own proceedings** when the **case reached the International Tribunal on Law of Seas**. In September 2015, the Supreme Court deferred the case till further orders.

## DELTA VARIANT MUTATES INTO DELTA PLUS

The **highly infectious Delta variant (B.1.617.2)** of Covid-19 that **first surfaced in India** is feared **to have mutated into a more virulent version** called **AY.1** or **Delta Plus** — one that is possibly capable of resisting even the **monoclonal antibodies cocktail** currently being prescribed as a cure.

### What

1. The **new Delta plus variant** has been formed due to a **mutation in the Delta or B.1.617.2 variant**.
2. It is not yet a **variant of concern (VoC) in India**, due to low incidence.
3. One of the emerging variants is **B.1.617.2.1** or **AY.1** is characterized by the

- acquisition of **K417N mutation**.
4. The mutation is in the **spike protein of SARS-COV-2**, which helps the virus enter and infect the human cells.
  5. **63 genomes of Delta (B.1.617.2)** with the new K417N mutation have been identified by the GISAID so far.
  6. **Delta plus was present in six genomes from India** as of 7 June 2021, as per Public Health England (PHE).
  7. The variant frequency for K417N is not much in India at this point in time. The sequences are **mostly from Europe, Asia and America**.

## SIPRI STUDY ON NUCLEAR ARSENALS

**China, Pakistan and India** have **350, 165 and 156 nuclear warheads** respectively as of January this year and the **three countries appear to be expanding** their nuclear arsenals, a study by **Stockholm International Peace Research Institute (SIPRI)** has said. It also said as per its assessment, **Russia and the US together possess over 90 per cent** of the estimated 13,080 global nuclear weapons.

### What

1. There are **nine countries in the world** that **have nuclear weapons**: the **US, Russia, the UK, France, China, India, Pakistan, Israel and North Korea**.
2. **China is in the middle of a significant modernisation** and expansion of its nuclear weapon inventory, and **India and Pakistan also appear to be expanding** their nuclear arsenals, the study said.
3. It has been more than a year since the military standoff between the armies of India and China erupted in **eastern Ladakh on 5 May 2020**, during which there were fatalities on both sides for the **first time in 45 years**.
4. The SIPRI's study also talked about the **fissile raw material stocks** that the countries have for their nuclear weapons.
5. The raw material for nuclear weapons is **fissile material**, either **highly enriched uranium (HEU)** or **separated plutonium...India and Israel have produced mainly plutonium**, and **Pakistan has produced mainly HEU** but is increasing its ability to produce plutonium.
6. **China, France, Russia, the UK and the US** have produced **both HEU and plutonium** for use in their nuclear weapons, the study mentioned.
7. Approximately **2,000 of the total 13,080 global nuclear warheads in the world** are "kept in a state of high operational alert", said the study mentioned in the **SIPRI Yearbook 2021**.
8. It also said **Saudi Arabia, India, Egypt, Australia and China** were the **five largest importers of major arms** in the world between 2016 and 2020.
9. **Saudi Arabia had 11 per cent share** and **India 9.5 per cent** in the global imports of the major arms in this time period.