

ANNUAL NEWSLETTER

RECAP 2021



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Indian Economy

With its robust democracy and strong partnerships, India has emerged as the world's fastest-growing major economy. It is anticipated to be one of the top three economic powers in the next 10-15 years.

Recent Developments

With an improvement in the economic scenario, there have been investments across various sectors of the economy. The private equity - venture capital (PE-VC) sector recorded investments worth US\$ 10.7 billion across 137 deals in August 2021, registering a 5x YoY growth. Some of the significant recent developments in the Indian economy are as follows:

1. India's merchandise exports between April 2021 and August 2021 were estimated at US\$ 164.10 billion (a 67.33% YoY increase). Merchandise imports between April 2021 and August 2021 were estimated at US\$ 219.63 billion (an 80.89% YoY growth).
2. In August 2021, the Manufacturing Purchasing Managers' Index (PMI) in India stood at 52.3.
3. The gross GST (Goods and Services Tax) revenue collection stood at Rs. 112,020 crore (US\$ 15.21 billion) in August 2021.
4. According to the Department for Promotion of Industry and Internal Trade (DPIIT), FDI equity inflow in India stood at US\$ 547.2 billion between April 2000 and June 2021.
5. India's Index of Industrial Production (IIP) for July 2021 stood at 131.4 against 122.6 for June 2021.
6. Consumer Food Price Index (CFPI) – Combined inflation was 3.11 in August 2021 against 3.96 in July 2021.
7. Consumer Price Index (CPI) – Combined inflation was 5.30 in August 2021 against 5.59 in July 2021.
8. Foreign portfolio investors (FPIs) invested US\$ 2.5 billion in India in August 2021.

Some of the recent initiatives and developments were undertaken by the Government are listed below:

1. By Nov. 1, 2021, India and the United Kingdom hope to begin free trade agreement negotiations. The proposed FTA between these two countries will likely unlock business opportunities and generate jobs. Both sides have renewed their Commitment to boost trade in a manner that benefits all.
2. In August 2021, NITI Aayog and Cisco collaborated to encourage women's entrepreneurship in India.
3. In August 2021, Prime Minister Mr Narendra Modi announced an initiative to start a national mission to reach the US\$ 400 billion merchandise export target by FY22.
4. In August 2021, Prime Minister Mr Narendra Modi launched a digital payment solution, e-RUPI, a contactless and cashless instrument for digital payments.
5. In June 2021, RBI Governor Mr Shaktikanta Das announced the policy repo rate unchanged at 4%. He also announced various measures, including Rs. 15,000 crores (US\$ 2.05 billion) liquidity support to contact-intensive sectors such as tourism and hospitality.
6. In June 2021, Finance Ministers of G-7 countries, including the US, the UK, Japan, Italy, Germany, France and Canada, attained a historic contract on taxing multinational firms per the minimum global tax rate be at least 15%. The move is expected to benefit India to increase foreign direct investments in the country.
7. In June 2021, the Indian Government signed a US\$ 32 million loan with World Bank for improving healthcare services in Mizoram.
8. In May 2021, the Government of India (GoI) and European Investment Bank (EIB) signed the finance contract for the second tranche of EUR 150 million (US\$ 182.30 million) for the Pune Metro Rail project.
9. According to an official source, as of Sept. 15, 2021, 52 companies have filed applications under the Rs. 5,866 crore (US\$ 796.19 million) production-linked incentive scheme for the white goods (air conditioners and LED lights) sector.
10. In May 2021, the Union Cabinet has approved signing a memorandum of understanding (MoU) on migration and mobility partnership between the Government of India, the United Kingdom of Great Britain and Northern Ireland.
11. In April 2021, Minister for Railways and Commerce & Industry and Consumer Affairs, Food & Public Distribution, Mr Piyush Goyal,

launched the 'DGFT Trade Facilitation' app to provide instant access to exporters/importers anytime and anywhere.

12. In April 2021, Dr Ahmed Abdul Rahman AlBanna, Ambassador of the UAE to India and Founding Patron of IFIICC, stated that trilateral trade between India, the UAE and Israel is expected to reach US\$ 110 billion by 2030.
13. India is expected to attract investment of around US\$ 100 billion in developing the oil and gas infrastructure during 2019-23.
14. The Government of India will increase public health spending to 2.5% of the GDP by 2025.
15. To implement the Agriculture Export Policy, the Government approved an outlay of Rs. 2.068 billion (US\$ 29.59 million) for 2019, aimed at doubling farmers income by 2022.

Road Ahead

1. As per the data published in a Department of Economic Affairs report, in the first quarter of FY22, India's output recorded a 20.1% YoY growth, recovering >90% of the pre-pandemic output in the first quarter of FY20. India's real gross value added (GVA) also recorded an 18.8% YoY increase in the first quarter of FY22, posting a recovery of >92% of its corresponding pre-pandemic level (in the first quarter of FY20).
2. In the FY21, India recorded a current account surplus at 0.9% of the GDP. The growth in the economic recovery is due to the Government's continued efforts to accelerate vaccination coverage among citizens. This also provided an optimistic outlook to revive industrial activities further. As per RBI's revised estimates of July 2021, the real GDP growth of the country is estimated at 21.4% for the first quarter of FY22. The increase in the tax collection and the Government's budget support to states strengthened the overall growth of the Indian economy.

India's Unicorn Companies

India has emerged as the 3rd largest ecosystem for start-ups globally, with over 59,000 DPIIT-recognized start-ups across 634 districts as of Nov. 24 2021. India ranks #2nd in innovation quality with top positions in the quality of

scientific publications and the quality of its universities among middle-income economies. These start-ups solve problems in 55 diverse industrial sectors with 14% from IT services, 9% healthcare and life sciences, 7% education, 5% professional and commercial services, 4% food & beverages and 4% agriculture.

The year 2021, 2020, and 2019 saw the birth of the maximum number of Indian unicorns, with 42 (and counting), 10, and 9 unicorns coming each year, respectively. COVID-19 has wreaked havoc on the world economy. Yet, it is now that the resilient Indian entrepreneurs have worked tirelessly to contribute to the economy and help with COVID-19 relief operations. Bengaluru is India's unicorn capital, geographically the heart of the country's high-tech industry, with the most unicorn headquarters, followed by Delhi (NCR) and Mumbai.

International Affairs

One positive aspect of 2021 is that it was not as chaotic as 2020, which claimed to be the most catastrophic year so far. This might be attributed to chronic adaption by humans but could also be due to a lack of any other plausible substitute. That, though, maybe a case of damning with scant praise. Yes, there has been some positive news in the last twelve months. Indeed, COVID-19 appeared to be in the rear-view mirror in early June. It isn't, though. Other bad news arrived in 2021 with the advent of the Delta and Omicron COVID versions. This part dives into the international news that now has spurred our 2021.

AUKUS

The AUKUS Agreement made Its First appearance. In September, President Joe Biden, Australian Prime Minister Scott Morrison, and British Prime Minister Boris Johnson introduced a unique trilateral military collaboration called AUKUS. One of the most significant characteristics of the agreement was the United States' vow to assist Australia to build eight nuclear-powered (but not nuclear-armed) submarines. The United Kingdom is the only other country with equivalent access to US technology. The announcement described the pact as required to "preserve security and stability in the Indo-Pacific." Even though none of the three presidents named China by name, AUKUS was generally reacting to rising Chinese aggression. Unsurprisingly, Beijing slammed the agreement as "highly imprudent" and "polarising." However, China was not the only country dissatisfied with the agreement. France was enraged when AUKUS cancelled a \$37 billion contract with Australia in 2016 to construct a dozen diesel-electric submarines.

Consequently, Paris withdrew its diplomats to Canberra and Washington, unprecedented for either country's bilateral ties. Biden later confessed that the pact's introduction had been "inelegant." At the same time, France exploited the episode to bolster its argument for "strategic autonomy," or the European Union's capacity to operate independently of the United States in global politics. There are still doubts about whether the new Australian submarines would ever be developed as they are expensive and won't be effective for more than a decade.

Migration Crisis

The COVID-19-induced decline in overseas refugee flows in 2020 extended into 2021. However, this did not result in the cessation of the migrant crisis. The Mexican boundary of the United States was a prime example. By October, the total number of people unlawfully entering the United States had increased by 1.7 million over the previous year, the most prominent figure since 1960. The upsurge was driven by COVID-19, financial distress, and socio-political and environmental events—the death of Haiti's president and the next earthquake that displaced masses of Haitians off-shore. The hope that the Biden government would be more hospitable than the Trump administration, however, faded.

To prevent the influx of migrants, the Biden management kept many of its predecessor's harsh anti-immigrant measures in place. Where it did not, the Supreme Court directed that it do so. The number of persons entering the European Union illegally increased by 70% between 2010 and 2020, prompting opponents to claim that the EU failed to meet its obligations. An increase of French refugees crossing the English Channel sparked a political spat between Paris and London.

Meanwhile, Belarus urged immigrants to cross its borders into Latvia, Lithuania, and Poland to put stress on the EU to lift sanctions enacted in response to the stolen presidential election in Belarus in 2020. These difficulties are not expected to decrease in the coming years. Around the world, about 84 million people have been involuntarily uprooted from their homes. Violence, financial meltdown, and environmental degradation are all likely to raise that figures in 2022 as well.

Iran's Nuclear Programme

Iran's nuclear programme is progressing. The year dawned with the hope that the Iran nuclear accord might be resurrected three years after President Donald Trump withdrew from it. When he took office, Joe Biden called Trump's Iran approach a "self-inflicted tragedy" and promised to return to the deal if Iran was restored to compliance. On the other hand, making it happen was easier said

than done. The Biden government accepted the European Union's request to resume discussions in February.

Discussions have been postponed until April due to bureaucratic wrangling between Tehran and Washington. In mid-April, an accident at an Iranian nuclear plant, most likely the product of Israeli sabotage, spurred Iran to claim that it had commenced enriching uranium to 60%, a threshold that has no civilian value but is below the bar necessary for a bomb. Five further talks were held before Iran's federal campaign in June, wherein hardliner Ebrahim Raisi was elected. He quickly put an end to speculation that a deal was nigh, stating that "the circumstances in Iran has changed due to the democratic vote."

Discussions began in late November, but Iran backtracked on prior commitments and reiterated its initial request that the US eliminate all sanctions imposed by the Trump administration. As the year 2021 drew to a close, the discussions were on the edge of failure, with Iran, according to some estimates, just a month away from gaining weapons-grade uranium and the Biden management grappling with the dilemma of what to do if dialogue failed. The failure of the recent rounds of Vienna talks suggests the same. However, the only upside is that the next round of talks is 'keenly awaited' by the countries across the globe.

100th Anniversary of the CCP

The Chinese Communist Party (CCP) will commemorate its 100th anniversary in 1921 by publicizing its achievements. Economically, the CCP has undeniably successfully converted China from a small, impoverished economy to the world's largest. Relative poverty has been erased, and household demand and ingenuity essentially stimulate the economy. China is no longer merely the world's assembly line.

The CCP has also demonstrated to the world that democratization and a market economy do not always go hand in hand, therefore confounding Western expectations that – sooner or later – China will suffer the same fate as the old Soviet Union. Politically, the CCP has a significantly poorer track record. China is still a country that suppresses civil freedoms and violates human rights, to say nothing of the atrocities done by the CCP throughout its history.

The collapse of the supply chain economy

In 2021, "supply chains" became a ubiquitous phrase. Businesses have long felt that outsourcing manufacturing was the factor for success. Who plan paid off: firms that improved their supply chains saw their costs fall and earnings grow.

Then there was COVID-19. It revealed the disadvantage of supply chains: deficits and time outs far away cause shortages and stoppages nearer to home. When the epidemic initially struck, industries stopped, and many businesses allowed stocks to deplete to avoid being trapped with unsold items. However, when vaccinations were accessible in 2021, customer demand skyrocketed, leaving many enterprises short on components and supplies. Shipping container shortages and backlog at ports throughout the world exacerbated the situation. The most publicized scarcity was in computer chips, specifically those utilized in game consoles and automobile manufacture. Due to semiconductor shortages, Ford Motor Company predicted that it would lose 1.1 million car sales in 2021.

Gasoline, grain, chlorine, and hot dogs were also in limited supply in 2021. Even when materials were plentiful, labour was frequently in limited supply. Since the beginning of the epidemic, the workplace in the United States has shrunk by five million individuals. The supply chain disruptions induced by COVID-19, which have led to a worldwide rise in inflation, may last for years. It didn't seem to help that Ever Given's cargo ship ran aground in the Suez Canal in March, closing one of the world's most extensive crucial waterways for a week, costing an astounding \$9.6 billion per day.

Taliban's accession to Power

The United States' war in Afghanistan concluded the same way it began: with the Taliban in control. President Donald Trump signed an agreement with the Taliban in 2020 that called for the withdrawal of all US forces by May 1, 2021. Two weeks before the scheduled timeframe, President Joe Biden directed that the United States execute its departure by Sept. 11, 2021—the twentieth commemoration of the 9/11 attacks.

As the pull-out progressed, the Afghan national army disintegrated, and the Taliban seized Power. On Aug. 15, Kabul fell, trapping hundreds of foreigners in the capital city. The US started a tremendous attempt to remove trapped Americans before Aug. 31, the Taliban's ultimatum. The United States withdrew on Aug. 30, leaving behind more than a hundred US nationals and up to 300,000 Afghans who may have been eligible for accelerated immigration to the United States. Biden referred to the pull-out as "exceptional success." Most Americans objected, and his public favour ratings plummeted to new lows.

The departure was dubbed "cretinous" and an "imbroglio" by allied ambassadors, among other considerations. Over a two-decade period, the United States spent more than \$2.3 trillion on Afghanistan, or approximately \$300 million every day. In Afghanistan, almost 2,500 US service personnel and 4,000 US private contractors were killed. The number of Afghans killed is estimated to have surpassed 170,000. Despite claims to the contrary, the new Taliban administration has so far looked and behaved much like the one that terrified the planet twenty years ago, and a catastrophic humanitarian catastrophe beckons.

Climate Crisis and Inaction

"A code red for humankind." This is how UN Secretary-General António Guterres phrased the UN report published in August, which found that humanity risks dangerous climate change except if greenhouse gas emissions are reduced. However, no one needs to read a 4,000-page study to figure it out. Severe weather dominated the headlines in 2021, as it did for much of the previous decade. The American southwest has been ravaged by record-breaking drought. It was flooding on a scale never seen before that wreaked havoc in Belgium and western Germany. Massive flames ravaged Greece. Late-season monsoons wreaked havoc in India and Nepal.

Climate optimists may uncover a few reasons to rejoice in 2021. On his first day in office, President Biden affirmed his Commitment to adopting the Paris Climate Agreement. In September, China committed to stopping subsidizing coal-fired power facilities in other countries, and Iceland established a facility to remove carbon dioxide from the atmosphere.

Countries promised to combat climate change during the COP-26 summit in Glasgow in November, including reducing methane emissions. Pledges, however, are not achievements. As the global financial system came back to life in 2021, carbon emissions skyrocketed. While President Biden pressed Congress to address climate change in a massive infrastructure plan, he also encouraged OPEC to raise oil output to cut gasoline costs. He was far from the only international leader who wished to have his cake and eat it as well. The shift away from fossil fuels necessitates difficult decisions. On the other hand, Mother Nature does not offer credit for the levels of complexity.

Annual Review

To summarise the timeline, there have been comprehensive and 'wholesome' developments in the field of International Affairs in 2021. Saudi Arabia decided to reopen its border with Qatar in January, bringing a three-year diplomatic dispute to an end. In February, former President Donald Trump was exonerated in his second impeachment hearing by the United States Senate. In March, Pope Francis met Grand Ayatollah Ali al-Sistani in Iraq, the first encounter between a pope and a supreme ayatollah. In April, a dispute over water supply sparked a conflict on the Kyrgyz-Tajikistan border, killing 55 people and displacing 50,000.

In May, a cyber-attack perpetrated by Russian criminal hackers triggered the closing of the Colonial Pipeline, causing gasoline distribution in the eastern United States to be disrupted. G7 leaders decided in June to support a baseline worldwide corporation tax rate of at least 15%. Lithuania decided in July to allow Taiwan to construct a de facto consulate in Vilnius, prompting China to sever ties with the Baltic country. The White House approved the transfer of \$750 million in armaments to Taiwan in August, a measure that China swiftly condemned. In September, the US abandoned a three-year-old demand that Canada repatriates a top Huawei official, forcing China to free two Canadian nationals detained when the extradition demand was initially issued in 2018.

The International Consortium of Investigative Reporters published the Pandora Papers in October, including over 12 million documents demonstrating how the affluent and influential utilize off-shore bank accounts to cheat taxes and hide money. In November, Iraqi Prime Minister Mustafa al-Kadhimi escaped a drone attack on his residence. A Russian military deployment near Ukraine's border

provoked Biden to warn Russian President Vladimir Putin in a December video conversation that the US "would retaliate with significant economic and other metrics if Russia attacked Ukraine."

Indian Social Issues

Caste Based Census

The need for a caste-based census has been mounting in several parts of the country for a long time. With the 2021 Census being delayed due to the pandemic, the caste-based census is being demanded to measure all castes' economic and social well-being. Caste census means the inclusion of caste-wise enumeration of India's population in the Census exercise. From 1951 to 2011, every census in India has published the population of Scheduled Castes and Scheduled Tribes, comprising the Dalits and the Adivasis, along with the range of data including religions, languages, socioeconomic status, etc.

It, however, has never counted OBC's, the lower and intermediate castes, which according to the Mandal commission, make up around 52% of the country's population.

The Government, however, is sceptical of a caste-based census as the process to measure and quantify castes might get very cumbersome. India has innumerable castes and sub-castes with phonetic variations and similarities, and measuring this will add to the burden of measuring an already exhaustive decennial Census. Moreover, a caste census goes against the idea of a casteless society, the Government argues.

Economic Criterion & Creamy Layer

The Supreme Court of India has clarified that economic criterion alone cannot classify a member of a Backward Class as belonging to the creamy layer. The SC ruling responds to a Haryana government notification of 2016, which mentioned monetary income of Rs. 6 lakh as the only criterion to identify whether a family belongs to the creamy layer. The Supreme Court has struck down this, stating that income cannot be the sole basis for deciding creamy layer.

Based on the recommendation of the Mandal Commission, the Government had notified 27% reservation for Socially and Educationally Backward Classes (SEBCs). The Indira Sawhney case 1992 upheld the 27% reservation for OBCs.

But it directed the exclusion of those falling within the creamy layer from receiving quota benefits. It had mentioned the following criteria (not just economic) for exclusion from quota benefits:

1. Children of high-ranking constitutional functionaries
2. Employees of a certain rank in the Union and State governments
3. Those affluent enough to employ others
4. Those with significant property and agricultural holdings.

Anti-Conversion Laws

Anti-Conversion laws have gained wide popularity across many states of the country. Recently, the Karnataka Protection of Right to Freedom of Religion Bill 2021 was introduced in the state assembly of Karnataka which prohibits conversion from one religion to another by misrepresentation, force, fraud, allurements, or marriage. The other states like Arunachal Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Odisha, Uttar Pradesh, and Uttarakhand have also passed laws restricting religious conversion.

The anti-conversion laws of these states outlaw religious conversion solely for marriage. While a common feature of all these laws is the declaration of such marriages as "null and void" and the penalizing of conversions done without the State's prior approval, they differ in the quantum of punishment prescribed and in attributing the burden of proof that a conversion is lawful.

Death of Father Stan Swamy sparks Rights of Prisoners with Disabilities

The death of 84-year-old Jesuit priest Stan Swamy has raised the issue of the treatment Prisoners with Disabilities receive from jail authorities. The tribal activist who has Parkinson's disease was among several prisoners in judicial custody for their alleged involvement in the Bhima Koregaon violence.

Declining Fertility Rates in India

The recently released empirical data from the National Family Health Survey 2019-20 (NFHS-5) shows that States and UTs are experiencing a sharp decline in fertility rates. Total Fertility Rate (TFR) is the average number of children

born to a woman in her reproductive years (15-49 years). Except for Bihar, Manipur, and Meghalaya, the fertility rates have gone below the replacement level of 2.1 children per woman. An increase in female education levels, postponement of marriage, access to family planning methods or high contraceptive prevalence rate, and declining infant mortality rate and neonatal mortality rate are listed reasons for the declining TFR.

Repeal of Farm Laws after year-long protests

The first day of the Winter Session of the Parliament saw the introduction and passing of the Farm Laws Repeal Bill with no discussion taking place in either Lok Sabha or Rajya Sabha. These laws are the Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, 2020; the Farmer's (Empowerment and Protection) Agreement on Price Assurance and Farm Services Act, 2020; and the Essential Commodities (Amendment) Act (ECA), 2020.

Educational-Legal Developments

UGC (Institutions of Eminence Deemed to be Universities) Regulations, 2017 amended by UGC as applicable to private institutions

IoEs were introduced to elevate the position of Indian universities and institutions' recognition and enable them to be counted in the top 500 world institutions and eventually the top 100. To promote this, IoEs are given more autonomy to administer their curriculum, fee structure, faculty, course etc.

The Amendment increases the autonomy to the private institutions, allowing them to:

Set up an Off-shore campus

This can be done after approval by the Ministry of Education and a no-objection certificate from the Ministry of External Affairs and Home Affairs. This step will help the institutions gain global recognition and be interested in international students and potential research collaborations.

Set up Off-campus centres

This is also subject to examination of application by UGC, an Empowered Experts Committee and the Education Ministry. The centres are to be set up across the country to help as many students as possible to get access to the institutions' quality education. The Amendment also states that a maximum of one such campus in an academic year and three in five years would be permitted.

Online Programmes

IoEs can now offer courses through online mode without requiring any approvals, provided the courses meet the minimum standards as prescribed by the UGC. This particular relaxation also extends to government IoEs.

Relaxation in faculty requirement

The Amendment allows all faculty, that is, regular, adjunct, overseas, visiting, contractual etc., to be included as regards the teacher-student ratio, provided 60% of the faculty is regular or permanent.

Ability to enter into agreements

The Amendment also permits the institutions to enter into an arrangement or agreement to establish or operate an institute if the agreement is permitted by a Central Act or its rules or regulations.

AICTE (Open and Distance Learning Education and Online Education Guidelines, 2021

The All-India Council for Technical Education guidelines have paved the way for online technical education courses. They have sought to regulate the online and open and distance learning programmes in technical education. The guidelines also permit certain premier institutions to offer Online and ODL programmes without prior approval. They apply to higher educational institutions, which include deemed to be universities, stand-alone universities and universities.

Programmes that award diploma, post-diploma, post-graduation, postgraduate diploma and postgraduate degree level programmes are governed under the guidelines. The courses covered include management and allied areas, artificial intelligence and data science, logistics, computer applications and travel and tourism. The guidelines expressly prohibit technical education programmes other than these for online and ODL modes.

Guidelines for Influencer Advertising in Digital Media

These guidelines have been released by the Advertising Standards Council of India (ASCI), which is a self-regulatory body. The guidelines define an influencer as someone 'who has access to an audience and the power to affect their audiences' purchasing decisions or opinions about a product, service, brand or experience because of the influencer's authority, knowledge, position or relationship with their audience.' They even cover 'virtual influencers', which are digitally created by individuals.

The guidelines lay down that if there is a 'material connection' between the advertiser and the influencer, the advertisements have to comply with the ASCI's Code of Self-Regulation of Advertising Content in India and these Guidelines. Here material connection is understood to mean any kind of incentive which the advertiser provides to the influencer, like money, discounts,

gifts, hotel stays etc. The influencer must disclose the relevant post as an advertisement and this disclosure must be prominent and 'hard to miss' by average consumers.

Madras High Court strikes down Amendment to Tamil Nadu Gaming Act, 1930 prohibiting for money online games of skill

The Court held the Amendment, which completely prohibits online games of skill for money, was excessive, unreasonable, and manifestly arbitrary and thus violated Article 19(1)(g) of the Constitution. The Court stated that the State's legislative competence is confined to betting on games of chance. The judiciary has interpreted gambling to mean betting or wagering on games of chance.

Article 19(1) (G) of the Constitution grants citizens the fundamental right to practice any profession, trade or business. It has been held that skilled players hold the right to exploit their skills and make a living off them, with only reasonable restrictions being acceptable. The complete prohibition on gaming, which has been widely defined, is unreasonable and arbitrary. The prohibitions are also disproportionate to the object sought to be achieved by the State. The object in the present scenario was to protect people from the potentially ruinous impact on the public from gambling and betting. However, the complete restrictions are excessive especially given that the State has not demonstrated why fewer restrictions would not have been sufficient.

Drone Rules, 2021

The Government of India released these rules, overhauling the heavily criticized rules released in March 2021. The new rules significantly liberalize the regime on drones, remove express restrictions on foreign-owned and controlled Indian companies and simplify the registration and certification process for drones.

The rules apply to all Unmanned aircraft systems (UAS) registered in India, persons who own or possess, or engage in leasing, operating, transferring or maintaining UAS in India, and all UAS operated over or in India for the time being. These rules apply only to the civil use of drones.

The rules permit foreign-owned and controlled Indian companies to manufacture and operate drones in India, a first for our drone regulatory regime. The Government will also notify an interactive map accessible through a machine-readable API that will divide the Indian airspace into three zones – Green, Yellow and Red. The rules have also simplified the provisions relating to research, development and testing operations, the requirement now being the drone manufacturer to possess a GST identification number.

Aadhaar and Voter ID Linkage

The Election Laws (Amendment) Bill, 2021, was introduced in the Lok Sabha on Dec. 20 2021, by Union Minister of Law and Justice Kiren Rijiju and passed by voice vote within 20 minutes amid opposition protests. The Rajya Sabha passed the Bill on Dec. 21 2021. The Amendment aims at linking voter ID numbers with Aadhaar to improve voter accessibility and reduce electoral malpractices. Calling it a voluntary practice, Kiren Rijiju said that the Government wants the electoral roll to be genuine and weed out duplicates in voter rolls.

The interlinking of Aadhaar and Voter ID numbers have been justified to stop bogus voting in elections and make the voting process more credible. This step would remove the problem of fraudulent voting that is common in elections. Since the Aadhaar Card information is authenticated by biometrics, the issue of duplication will be resolved. Therefore, the linkage would curb the menace of multiple enrolments of the same person in different places, thus cleaning the electoral process.

Science, Technology and Health

2021 came as a year of hope and possibilities as things finally started to get back to normal with the launch of the vaccine drive.

Vaccination Drive

The Covid Vaccine drive in India was launched on Jan. 16. From May 1, 2021, people older than 18 years were eligible for the vaccine. By Jul. 20, 2021, 326.4 million people in India (23.4% of the population) had received the first dose of the vaccine, and 85.4 million people (6.1% of the population) had received the second dose.

The drive did start out efficiently; however, India faced a shortage of vaccines during April, slowing down the whole vaccination process. India's vaccination policy problems resulted in widespread vaccine shortages, and as a result, India's vaccine policy vacillated about who should receive the vaccine and who should not. However, now the vaccines have been approved for kids as young as 15 years from Jan. 3 onwards.

Exploring Mars

In February, NASA sent its rover Perseverance to Mars to explore the planet. The vehicle was equipped with an ultralight helicopter that successfully flew through the thin Martian atmosphere, a toaster-size gadget dubbed MOXIE that successfully converted carbon dioxide to oxygen and sample elements that successfully collected rocks from the planet's surface. The success of the flight will provide scientists with information on how to build larger helicopters, the oxygen production will assist scientists in devising grander plans for conversion devices, and the rocks will return to Earth for analysis when they are picked up on a future expedition.

Aside from the Rover's victories, other countries also achieved notable firsts. The Hope space mission from the United Arab Emirates has successfully reached orbit around Mars and examined the Martian atmosphere and weather. The Zhurong rover from China landed on Mars in May and is currently exploring the planet's geology and seeking evidence of water. Scientists

worldwide are learning more and more about the planet and how we may better explore it, perhaps one day in person, thanks to these ongoing missions.

Delta Variant

Though things finally started to seem normal, we were soon surprised by the delta variant. First, after a steady drop since January 2021, a massive surge in new cases reversed the trend. CDC witnessed a dramatic and frightening surge in COVID-19 case and hospitalization rates across the country in the days leading up to our guidance update. Tedros blamed the rise of increased social mixing and mobility cases, the inconsistent use of public health and social measures, and inequitable vaccine use. He said "hard-won gains" are in jeopardy of being lost, and health systems in many countries are increasingly overwhelmed.

Dr Maria Van Kerkhove, a lead WHO epidemiologist and COVID-19 technical lead, noted that the Delta variant has changes that allow the virus to cling to human cells more efficiently. Experts are finding an enormous viral load in infected patients. Delta was "dangerous and the most transmissible SARS-CoV-2 virus to date," according to her. This took us back to lockdowns that have now become the new normal.

A Trip to Space

In Virgin Galactic's first fully crewed flight, billionaire Richard Branson and his staff went barely above the edge of space—a suborbital flight—early in July. Just over a week after Branson's expedition, Jeff Bezos, the world's richest man, accomplished Blue Origin's first crewed suborbital journey, including the world's youngest and oldest space travellers. Blue Origin replicated the feat in October when it launched Star Trek actor William Shatner into space. In Elon Musk's SpaceX Dragon Capsule Resilience, a crew of four became the first all-civilian crew to orbit the Earth from space a month prior.

The James Webb Space Telescope

The James Webb Space Telescope, the most powerful space telescope ever constructed, was finally launched on Dec. 25 to study the earliest stars and peer

back farther into the universe's past than ever before. Webb is currently on a 29-day trip to its observing spot. The James Webb Space Telescope has successfully deployed the tower assembly that connects the spacecraft's two main sections. If all goes as planned, the telescope will be fully deployed 13 days after launch, on Jan. 7, and will reach its ultimate orbit 29.5 days later.

Doctors Protest

The Doctor Protest took a dramatic turn on Monday after doctors had a clash with police on the streets of Delhi. Hundreds of resident doctors from several government-run hospitals across Delhi have been protesting for the past few days over the delay in NEET-PG counselling, demanding that the process must be expedited.

Omicron Variant

While in the beginning (as of Nov. 28 2021), India did not outrightly impose any ban on the South African countries, India has decided not to resume International Flights from Dec. 15 2021, in the wake of the increasing new Covid-19 variants. Now, cases are going as high as 961, with 263 cases in Delhi and 252 in Maharashtra and raising the positivity rate to 1.29%. The Government has issued a yellow alert in Delhi, shutting down the schools, cinema halls and gym, imposing a night curfew from 10 pm, metros and restaurants working at 50% occupancy.

More than 440,000 new cases were recorded in the US on Monday. France, Italy, Greece, Portugal, and England have also reported record numbers of daily infections. Officials have said the high figures could be due in part to reporting delays over the Christmas period.

Studies suggest that Omicron is milder than the previously dominant Delta variant, but fears remain that the sheer number of cases stemming from the highly infectious Omicron could overwhelm hospitals.

Environment

Not only did we face another dangerous variant of the coronavirus in 2021, we also faced cataphoric climate change or, as General António Guterres described it as "a code red for humanity." From draughts to flood to tsunami to wildfires, we saw it all.

Amazon Wildfire

Since January, around 1,000 significant fires have raged over the forest. According to experts, this year will be as disastrous as 2020, when fires destroyed more than 19 million acres of the world's largest tropical forest. Conservationists aren't expecting support from the Brazilian Government, which controls 60 per cent of the Amazon. While President Jair Bolsonaro outlawed unauthorized outdoor fires and dispatched troops to the Amazon early this year, experts say such attempts have failed in the past, casting doubt on the president's Commitment to halting forest degradation.

The rainforest that stores 123 billion tons of carbon and is a haven of biodiversity was on fire, affecting our fate.

Climate Change Crisis

With CO2 levels rising and icebergs melting faster, we have come to a movement of realization that it is time for us to start taking steps to save ourselves and our planet. For the United States, it meant rejoining the Paris climate agreement in January after Biden took office. The agreement aims to keep average global temperatures from rising more than 2 degrees Celsius, preferably less than 1.5 degrees Celsius, to avoid the most severe climate change scenarios. However, these requirements are not being met.

This brings us to COP26, in which 197 parties agreed to the "newly-dubbed Glasgow Climate Pact". There were several noteworthy accomplishments. Countries agreed to accelerate their decarbonization plans and, in particular, to increase their emissions-reduction objectives for 2030 by next year, rather than 2025, as set out in the Paris agreement's five-year timeframe.

Developed countries have been "encouraged" to quadruple financing for developing country adaptation by 2025. The rules for establishing a framework for a global carbon market were accepted, resolving a problem that had been plaguing negotiators since 2015.

While COP26 and Paris Climate agreement reflects us with a hope of better tomorrow, one needs to understand that just knowing the problem is not enough; one must act and know that we have a long way to go.

Cyclone Yaas

In May, cyclone Yaas hit the coast of Odisha and West Bengal. According to media reports, six people have died in India, and approximately 22,000 houses were damaged across the States of Odisha and West Bengal. In Bangladesh, 15,000 people were displaced across 200 villages as their homes, shops, and farms were flooded.

Cyclone Tauktae

On the night of 17, May Cyclone Tauktae hit the southern coast of Gujarat. More than 200,000 people were evacuated from low-lying locations along the shore by authorities in impacted states, including COVID-19 patients in hospital facilities. Vaccinations in Gujarat were halted for two days to allow for evacuations. Over 80 disaster management teams have been dispatched to assist district officials with readiness and reaction procedures.

Great Barrier Reef in Danger

Despite having plans to preserve the world's largest coral reef, the Great Barrier reef continues to deteriorate due to coral bleaching over the past five years. The collapse is driven by warming waters. As heat-trapping human emissions accumulate in the atmosphere, the world's oceans absorb a considerable quantity of heat, warming at rates that are having a severe impact on marine life. Alix Foster Vander Elst, Campaigner for Greenpeace Australia Pacific showed her concern over climate change and said, "We can still stop the reef's destruction if we dramatically reduce global emissions."

Mozambique faces' triple threat' of climate change'

Mozambique faces a triple threat from the coronavirus, Cyclone Eloise, and a large outbreak of violence in Cabo Delgado province blamed on extremist Islamic groups.

According to an assessment by the International Committee of the Red Cross, as many as 700 health workers have deserted the region owing to insecurity. According to the NGO, 39 out of 55 health institutions in nine conflict-affected Cabo Delgado districts are non-operational, or 71%. The Red Cross is assisting those displaced from their homes because of armed violence, and it also opened a COVID-19 treatment centre to help inhabitants prevent disease transmission through masks and cleanliness.

Thwaites Glacier

According to an international team of scientists, Antarctica's Thwaites Glacier, also known as the Doomsday Glacier, is retreating rapidly as a rising ocean progressively erases its ice from below, causing faster flow, more fracturing, and a threat of collapse. The glacier is the size of Florida or the United Kingdom, and it produces 4% of the world sea-level rise each year. If it fails, global sea levels will rise by several feet, putting millions of people in coastal communities in danger of severe flooding.

Coal Shortage

India recorded a shortage of 1,201 million units in October 2021, the highest in 5.5 years due to the shortage of coal. The shortage was felt in Punjab, Haryana, Jharkhand, Rajasthan, and Gujarat. Supply shortage was also observed in Uttar Pradesh and the Union territory of Jammu and Kashmir in October. The power shortage was primarily due to a supply crunch of coal to 135 thermal plants as on Nov. 5, the clear average inventory held by the plants would last only seven days.

Super Typhoon Rai

Towards the end of the disastrous year- 2021, Super Typhoon Rai killed 375 people, injuring 500 people and 56 people reportedly missing. However, establishing the scale of loss as of now seems a difficult task since communication has been cut off to several areas.

Super Typhoon Rai - with winds of about 195km/h (120mph) - sent around 400,000 people running for safety when it hit the country's south-eastern islands. The International Federation of Red Cross and Red Crescent Societies has launched an emergency appeal to raise \$20 million (£16 million; \$22 million) for long-term relief efforts.

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