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POLICY PULSE

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FIRST TAKE

Overview

The Importance of Trust

The International Monetary Fund (IMF) in a recent blog brought out a very important aspect that requires attention for revival of the global economy in the post COVID era- Trust.

The blog said that “from COVID-19 to climate change and now the Russian invasion of Ukraine, governments are asking or telling people to alter their behaviour and make sacrifices—great sacrifices in the case of war. Yet in an environment rife with conspiracy theories, trust is becoming much harder to establish and sustain. Public responses to the pandemic have underscored the importance of trust, among the young especially, and may hold lessons for other areas of public life.”

The blog based on an essay in the Finance and Development magazine of IMF titled “COVID 19 and Trust Among the Young” said “governments and modern medical science have played important roles in mitigating the pandemic. Public officials and agencies have offered advice and issued rules on social distancing, mask wearing, and vaccination. Scientists, in their capacity as advisers, have informed those rules and policies, and as researchers have developed mRNA vaccines and now prophylactic and therapeutic drugs that promise to lessen spread of the disease. Recent research and casual observation both suggest, in order for such efforts to succeed, that members of the public must trust government officials and scientists, together with their associated institutions. Only if people believe that government is trustworthy—that it will adopt unbiased and well-informed measures—are they likely to follow its advice and instructions”.

Trust will drive economies and policies in an interconnected world. At a time when stakeholder engagement is gaining ground across the world, it will be important for all stakeholders to improve the trust quotient. This will assume importance as new free trade agreements are being signed and geo-political shifts are becoming a norm.

This edition of Policy Pulse covers many important developments in the policy space that has an impact for readers.

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ECONOMIC SNAPSHOT

GLOBAL ECONOMY

The International Monetary Fund (IMF), in its recent report “World Economic Outlook-April 2022” has slashed its forecast for global economic growth this year, citing the war in Ukraine, inflation and the lingering effects of the pandemic. As per IMF, global growth is projected to slow down from an estimated 6.1% in 2021 to 3.6% in 2022 and 2023. This is 0.8% and 0.2% points lower for 2022 and 2023 than projected in January.

Similarly, the World Bank also slashed its projections and expects the global economy to grow 3.2% in 2022, down from its previous estimate of 4.1%. The projection was updated before policymakers from around the world headed to Washington for the spring meetings of the World Bank and the IMF. The World Bank is predicting a sharp contraction in the economies of Russia and Ukraine, and nearby countries in Europe and Central Asia would feel the impact. Consumers in advanced economies are expected to reduce their spending this year as gasoline prices rise

GDP Growth Projection (%)			
	2021	2022	2023
World Output	6.1	3.6	3.6
Advanced Economies	5.2	3.3	2.4
United States	5.7	3.7	2.3
Euro Area	5.3	2.8	2.3
Germany	2.8	2.1	2.7
France	7	2.9	1.4
Italy	6.6	2.3	1.7
Spain	5.1	4.8	3.3
Japan	1.6	2.4	2.3
United Kingdom	7.4	3.7	1.2
Canada	4.6	3.9	2.8
Other Advanced Economies	5	3.1	3
Emerging Market and Developing Economies	6.8	3.8	4.4
Emerging and Developing Asia	7.3	5.4	5.6
China	8.1	4.4	5.1
India	8.9	8.2	6.9
ASEAN-5	3.4	5.3	5.9
Emerging and Developing Europe	6.7	-2.9	1.3
Russia	4.7	-8.5	-2.3
World Trade Volume (goods and services)	10.1	5	4.4
Imports			
Advanced Economies	9.5	6.1	4.5
Emerging Market and Developing Economies	11.8	3.9	4.8
Exports			
Advanced Economies	8.6	5	4.7
Emerging Market and Developing Economies	12.3	4.1	3.6

Source: IMF

In USA, the Federal Reserve was expected to raise interest rates by at least another 150 basis points before year-end, with growth expected to slow to 3.3% this year and 2.2% next, down from the 3.6% and 2.4% predicted last month. In EU, economic growth was expected to be 2.9% this year and 2.3% in 2023, down from 3.8% and 2.5% predicted a month ago. Growth estimates were downgraded for most Asian economies as China's economic setbacks have darkened the outlook for countries in its orbit, from South Korea to Thailand.

As per IMF, five forces such as war in Ukraine, monetary tightening and financial market volatility, slowdown in China, withdrawal of fiscal support from economies and future pandemic impact are going to shape the near-term global outlook. It also predicts that these forces were expected to drive up global poverty rates as the world coped with sudden increases in prices of energy, fertilizer and food. Rising interest rates are expected to slow growth and exacerbate inequality.

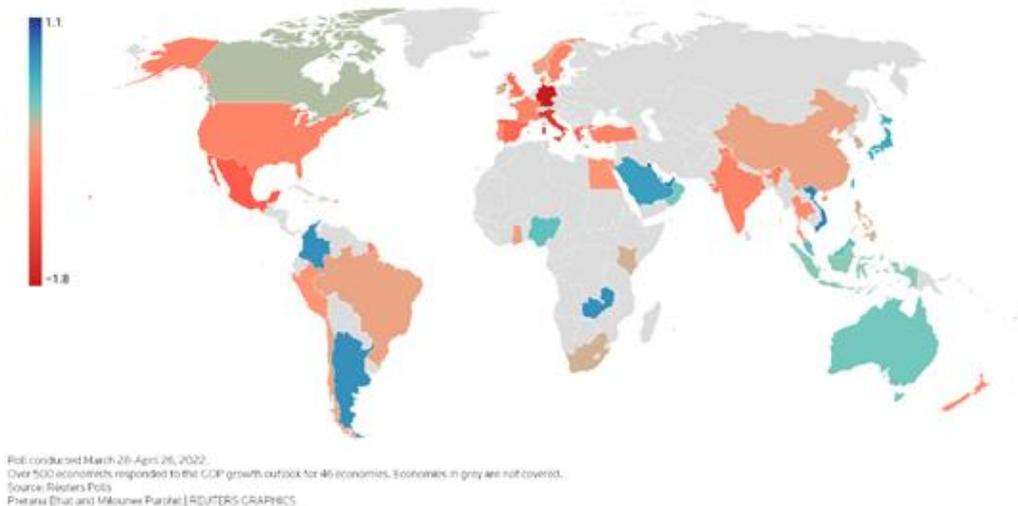
As per IMF, reflecting the significant slowdown in overall activity, global trade growth is expected to decline in 2022. Global goods demand is expected to moderate because of the war. Cross-border services trade, especially tourism, is however expected to remain subdued because of the war and lingering effects of the pandemic.

Overall, global trade growth is projected to slow from an estimated 10.1% in 2021 to 5% in 2022 and further to 4.4% in 2023 (1 and 0.5 percentage points lower than in the January forecast). Over the medium term, trade growth is expected to decline to about 3.5%.

According to the International Energy Agency, "the global demand for oil in 2022 is projected to increase to 99.7 million barrels a day (mb/d) in 2022, a downward revision of 1.1 mb/d compared with demand before the war in Ukraine. The risk of a major decline in Russian oil exports has caused a significant upward shift of the futures curve, with a spike in front-month futures prices. Futures markets suggest crude oil prices will increase 55% in 2022 and fall slightly thereafter, while short- and medium-term upside risks to oil prices remain elevated and include long-term downside risks from the energy transition."

According to Reuters Poll of over 500 economists, the global economy will expand more slowly than predicted three months ago. Higher commodity prices and an escalation in the Russia-Ukraine war could prompt another downgrade.

Reuters Poll: 2022 Global GDP growth revisions



INDIAN ECONOMY

As per Asian Development Bank (ADB) forecasts, India's economy will grow 7.5% in fiscal year (FY) 2022 and 8% in FY2023, supported by increased public investment in infrastructure and a pickup in private investment. The outlook assumes sustained progress in coronavirus disease (COVID-19) vaccinations and that any new variants of the virus are of limited severity. It also factors in the impacts of Russia's invasion of Ukraine, primarily higher global oil and commodity prices that will contribute to rising inflation and a widening of the current account deficit.

It says that "India is on the path to a sustained economic recovery, thanks to the vigorous countrywide drive to deliver safe and wide-reaching COVID-19 vaccinations, which helped reduce the severity of the third pandemic wave with minimal disruptions to mobility and economic activity. The Government of India's policy to improve logistics infrastructure, incentives to facilitate industrial production, and measures to improve farmers' income will support the country's accelerated recovery."

ADB says that large public infrastructure investments planned over the next 2 years in India will encourage more private investment. Together with the PM Gati Shakti initiative to improve India's logistics infrastructure, increased financial and technical support to states to expand capital investment will boost infrastructure spending and help spur economic growth. Private consumption will pick up as labour market conditions improve. Forecasts are based on a normal monsoon, which, coupled with rising wheat prices, is expected to boost agriculture output and improve farmers' income. The government's production-linked incentive scheme will provide a thrust to the manufacturing sector in FY2022 and FY2023.

Inflation will likely increase to 5.8% in FY2022 amid rising oil prices. The current account deficit is projected to widen to 2.8% of GDP in

FY2022 due to the rising oil import bill, and is expected to decline to 1.9% in FY2023 amid an uptick in export growth. Foreign Direct Investment (FDI) inflow is expected to moderate amid rising global uncertainty and tightening of global economic and financial conditions.

Performance of Key Indicators

India's combined index of Eight Core Industries grew by 4.3% in March, compared to the same month last fiscal. The cumulative growth rate during April-March 2021-22 was 10.4% (provisional) as compared to the corresponding period of last financial year, driven by steel, cement, and natural gas.

- ❖ Coal – Coal production declined by 0.1% in March 2022 over March 2021. Its cumulative index increased by 8.5% during April to March 2021-22 over corresponding period of the previous year.
- ❖ Crude Oil – Crude Oil production declined by 3.4% in March 2022 over March 2021. Its cumulative index declined by 2.6% during April to March 2021-22 over the corresponding period of previous year.
- ❖ Natural Gas - Natural Gas production increased by 7.6% in March 2022 over March 2021. Its cumulative index increased by 19.2% during April to March 2021-22 over the corresponding period of previous year.
- ❖ Petroleum Refinery Products – Petroleum Refinery production increased by 6.2% in March 2022 over March 2021. Its cumulative index increased by 8.9% during April to March 2021-22 over the corresponding period of previous year.
- ❖ Fertilizers – Fertilizers production increased by 15.3% in March 2022 over March, 2021. Its cumulative index increased by 0.7% during April to March 2021-22 over

the corresponding period of previous year.

- ❖ Steel – Steel production increased by 3.7% in March 2022 over March 2021. Its cumulative index increased by 16.9% during April to March 2021-22 over the corresponding period of previous year.
- ❖ Cement – Cement production increased by 8.8% in March 2022 over March 2021. Its cumulative index increased by 20.8% during April to March 2021-22 over the corresponding period of previous year.
- ❖ Electricity – Electricity generation increased by 4.9% in March 2022 over March 2021. Its cumulative index increased by 7.8% during April to March 2021-22 over the corresponding period of previous year.

India's industrial output rose 1.7% in February compared to a 3.2% contraction in the same month a year earlier, mainly on account of improved performance of mining and electricity sectors.

The Goods and Services Tax (GST) revenues surpassed the INR 1.5 lakh crore (US\$ 19.3 Billion)¹ mark for the first time while maintaining its streak of record collections for the second time in a row with highest-ever gross collections in April at INR 1,67,540 crore (US\$ 21.6 billion), nearly 18% more than the previous record of INR 1,42,095 crore (US\$ 18.3 billion) in March on the back of faster economic recovery, better tax administration and increased compliance.

India's retail inflation shot up to 6.95% in March 2022, the highest rate of price rise in nearly one and a half years, and marking the third successive month above the Reserve Bank of India's tolerance threshold of 6%.

India has achieved monthly value of merchandise export in April 2022 amounting to US\$ 38.19 billion, an increase of 24.22% over

US\$ 30.75 billion in April 2021. Value of non-petroleum exports in April 2022 was 30.46 US\$ billion, registering a positive growth of 12.32% over non-petroleum exports of US\$ 27.12 billion in April 2021. Value of non-petroleum and non-gems and jewellery exports in April 2022 was US\$ 27.16 billion, registering a positive growth of 14.38% over non-petroleum and non-gems and jewellery exports of US\$ 23.74 billion in April 2021. Petroleum products (113.21%), Electronic goods (64.04%) and Chemicals (26.71%) led the way in high increase in exports during April 2022.

India's merchandise import in April 2022 was US\$ 58.26 billion, an increase of 26.55% over US\$ 46.04 billion in April 2021. Value of non-petroleum imports was US\$ 38.75 billion in April 2022 with a positive growth of 9.87% over non-petroleum imports of US\$ 35.27 billion in April 2021. Value of non-oil, non-GJ (gold, silver & Precious metals) imports was US\$ 34.43 billion in April 2022 with a positive growth of 29.68% over non-oil and non-GJ imports of US\$ 26.55 billion in April 2021. The trade deficit in April 2022 was US\$ 20.07 billion.

¹ 1US\$: INR 77.37

REGULATIONS WATCH

Notifications at the WTO

Article XX of the General Agreement on Tariffs and Trade (GATT) allows governments to enact trade measures to protect human, animal, or plant life or health, provided that the provisions do not discriminate and are not used as disguised protectionism. In addition, two specific World Trade Organization (WTO) agreements deal with food safety, animal and plant health and safety, and product standards in general.

The Sanitary and Phytosanitary Measures (SPS) and Technical Barriers to Trade (TBT) Agreements aim to ensure that these requirements do not create unnecessary obstacles to international trade. Under the WTO, members are required to notify other Members before adopting new measures if these are likely to affect international trade and provide an opportunity for comments.

The WTO Agreement on the Application of Sanitary and Phytosanitary Measures (the SPS Agreement) lays out the basic rules on food safety and on animal and plant health standards. It allows countries to set their own standards, but it stipulates that regulations must be based on science and should be applied only to the extent necessary to protect human, animal, or plant life or health.

The TBT Agreement seeks to ensure that technical regulations, standards, and testing and certification procedures do not create unnecessary obstacles. The agreement does recognize countries' rights to adopt the standards they consider appropriate—for example, to protect human, animal, or plant life or health; to safeguard the environment; or to meet other consumer interests. In any case, whatever regulations countries use should not discriminate. Under the agreement, the procedures used to decide whether a product conforms with relevant standards have to be

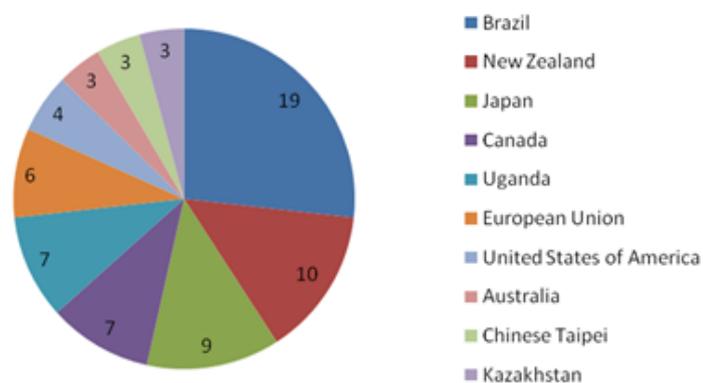
fair and equitable, and any methods that would give domestically produced goods an unfair advantage are discouraged.

SPS Notifications

The total numbers of SPS Notifications issued by the various WTO-Member Countries in 21st March 2022 to 21st April 2022 are 164 of which 98 are relevant to India. Out of 98 notifications, 15 notifications were the addendums of draft regulations notified earlier in the WTO.

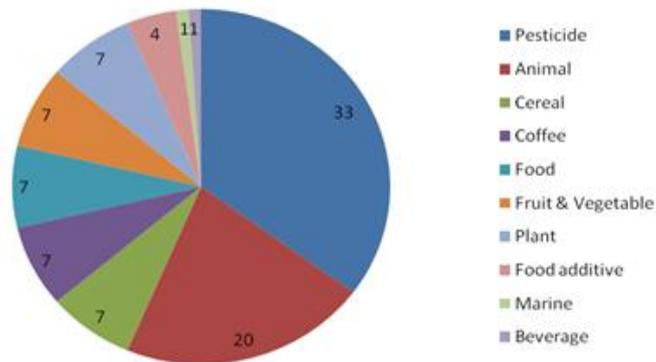
❖ Country-wise Information (Top 10)

Out of the total 98 notifications, Brazil issued 19 notifications, followed by New Zealand (10), Japan (9), Canada (7), Uganda (7), European Union (6), United States of America (4), Australia (3), Chinese Taipei (3) and Kazakhstan (3) notifications. The remaining 27 notifications were from other WTO Member country.



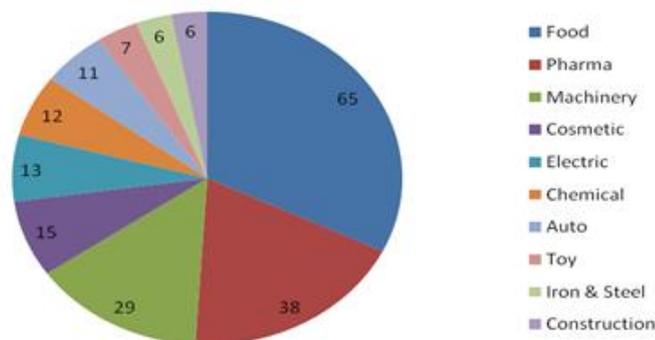
❖ Product-wise Information (Top 10)

Out of the total 98 Notifications, 33 related to pesticide, 20 related to animal, 7 related to cereals, 7 related to coffee, 7 related to food, 7 related to fruit & vegetable, 7 related to plant, 4 related to food additive, 1 related to marine, 1 related to beverages and 4 notifications were related to other products.



❖ Product-wise Information (Top 10)

Out of the total 257 Notifications, 65 related to food, 38 related to pharmaceutical, 29 related to machinery, 15 related to cosmetic, 13 related to electric, 12 related to chemical, 11 related to auto, 7 related to toy, 6 related to iron & steel, 6 related to construction and 55 notifications were related to other products.

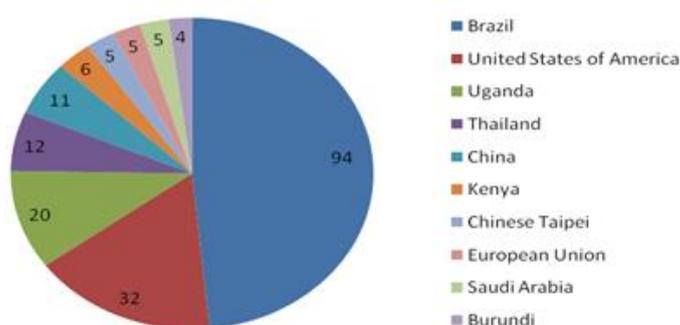


TBT Notifications

The total numbers of TBT Notifications issued by the various WTO-Member Countries from 21st March 2022 to 21st April 2022 were 257. Out of 257 notifications, 82 notifications were the addendums of draft regulations notified earlier in the WTO.

❖ Country-wise Information (Top 10)

Out of the total 257 notifications, Brazil issued 94 notifications, followed by United States of America (32), Uganda (20), Thailand (12), China (11), Kenya (6), Chinese Taipei (5), European Union (5), Saudi Arabia (5) and Burundi (4) notifications. The remaining 63 notification were from other WTO Member country.



WTO UPDATES

Plastics Pollution and Environmentally Sustainable Plastics Trade

Three workstreams to facilitate plastics trade were launched, on March 18, during an informal dialogue on Plastics Pollution and Environmentally Sustainable Plastics Trade (IDP) by some of the members of the World Trade Organization (WTO). These three workstreams are: 'Promoting trade to tackle plastic pollution', 'Crosscutting issues' and 'Circularity and reduction to tackle plastic pollution.' The participants of the dialogue have started the discussion on first workstream: "Plastics Pollution and Environmentally Sustainable Plastics Trade." During one of IDP discussions, UNCTAD informed the participants that the "Trade in plastics accounted for over US\$ 1 trillion per year and 344 MM tons (in quantity)." Forum on Trade, Environment and the SDGs (TESS) took the floor to brief about some of the identified shortcomings of the existing HS classification which affected the efforts for plastic pollution management. The shortcomings mentioned are the following:

- i. Insufficient differentiation of primary plastics by polymer type and by feedstock (e.g. fossil fuel feedstocks, bio-based feedstocks, and recycled feedstocks);
- ii. Insufficient differentiation of POPs and other harmful chemical additives;
- iii. Gaps in the scope of products that are classified as plastics;
- iv. Varying detail on the share of plastics embedded in products;
- v. Inadequate information on the material composition of plastic products and waste, including polymer types and the presence of harmful chemical substances of high environmental and health

concern;

- vi. Failure to capture plastic packaging that is an integral part of other traded products; and
- vii. Inadequate classifications of plastic waste (including poor alignment with Basel Convention amendments).

Several suggestions/recommendations for advancing work on the workstream were also discussed by participants. It was urged that the market incentives shall be provided to make the recycling economies work at scale and also to facilitate the investments into the sector. Need for building capacity to facilitate plastics trade, technical assistance and implementation of national policy mechanisms were also highlighted in the discussion. The participants also suggested creation of a repository system for easy access to plastics related trade data and best practices. The participants agreed that their first tasks shall be to enhance transparency in Plastics trade.

MSME related provisions in Regional Trade Agreements (RTAs)

The WTO Secretariat presented a revised note on MSME chapter/provisions in Regional Trade Agreements at one of its meetings of [Informal Working Group on MSMEs](#), held on 7 April. According to the Secretariat, there are three broad objectives of MSMEs related provisions in RTAs: economic growth and supply chain integration at regional and global level, improvement in economic competitiveness and sustainable development.

The note highlights several trade related aspects of MSMEs including development of better cooperation in several areas. The MSMEs related provisions in RTA negotiations can help build cooperation in following areas:

- i. Human resource development,
- ii. Adoption of technology by MSMEs,

- iii. Facilitation of access to capital and financial services,
- iv. Business partnership facilitation,
- v. Access to regulatory and market information,
- vi. Partnerships between relevant institutions, and
- vii. Establishment of a committee mandated with MSME-related affairs.

Further, the note covers several other areas in trade that have linkages with MSME growth such as e-commerce, transparency, competition, labour, etc. It also contains the MSME RTA database (2021). According to the database, about a total of 24 countries have included provisions/chapter related to MSMEs in all their WTO notified RTAs. While about 11 countries have so far have not made any reference to MSMEs in their RTAs including several of India's neighbours such as Bangladesh and Nepal, etc. India has, so far, included MSME related provisions in 6 of its total 17 RTAs, according to the database.

BUDGET SESSION IN PARLIAMENT 2022

The Budget Session 2022 of Parliament, which commenced on 31 January 2022, was adjourned sine die on Thursday, 7 April 2022. The session had a total of 27 sittings for a total of 177 hours and 50 minutes. The productivity of Lok Sabha during the Budget Session 2022 was approximately 129% and that of Rajya Sabha was 98%. During this session a total of 13 Bills (12 in Lok Sabha and 01 in Rajya Sabha) were introduced. 13 Bills were passed by Lok Sabha and 11 Bills were passed by Rajya Sabha. A total of 11 Bills were passed by both Houses of Parliament.



Some of the key bills passed:

❖ Competition (Amendment) Bill, 2022

The Competition (Amendment) Bill, 2022 aims to strengthen the regulatory structure by increasing the Competition Commission of India's (CCI) accountability, flexibility, and enforcement efficiency.

Accountability: The bill proposes that a board with part-time members oversee CCI operations. This will put its regulatory framework in line with that of financial authorities including the Securities and Exchange Board of India (SEBI), the Insurance Regulatory and Development Authority, and the Pension Fund Regulatory and Development Authority. Secondly, the bill incorporates accountability into lawmaking. It requires the CCI to consult the public before issuing

regulations. This is a positive step forward that will help to prevent legislative errors. The amendment will make CCI issues mandatory penal guidelines and show cause in case of any deviations. The CCI has collected only less than 1% of the fines imposed by it. Further, the amendment will help fill in the gaps and smoothen the legal process.

Enforcement Efficiency: After this amendment, CCI's power will be at par with SEBI, passing settlement orders for over a decade. Earlier, CCI could only take action in the form of final orders in court proceedings for abuse of dominance or anti-competitive agreements. The CCI might appeal to the National Company Law Appellate Tribunal if a pre-deposit of up to 25% of the penalty imposed by the CCI is made. The reduction of the merger review period from 210 to 150 days and introducing a green route for merger applications should improve enforcement effectiveness and give India Inc the rest.

Flexibility: With the advent of the digital economy, traditional business models are undergoing a fast transition, as recognised by the Bill. CCI is currently only permitted to investigate agreements formed between firms at the same production level (such as competitors forming a cartel) or between businesses directly involved in an upstream or downstream market (such as agreements between a manufacturer and a distributor). If the parties do not fall into these categories, their anti-competition agreements may go unchallenged.

❖ Delhi Municipal Corporation (Amendment) Bill, 2022

The [Bill](#) was introduced in Lok Sabha on March 25, 2022. The Bill seeks to amend the Delhi Municipal Corporation Act, 1957 passed by Parliament. The Act was amended in 2011 by Delhi Legislative Assembly to trifurcate the erstwhile Municipal Corporation of Delhi into (i)

North Delhi Municipal Corporation, (ii) South Delhi Municipal Corporation, and (iii) East Delhi Municipal Corporation. The Bill seeks to unify the three corporations.

Key Points:

- Number of Councilors: The Bill states that the total number of seats in the new corporation should not be more than 250.
- The Bill provides that the Central Government may appoint a Special Officer to exercise powers of the Corporation until the first meeting of the Corporation is held after the commencement of the Bill.
- The Bill adds that obligatory functions of the new corporation will include establishing an e-governance system for citizen services on an anytime-anywhere basis for a better, accountable, and transparent administration.
- The Act provides that a sweeper employed for doing house scavenging of a building would be required to give a reasonable cause or a 14-day notice before discontinuing his service. The Bill seeks to omit this provision.

❖ **Criminal Procedure (Identification) Bill, 2022** to authorise for taking measurements of convicts and other persons for the purposes of identification and investigation in criminal matters and to preserve records and for matters connected therewith and incidental thereto.

❖ **Constitution (Scheduled Tribes) Order (Amendment) Bill 2022**, to amend Part XV.Tripura of the Schedule to the Constitution (Scheduled Tribes) Order, 1950 to insert "Darlong" community as a sub-tribe of "Kuki" after sub-tribe "(iii) Chhalya" in entry 9 in the list of Scheduled Tribes.

❖ **Constitution (Scheduled Castes and Scheduled Tribes) Orders (Amendment) Bill, 2022**, to omit Bhogta community from the list of Scheduled Castes in relation to the

State of Jharkhand and the Constitution (Scheduled Tribes) Order, 1950 for inclusion of certain communities in the lists of Scheduled Tribes in relation to the State of Jharkhand.

❖ **Weapons of Mass Destruction and their Delivery Systems (Prohibition of Unlawful Activities) Amendment Bill, 2022** was also passed by Lok Sabha which seeks to (a) prohibit financing of any activity in relation to weapons of mass destruction and their delivery systems; (b) empower the Central Government to (i) freeze, seize or attach funds or other financial assets or economic resources for preventing such financing; (ii) prohibit making available funds, financial assets or economic resources for any prohibited activity in relation to weapons of mass destruction and their delivery systems.

FREE TRADE AGREEMENTS/ BILATERAL DISCUSSIONS

INDIA

India-EU

India-EU have decided to resume discussions for a Free Trade Agreement (FTA) in June 2022. The negotiations were initially launched in 2007 but were halted in 2013. Both countries, however, are now keen to relaunch the discussions and iron out differences in the negotiations to soon finalise an agreement. Easy movement of Indian professionals in EU; market access for automobiles, alcoholic beverages and dairy products from EU and other sensitive issues such as environment, data protection and labour standards are some of the areas where the differences exist and have to be sorted out. Preparing the ground for same, the President of the European Commission, Ursula von der Leyen recently met Prime Minister Narendra Modi in New Delhi.



The meeting led to the discussion of India-EU trade and strategic partnership. An announcement was made on setting up of a trade and technology council to boost bilateral ties. The Council is expected to help enhance the cooperation between the countries in several areas such as climate, green hydrogen, digital technology and people-to-people ties.

India - UK

India-UK FTA negotiations were launched in 2022, to promote complementarity in trade. The proposed FTA will include a total of 26 chapters. It is expected to cover about 90% of goods at the final agreement and result into doubling the bilateral trade by 2030 to more than US \$100 billion. The two countries have decided to conclude the negotiations by October 2022. So far, two rounds of negotiations have happened which resulted into an interim consensus on providing greater market access to rice and textiles from India in UK.



Moreover, India is likely to provide duty free access to medical devices, machinery and apples from UK. The third round of negotiations started in the last week of April. The recent round of negotiations is expected to be focused on tariff reduction on Alco-beverages and processed food from UK. Meanwhile, India is likely to sought liberal rules for export of its professional services in UK.

India - Israel



India and Israel are likely to sign a Free Trade Agreement by June 2022. The negotiations for finalising the FTA between the two countries

have been happening for over a decade. But now both countries have decided to expedite the talks and the latest round is set to take place in May 2022. Israel wants to expand its market share in electronics products exports in India. It is specially looking at supplying the products for significant technology sectors such as agri-tech, medical devices, energy, defence and electric vehicles, etc. It believes that this will provide access to better and sophisticated technology to both the countries. On the other side, India is looking for greater Israeli investment in India. However, Israel may demand strong rules for Intellectual Property (IP) and liberalized rules for work visa to agree to expand its investments into India.

OTHERS

UK - Canada



UK and Canada announced the launch of negotiations for a free trade agreement in March 2022. The countries aim at utilizing the FTA for strengthening cooperation in areas such as environment, economic empowerment of women, innovation, digitalisation and data. UK is seeking preferential market access for its services exports and more investments from Canada. The two countries are likely to include chapters on gender equality, digital trade and climate change.

China-Pakistan

Pakistan Single Window (PSW) and the General Administration of Customs People's Republic of China announced the launch of Joint Working Group (JWG) for creating mechanism for a single window cooperation and integration. The

decision will facilitate the exchange of trade valuation data under the Electronic Data Exchange mechanism.



This will help in preventing mis-invoicing of trade data and money laundering. Further, the integration of single -windows of both the countries will provide significant trade facilitation such as improving import processes by enabling full data transfer. It will also expedite clearance of goods at customs and will increase investors' confidence in both the countries.

Turkey - UAE



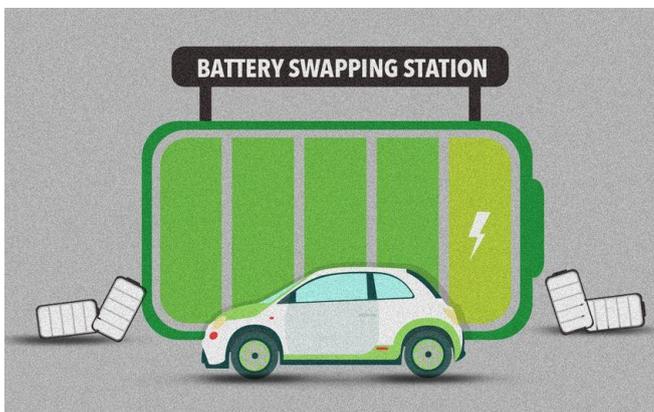
In March 2022, Turkey and UAE announced the launch of negotiations for a free trade agreement. They also signed a total of 12 agreements for cooperation in sectors such as trade, industry, defence, health sectors and medical sciences, land and sea transportation and climate action, etc. The negotiations are expected to be concluded by second quarter of 2022. "By cutting tariffs, promoting free movement of goods, facilitating capital flows and reducing trade barriers, we will make it easier than ever to do business. It will also underpin a new era of cooperation," said Emirati trade minister Thani al Zeyoudi in a statement.

POLICY – REGULATORY BRIEF

INDIA

Draft Battery Swapping Policy (NITI Aayog)

India has committed to achieving net-zero emissions by 2070 at the 26th Conference of the Parties (COP26) in November 2021. This will require clear pathways to decarbonize high greenhouse gas (GHG) intensive sectors such as transport and energy. The transition to clean mobility is paramount, led by electric vehicles (EVs).



EVs are traditionally purchased with “fixed” batteries, which can only be charged using the power supply while housed within the EV. Like fueling stations for ICE vehicles, adequate, affordable, accessible, and reliable charging networks are prerequisites for mass EV adoption. Efforts are underway in India to boost the availability of charging infrastructure. Charging still takes significantly longer than refueling an ICE.

Current scenario in the battery sector in India

- ❖ Lithium used in lithium-ion batteries is in massive demand as countries shift to EV production. But there is a shortage of lithium metal in the global supply.
- ❖ Recently, several incidents have come up of EV two-wheelers catching fire.

The Union transport minister, Nitin Gadkari,

tweeted that an Expert Committee is constituted to inquire into these incidents and recommend remedial steps.

The ministry will issue necessary orders on the defaulting companies based on the reports. And also announce quality-centric guidelines for Electric Vehicles. The minister also advises EV companies to take advance action to recall all defective batches of vehicles.

Battery Swapping Policy

Battery swapping is an alternative which involves discharged batteries for charged ones and provides flexibility to charge them separately. Swapping will offer key advantages relative to charging: time, space and cost-efficient.



During the budget session 2022, Finance Minister speaks about the battery swapping policy which will develop special mobility zones (SMZs) for EVs. To promote a shift to the use of public transport in urban areas, SMZs with zero fossil fuels policy to be introduced.

This will help develop the EV structure/charging station ecosystem & positive for the domestic EV space. Government plans to encourage the private sector to incur CAPEX in this domain.

Key Points

- ❖ Targeted 2Ws and 3Ws: Battery Swapping is used for smaller vehicles such as 2Ws and 3Ws with smaller batteries that are easier to swap. This is driven to build large-scale adoption of EVs by promoting & growing

swapping technology and encouraging stakeholders' collaboration.

- ❖ Reduction of GST on Lithium-ion batteries (18%) and Electric Vehicle Supply Equipment's (5%).
- ❖ BIS/ other organisations: They shall develop regulations for the minimum battery performance & durability parameters. The standards for re-use or re-purposing of the batteries, keeping safety, reliability & sustainability of the business model into consideration.
- ❖ Battery Management System (BMS): The batteries need to be fitted with smart BMS which will monitor the battery and capture data which is essential for the swappable batteries.
- ❖ Unique Identification Number: A Unique Identification Number (UIN) for tracking and monitoring EV batteries must be assigned at the manufacturing stage to ensure traceability throughout the battery lifecycle.
- ❖ For the safety of traction, batteries must be tested and certified according to the AIS 156 (2020) and AIS 038 Rev 2 (2020) standards, as well as any additional tests that may be required for swappable batteries that are subject to multiple coupling/decoupling processes at the connectors.
- ❖ Battery charging and swapping infrastructure
 - BIS/ Ministry of Power will develop or approve the standards for Battery Charging Station (BCS) and Battery Swapping Station (BSS), to ensure safe and cost-effective infrastructure for charging and swapping of EV batteries.
 - The Electric Vehicle Supply Equipment (EVSE) used at the swapping station must be tested and approved by the National

Accreditation Board for Testing and Calibration Laboratories (NABL) or an agency appointed by the central nodal agency for battery swapping.

- The operator must follow the DISCOMS/CEA (Central Electricity Authority) rules and regulations when operating the charging infrastructure for safety.

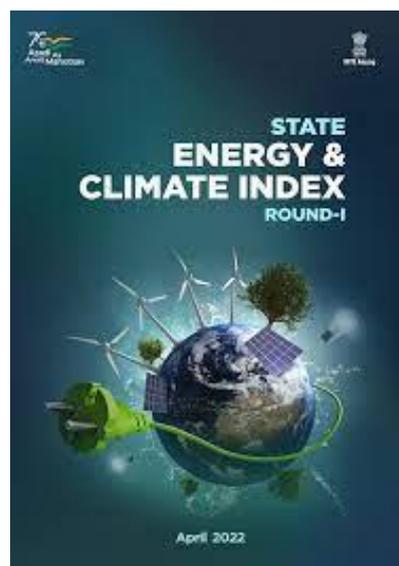
EV battery swapping in the world

Market: The global electric vehicle battery swapping market was valued at \$100,087.7 thousand in 2020 and is projected to reach \$852,597.49 thousand by 2030, registering a CAGR of 24.4% from 2021 to 2030.

Growth: The key growth strategies adopted by the EV battery swapping industry players include collaboration, product launch, agreement and partnership. These strategies are opted by various industry players worldwide to increase their revenue.

Backward impact on the market: The market is influenced by differences in battery technology and design and the expensive initial set-up and operational costs of battery switching stations.

State Energy & Climate Index (Round-I)



NITI Aayog released the State Energy and

Climate Index (SECI)-Round 1. The [State Energy & Climate Index \(Round I\)](#) is envisaged as a stepping stone in highlighting the role and performance of the state in the energy sector. It will help the country to become "Atmanirbhar in the energy sector" by encouraging healthy competition among states on different dimensions of the energy and climate sector.

The SECI is the first index designed to track states and UTs in the climate and energy sectors. An in-depth analysis of particular states is believed to improve service delivery on numerous energy criteria. These parameters were developed with India's climate change and sustainable energy transition goals.

The energy sector contributes to about 75% of the total greenhouse gas emissions of the country. The paradigm shift in the clean energy transition has a twin-fold objective: i) ensure affordable and reliable energy to all and ii) reduce its dependence on fossil-based energy by accelerating the clean energy transition.

The objectives of the index are:

- ❖ Ranking the States based on their efforts towards improving energy access, energy consumption, energy efficiency, and safeguarding the environment;
- ❖ Helping drive the agenda of the affordable, accessible, efficient and clean energy transition at the State level;
- ❖ Encouraging healthy competition among the states on different dimensions of energy and climate.

The SECI Round-1 aims to rank states and UTs on six parameters, and further these parameters include a total of 27 indicators.

1) Discoms' Performance: DISCOM's Performance parameter consists of 9 indicators: Debt-equity ratio, AT&C losses, ACS-ARR gap, T&D losses, and ToD/ToU tariffs for consumers DBT Transfer, Open access surcharge,

Regulatory Assets and Complexity of Tariffs.

2) Access, Affordability and Reliability of Energy: It consists of five indicators, namely, per capita energy consumption, hours of electricity supplied in agricultural and industrial sectors, cross-subsidization, and life-line electricity & tariff.

3) Clean Energy Initiatives: This consists of three indicators- clean cooking fuel supply, RE penetration and CNG vehicle penetration.

4) Energy Efficiency: It consists of three indicators related to energy savings in industry, buildings, and energy intensity.

5) Environmental Sustainability: This parameter consists of four indicators: energy intensity of GSDP, utilization of RE potential, the percentage change in forest cover, and forest carbon stock.

6) New Initiatives: This parameter consists of three indicators related to EV penetration, availability of charging infrastructure for EVs, and the proportion of consumers with smart meters.

Based on scores, States and UTs will be categorized into 'Front Runners', 'Achievers', and 'Aspirants'.

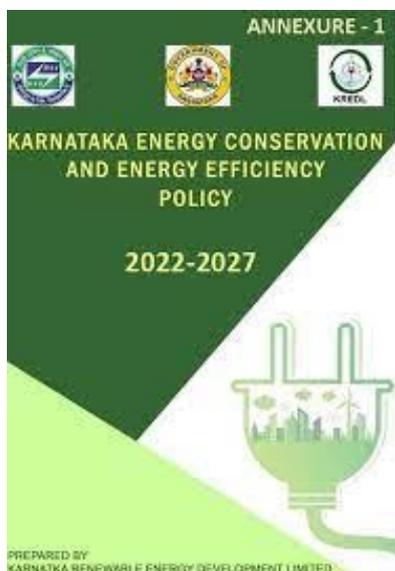
The states have been categorized based on size and geographical differences as larger states, smaller states, and UTs.

- ❖ Gujarat, Kerala, and Punjab have been ranked as the top three performers in the category of larger states.
- ❖ Goa emerged as the top-performing state in the smaller states category, followed by Tripura and Manipur.
- ❖ Among UTs, Chandigarh, Delhi, and Daman & Diu/Dadra & Nagar Haveli are the top performers.

Other states can adopt the best practices for all indicators in better-performing states to improve their performance. This will help states to understand their performance across multiple parameters/indicators. This document also intends to create awareness among citizens regarding energy and climate indicators and initiate debate for better energy and climate-related services.

Karnataka Energy Conservation (EC) & Energy Efficiency (EE) Policy 2022-27

Karnataka is one of the largest states in terms of source-wise installed power generation capacity. Out of the total State energy consumption, the energy consumed by the agriculture sector is about 38%, the Domestic Sector is about 22%, Industrial Sector is about 18%, Commercial Sector is about 12% and the Municipal about 10%.



As per the last Karnataka Government, Renewable Energy Policy 2009-14 was to promote and harness the renewable energy and energy efficiency potential in the state. During the policy period, the energy efficiency measures were introduced to attain energy conservation and targeted to conserve 20% of the energy consumed in each sector. This policy is in line with the Bureau of Energy Efficiency (BEE) direction to have a separate 'Energy Conservation and Energy Efficiency Policy' in

the states. This policy seeks to save roughly 744 million kWh of electricity usage, avoiding the addition of 454 MW of fossil fuel-based generation capacity in the medium term. To reduce CO₂ emissions by approximately 6,10,080 tonnes.

Karnataka has abundant renewable energy generation to meet the State demand, and the state Government's ambitious initiatives to harness renewable energy and efficient usage has been successful. In the next five years, the policy aims to increase the state's renewable energy generation capacity to 10 GW. This includes 1 GW of rooftop solar energy. Currently, the state has a renewable energy generation capacity of 15,392 megawatts (MW).

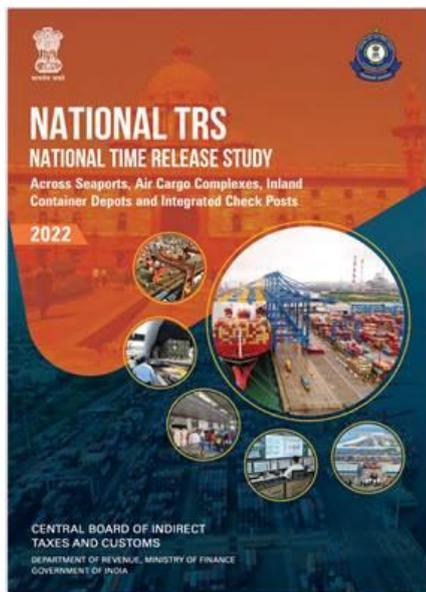
The [policy](#) aims at developing Karnataka as the major exporter of renewable energy to other States by utilising the opportunities in the State for maximizing renewable energy generation. The policy also envisages the economic development of Karnataka by attracting investments in the field of renewable energy generation in a massive way. The policy has provided policy & regulation, financial mechanism; institutional capacity; suggestible adoption of EE measures for each sector.

CBIC: National time-release study 2022

[Time Release Studies](#) (TRS) is released by the Central Board of Indirect Taxes and Customs (CBIC). TRS is recommended by the World Trade Organization (WTO) and the World Customs Organization (WCO) under the Trade Facilitation Agreement (TFA). It is a performance measuring instrument for evaluating the international trade cargo clearing procedure. It uses the average cargo release time, i.e. the time it takes from when the cargo arrives at the customs station to when it is finally released for import or export.

The National Time Release Study (NTRS) 2022 presents the annual report of the cargo clearness process through four categories of

ports - seaports, air cargo complexes (ACCs), inland container depots (ICDs) and integrated check posts (ICPs). The study is based on a sample period between 1st January and 7th January 2022. It covers 15 major Customs formations that handle around 80% of bills of entry (import documents) and 70% of shipping bills (export documents).



Imports: Key Findings

Compared to the same period in 2021, the average cargo release time for all four port categories has improved in 2022. The average import release time has improved by 16% at ACCs, 12% at seaports and ICDs, and 2% at ICPs.

With this progress, the ICPs have met the National Trade Facilitation Action Plan (NTFAP) target release time of 2023, while the other three-port categories have completed 75% of the NTFAP target.

Further, the reports progress in respect of the four-fold “Path to Promptness” for import release time, namely-

- ❖ Advance filing of import documents enabling pre-arrival processing,
- ❖ Risk-based facilitation of cargo,
- ❖ Benefits of trusted client program - Authorized Economic Operators, and

❖ Direct Port Delivery (DPD) facility.

The percentage of bills of entry filed in advance has increased significantly, from 37% in 2021 to 74% in 2022, as a result of a statutory push through the Finance Act of 2021. As mentioned in the section on 'Pre-arrival processing,' this has enabled a higher degree of pre-arrival processing, decreasing the release time.

The stage-wise analysis of import release time has identified the time taken in payment of duty after assessment as the stage accounting for the maximum time taken, indicating a significant shift from the time spent filing bills of entry or assessing non-facilitated bills of entry, as identified in the earlier TRS. From the assessment of duty payment, the duration has increased from 67.06 hours in 2021 to 88.37 hours in 2022.

Exports: Key Findings

The study discovered that the documentary clearance of consignments for export has been reduced significantly. It is currently 4:04 hours for ACCs and 47:41 hours for ICDs. The local TRS and the National TRS 2022 have also provided recommendations to mitigate average release time targets to meet the NTFAP's targets and strengthen the country's trade facilitative ecosystem.

The shipping invoices must be filed before the cargo arrives at the customs station as part of the export process, assuring pre-arrival processing. Furthermore, throughout the four-port categories, the share of fully facilitated shipping bills has increased marginally from 87 % in 2021 to 88 % in 2022.

According to the stage-wise analysis, the share of the release time following the grant of the Let Export Order (LEO) by Customs authorities (marking the completion of all regulatory approvals) in the total export release time ranges from 60% in the case of integrated checkpoints to 92% in the case of air cargo.

MoEF&CC launches Prakriti: A Green initiative for Plastic Waste Management

Union Environment Minister Bhupender Yadav has launched "Prakriti," a mascot that promotes awareness about lifestyle changes that can help reduce single-use plastic. It also explains the various efforts and initiatives undertaken by the Ministry of Environment, Forests and Climate Change (MoEFCC) and the Central Pollution Control Board (CPCB) to ensure effective Plastic Waste Management (PWM) in the country.



Other green initiatives that were launched for Plastic Waste Management:

National Dashboard on Elimination of Single-Use Plastic and Plastic Waste Management (MoEFCC): This aims to connect all stakeholders including Central Ministries/ Departments, State/UT Governments, etc. through one platform and track status and progress made for elimination of single-use plastic & effective management of plastic waste.

Extended Producer Responsibility (EPR) Portal for Plastic Packaging (CPCB): This portal will look after tasks that will help in overall operational functions like improving accountability, traceability, transparency and facilitating ease of reporting compliance to EPR Obligations by Producers, Importers and Brand-owners.

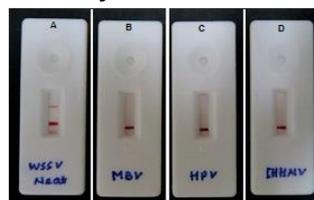
Mobile App for Single-Use Plastics Grievance Redressal (CPCB): This app will allow citizens to check the sale/usage/manufacturing of single-use plastic in their region and tackle the plastic menace.

Monitoring module for single-use plastic (CPCB): This will be for local bodies, State pollution control board/PCCs and CPCB, etc. to inventory details of single-use plastic production, its sale & usage, etc. in commercial establishments at district level, and on-ground enforcement of a ban on single-use plastics.

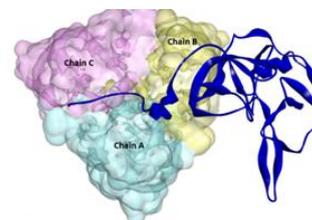
Industrial production of Graphene from Waste Plastic (G B Pant NIHE & NRDC) will promote more industries to come forward to upcycle plastic waste.

New Diagnostic Tool for aquaculture pathogen

Scientists at the Agharkar Research Institute (ARI), an autonomous institute of the Department of Science and Technology (DST), have developed a novel diagnostic tool for detecting the White Spot Syndrome Virus, an aquaculture virus (WSSV). The peptide-based diagnostic tool was issued a patent as an alternative bio-recognition element. The tool is expected to help India's shrimp farming industry.



Handy assay for detection of WSSV (High specificity for WSSV, other viruses not detected)



In-silico study of VP28 (major capsid protein) WSSV binding to the 12-mer peptide (blue)

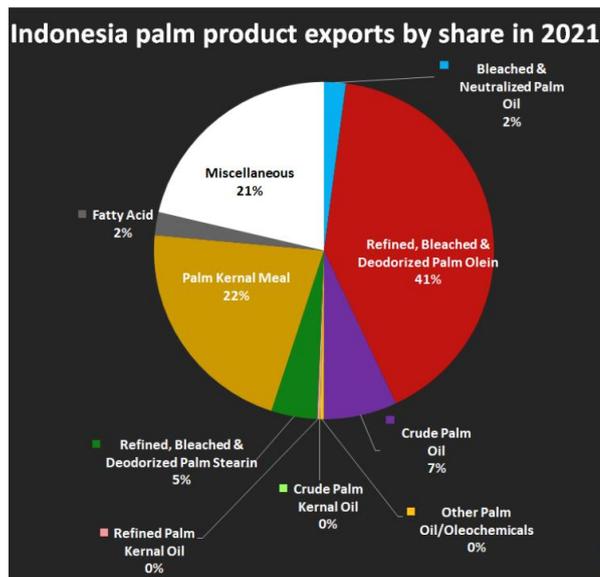
The WSSV infection of the shrimp *Penaeus vannamei* causes a massive crop loss. Early and rapid detection of diseases on the farm will benefit fish and shellfish farming, which generates significant export revenue for the country, a major shrimp exporter to the United States.

This tool is developed as a lateral flow assay using gold nano-particles for clear visuals. This will provide a convenient and self-use diagnostic for WSSV infection.

WORLD

Indonesia bans exports of palm oil

Indonesia the world's largest palm oil producer (as of 2020, \$17.9 Billion), announced a ban on exports of Palm Oil. The export ban would come into effect from 28th April 2022 because of soaring inflation in the country. This ban will last until the domestic shortage is resolved.



The restriction includes RBD palm olein and excludes crude palm oil and RBD palm oil. RBD palm olein accounts for 30% to 40% of Indonesia's total palm oil exports.

India consumes 22.5 million tonnes of edible oil annually, of which 9-9.5 million tonnes are met by domestic supplies and the rest by imports. About 3.5-4 million tonnes of palm oil is imported by India annually from Indonesia.

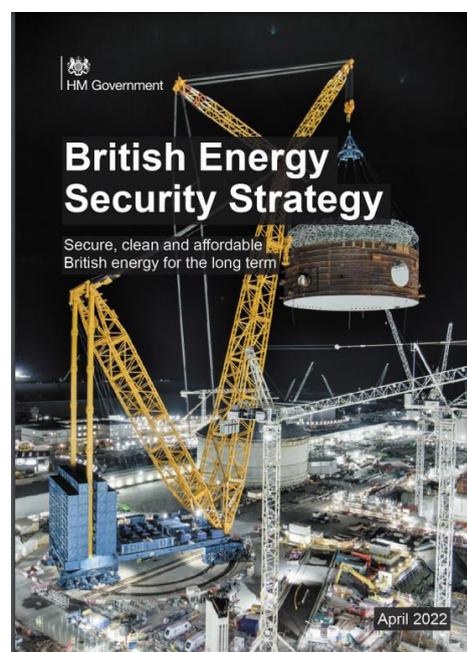
Since palm oil and its derivatives are used in several FMCG goods, it will impact the prices of these products due to weakening supply and rising demand. FMCG companies such as Unilever, Mondelez International Ltd, Godrej Consumer Products Ltd. Nestle, etc., can be impacted.

As per OEC, as of 2020, Malaysia exports US\$10.8 Billion of palm oil. Until Indonesia opens, the export world can look to other alternatives such as Malaysia, Argentina, and others.

India may move to Malaysia to fulfil its needs for palm oil. The second option maybe to strengthen the Aatmanirbhar Bharat concept for this product. In August 2021 PM Narendra Modi sanctioned Rs 11,040 Crore for National Mission on Edible Oils – Palm Oil (NMEO-OP), and guidelines have been released by the Ministry of Agriculture & Farmer's Welfare. The main objective was to reduce dependence on imports of edible oil. Special attention is given to North – Eastern region and Andaman & Nicobar Islands.

Britain Energy Security Strategy

The United Kingdom has set out an [Energy Security Strategy](#) to accelerate the deployment of new renewable projects, including wind, nuclear and solar, to contribute to 95% of the electricity generated.



The strategy covers assisting consumers with their energy bills, increasing energy efficiency, supporting the oil and gas sector, and developing renewables.

The strategy builds on Ten Point Plan for a Green Industrial Revolution and, together with the Net Zero Strategy, is driving an unprecedented £100 billion (~\$130.23 billion) of private sector investment into new British industries.

The ten-point plan includes –

- ❖ Advancing offshore wind
- ❖ Driving the growth of low carbon hydrogen
- ❖ Delivering new and advanced nuclear power
- ❖ Accelerating the shift to zero-emission vehicles
- ❖ Green public transport, cycling and walking
- ❖ Jet zero and green ships
- ❖ Greener building
- ❖ Investing in CCUS
- ❖ Protecting our natural environment
- ❖ Green finance and innovation

Renewable projects

Solar:

The UK will evaluate existing regulations for solar projects, on domestic and commercial rooftops. The UK Government aims to achieve five-fold growth in the sector by 2035, with the current installed solar capacity of 14 GW. The UK Government has abolished VAT on solar panels placed in residential buildings in the United Kingdom, with the goal of facilitating low-cost financing from retail lenders to encourage rooftop deployment and energy-saving measures. The Government aims to develop performance criteria as part of the effort to make the installation of renewables, such as solar, a necessity in new houses and buildings.

Wind

By 2030, the UK aims to have 50 GW of offshore wind capacity, which would be enough to power every resident. Of the total capacity, floating offshore wind projects of 5 GW capacity will be installed in the deep sea. This is supported by investments of up to £160 million (\$208.56 million) in ports and supply chains and £31 million (\$40.39 million) in R&D.

The strategy aims to reduce the approval time for new offshore wind farms from four to one year. It also intends to work with the Offshore Wind Acceleration Task Force, a group of industry experts brought together to work with the Government, Ofgem, and National Grid to further reduce the timeline.

Nuclear

The strategy is projected to increase nuclear power capacity by 2050, with a goal of 24 GW. The Government also intends to introduce the Future Nuclear Enabling Fund, which will be worth £120 million (\$156.40 million). The Government wants to build up to eight reactors in the next decade, which would be the equivalent of one reactor per year instead of one in a decade.

Hydrogen

The UK aims to double its low carbon hydrogen production capacities to 10 GW by 2030. At least half of this capacity will come from hydrogen, allowing British industry to avoid importing or using expensive fossil fuels. The strategy is to come up with a new business model for hydrogen transportation and storage infrastructure. By 2025, the policy aims to establish a hydrogen certification programme to demonstrate high-grade British hydrogen for export and to ensure that any imported hydrogen satisfies the same high standards that UK businesses expect.

China 14th Year Plan for Fishery Sector

The Ministry of Agriculture and Rural Affairs published its 14th Five Year Plan (FYP) for Fishery Development, a blueprint for the sector until 2025. The program studies and assesses challenges and opportunities facing the industry and makes overall arrangements for developing the fishing industry.

The 14th Five-year Plan includes emphasising quantity and quality, facilitating innovation-

driven and green development, boosting domestic demand, propelling openness and win-win results, and adopting an integrated approach to development and safety.



The goal is to encourage the fishing industry's high-quality development and modernisation. The Plan also includes 12 targets in four areas: fishing industry development, green ecology, science and technology innovation, and governance capability, all of which must be met by 2035 to ensure the basic reality of a modern fishing sector.

The Plan puts forward six priorities:

- 1) Build a strong base for fishing production, stabilize the production of aquatic products and ensure their supply. Put ensuring the supply of aquatic products at the top of the agenda for the development of the fishing industry. Stabilize aquaculture acreage, push for green and healthy aquaculture, revitalize fish seed production, and optimize the fish catch supply.
- 2) Promote development and modernization of the fishing industry, improve the processing and distribution of aquatic products, develop various business models, strengthen the expansion of markets for aquatic products, and facilitate the development of industry clusters.
- 3) Deepen reform and innovation in the fishing industry, and improve governance. Strengthen fishing industry S&T and advance

reforms in fishing boat and harbour management, set up more fishery cooperatives and enhance law enforcement.

- 4) To enhance the protection of aquatic life, especially in the Yangtze River, and promote the sustainable use of fishery resources. Take concrete measures to implement the 10-year fishing ban in the Yangtze River, strengthen the conservation of aquatic resources, and improve the protection of aquatic wildlife.
- 5) Strengthen risk prevention and control, and push for the safe development of the fishing industry. Ensure the safety of aquatic life, strictly guarantee the quality and safety of aquatic products, improve the safety of fishing boats, and enhance the safety of fishing activities involving foreign parties.
- 6) Promote international collaboration in the fishing industry and encourage domestic aquaculture enterprises to expand internationally. In addition, the Plan includes plans for 12 large projects.

OPINION COLUMN

Geopolitics

Behind the Clutter

Anjali Mahto

Technology in trade

New advanced digital technologies like blockchain, AI and meta-verse are gaining popularity globally and are expected to create major breakthroughs in trade. Technology provides opportunities to make trade more inclusive, efficient, transparent and sustainable.



As the companies are racing to adopt these new technologies, the traditional supply chain landscape is changing. At the same time, new and growing geopolitical tensions are also changing the way supply chains can function. Most countries, especially developed, are expected to close their political borders due to rising geopolitical uncertainty, such as pandemic threat, mass migration, war, etc. This, in turn, could result in disruption of physical supply chains.

Therefore, to make global supply chains resilient, it seems obvious to substitute physical geopolitical boundaries as much as possible with functional boundaries that could be navigated through digital windows or solutions. The advantages that the digital trade can provide are following:

1. **Innovative Supply Chains:** Digital technology can reduce time and space. This will enable the faster movement of goods and

services through digital supply chains. It also has the potential to reduce the labour and paper-intensive documentation across the supply chain networks.

2. **Transparency:** Digital technology can enable end-to-end visibility in supply chains, providing ease in real-time supply chain management. It can also help track and evaluate environment and labour standards throughout the supply chains and empower investors in their decisions.

3. **Inclusive trade:** Technology like metaverse and other virtual meeting rooms can eliminate the need for physical movement of people and services, which can largely benefit women in trade. Further, technology like AI and machine learning also promises to provide labour friendly mechanisms.

4. **Risk Management:** Technology can help in the identification of non-tariff barriers bottlenecks and facilitate better inventory management and control and, therefore, reduce waste and losses.

5. **Facilitate foreign direct investment:** The need for tech adoption in trade by developing and least developed countries provide opportunities for investors. Promotion of trade-tech can result in growth of investment in the technology sector.

6. **Provide Market access:** Tech can provide opportunities for trade facilitation, such as through the adoption of secure cross border transaction systems and delivery. Countries can use tech-based interventions to acquire new foreign markets.

However, private players' mere adoption of new tech and tech innovation would not provide any major breakthrough. This is because technology does provide not only opportunities but also poses several challenges. For instance, take e-vehicles that were expected to give a push to India's climate action goals but now faced with

the problem of finding credibility with some batteries exploding, thereby making customers wary of buying the vehicle.

Therefore, agile, flexible and sensible policy-making in tech is important for its safe and efficient use. A strong public-private partnership is required to balance the development of technological innovation and public welfare. Further, International policy-making on trade and tech is necessary to bring coordination among various tech-related policies and create coherence.

(The writer is an Account Executive at VeKommunicate)

Environment Supply Chain Management

Supply chain management is the handling of the entire production flow of a good or service — starting from the raw components all the way to delivering the final product to the consumer. Environmental supply chain management is an important part of a sustainable business strategy. It includes management of all significant environmental impacts from the company's supply chain throughout the life cycles of products or services.



Source: Business reporter

Environmental leaders and organisations are developing guidelines for businesses to follow. The purpose is to teach businesses how to improve their sustainability practices over time. If a business takes on these responsibilities, it will help better manage its business risks, improve productivity, and keep up with changing market and technological trends. The business may persuade its suppliers and all other stakeholders in the supply chain to do the same, and this never-ending loop will eventually have a much larger impact on society and the environment.

The United Nations Global Compact issued the 'Supply Chain Sustainability: A Practical Guide for Continuous Improvement' Second edition in 2015². This guide includes how companies can

implement the Ten Principles of the UN Global Compact throughout their supply chains and integrate sustainability into procurement strategies.

Sustainability in the supply chain is a social and economic responsibility; this encourages companies to use good governance practices. Principle 7-9³ is to support protecting the environment:

- ❖ Principle 7: Businesses should support a precautionary approach to environmental challenges;
- ❖ Principle 8: undertake initiatives to promote greater environmental responsibility; and
- ❖ Principle 9: encourage the development and diffusion of environmentally friendly technologies.

Environmental impacts from supply chains can include toxic waste, water pollution, loss of biodiversity, deforestation, long-term damage to ecosystems, hazardous air emissions as well as greenhouse gas emissions and energy use.

The demand to incorporate environmentally friendly options into supply-chain management is rising. The supply chain costs have an impact on the environment since delivering products more efficiently reduces carbon footprint. Companies are now establishing sustainability initiatives to help the environment by reducing miles travelled, production expenses, product waste, and unplanned activities.

Also, companies who strive for sustainability have business advantages such as improved business image, lowered risk of non-compliance, the attraction of other environmentally aware customers (this group is growing larger), improved productivity and

²

https://d306pr3pise04h.cloudfront.net/docs/issues_doc%2Fsupply_chain%2FSupplyChainRep_spread.pdf

³ <https://www.unglobalcompact.org/what-is-gc/mission/principles>

quality, and an increase in more sustainable products.

Some of the special initiatives of the UN global compact and supply chain sustainability

Caring for Climate (C4C)

It was launched by the UN Secretary-General Ban ki-moon in 2007⁴. It is the joint initiative of the UN Global Compact, UN Environment Programme and the secretariat of the UN Framework Convention on Climate Change to improve business role in addressing climate change. It gives corporate executives a framework for implementing effective climate change solutions and influencing public policy. C4C signatories commit to continuously improving energy efficiency and usage, reducing the carbon footprint of products, services and processes, and building capacity to adapt to climate change in their operations and the supply chain.

CEO Water Mandate (CWM)

CEO Water Mandate⁵ was launched by the UN Secretary-General and is designed to assist companies in the development, implementation and disclosure of water sustainability policies and practices. It seeks to make a positive impact with respect to the emerging global water crisis by mobilizing a critical mass of business leaders to advance water sustainability solutions throughout business operations and the supply chain – in partnership with the UN, civil society organizations, governments and other stakeholders.

(The writer is an Account Executive at VeKommunicate)

⁴ https://d306pr3pise04h.cloudfront.net/docs/news_events%2F8.1%2Fcaring_for_climate.pdf

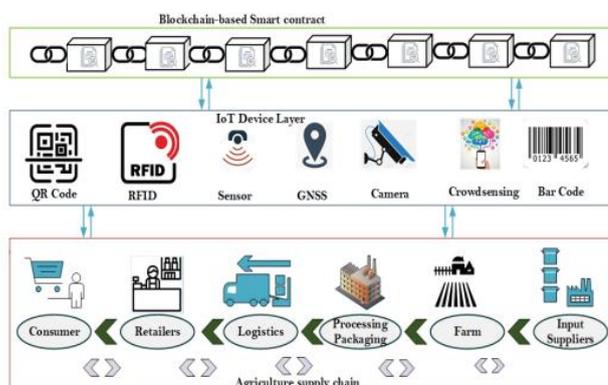
⁵ <https://ceowatermandate.org/>

Food and Agriculture Supply Chain Management

Agricultural production has a huge impact on the country's economy and security, nutrition, and the health of its people. Agricultural practice involves many choices as well as weaknesses. In the agricultural supply chain, big data analysis can be used to analyze food quality, storage conditions, climate patterns in a particular area, soil level such as pH and nutrients, marketing and trade management. It can also be used to determine customer behavior and inventory management.

Farmers, processors, distributors, retailers, and consumers are all part of a complex food supply chain that includes many stakeholders. All food processing businesses and supply chains must now provide safe food as an important and legally defined requirement.

The food industry continues to rely heavily on paper records, and current food tracking systems are not integrated and connected to all participants in the supply chain. This division creates inequality of information between all supply chain stakeholders, lack of transparency across supply chain processes, and opportunities for the development or concealment of fraud.



Source: MDPI

Although several product tracking technologies have been used in the past, such as barcodes,

RFID tags, and Electronic Data Interchange (EDI) etc., it has identified the need for more technical applications to track food supply chain.

In order to establish an effective and reliable supply chain system, the industry needs to use various technology such as block chain, Internet of Things (IoT), and AI. A data-driven agricultural supply chain from AI, IoT, and block chain is a very promising approach to solve various existing problems. If we can generate a large amount of data from the supply chain and use that data to drive decision-making processes. It can help solve a few problems related to food quality, safety, nutrition, and data sharing across the supply chain, etc., worldwide.

Some of the potential applications of technology in supply chain management are discussed below:

❖ Food Composition, Quality, and Safety Monitoring

Recently consumers are becoming increasingly aware of the design and quality of food products through various health awareness programs and technological advances in food science. In addition, due to new food regulations around the world companies need to label food products in detail and monitor quality. Use of various technology in the supply chain provides authenticity management mechanism for the smart agriculture area.

❖ Food Safety across Supply Chain

For all stakeholders around the world, food security has become as a global priority from farm to fork. There have been many outbreaks of food based on new agricultural products in the past. That results in the disposal of large quantities of agricultural products to protect public health. The power of block chain and the internet of things developing food testing frameworks are encouraging and collaborative

by combining AI-based large-scale data testing as a quick response to a food safety explosion.

❖ **Food Product Traceability**

Tracking of food products has always been one of the main concerns for consumers. It is best described as the capability of a system for monitoring and tracking the movement of agricultural food products throughout the supply chain from the manufacturer to the final stages of distribution. In recent years, various solutions have been proposed using several technologies such as IoT, RFID, AI, etc. have been proposed to improve the track record of agricultural food production. The tracking system contains all the information regarding food production, processing, transportation and food storage conditions.

❖ **Inventory Management**

Inventory management is defined as the process of overseeing the movement of goods from a production facility to warehouses and from these facilities to retail outlets. It is an important part of supply chain management. It is important to note that demand forecasting and inventory management are inextricably linked.

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