



THE KNOWLEDGE AND LEARNING ENTERPRISE

# **THE KNOWLEDGE & LEARNING** **DIGEST** PART 1

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VOL 4 (2024)

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*"Knowledge has to be improved, challenged, and increased constantly, or it vanishes."*

- Peter Drucker

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## Pages & Perspectives

*“To know, is to know that you know nothing. That is the meaning of true knowledge.”*

Socrates

*At **The Knowledge and Learning Enterprise**, we are driven by a deep passion for continuous learning and personal growth. The K&L digest is curated to keep you informed and intellectually engaged, offering a quick and easy way to broaden your horizons. Whether you’re looking to enhance your professional expertise or gearing up for competitive exams, our digest provides a blend of essential facts, insightful content, and engaging trivia. Dive in and discover a treasure trove of knowledge, designed to empower and inspire you!*

Note: This is the second part of Volume 4 of The K&L Digest Part 1

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## 113. Key Terms from The World Bank International Debt Report 2024



*This list provides general descriptions, not precise legal definitions, of the terms commonly used in this report. However, the descriptions include legal and policy elements relevant to how these terms are understood and applied in practice.*

**Blue bond:** is a debt instrument issued by governments, development banks, or other entities to raise capital from impact investors to finance marine- and ocean-based projects that yield positive environmental, economic, and climate benefits.

**Bonds:** are debt instruments issued by public and publicly guaranteed or private debtors with durations of one year or longer. Bonds usually give the holder the unconditional right to fixed money income or contractually determined, variable money income.

**Central bank:** is a country's financial institution that exercises control over key aspects of the financial system. It carries out activities such as issuing currency, managing international reserves, transacting with the International Monetary Fund, and providing credit to deposit-taking corporations.

**Commitments of public and publicly guaranteed debt:** constitute the total amount of new long-term loans to public sector borrowers or borrowers with a public sector guarantee extended by official and private lenders and for which contracts were signed in the year specified.

**Common Framework:** for debt treatment beyond the Debt Service Suspension Initiative is an initiative launched in 2022 and endorsed by the

**Group of Twenty:** It is designed to support, in a structural manner, low-income countries with unsustainable debt.

**Concessional debt:** conveys information about the borrower's receipt of aid from official lenders at concessional terms as defined by the World Bank, that is, loans with an original grant element of 35 percent or more. Loans from major regional development banks—the African Development Bank, Asian Development Bank, and Inter-American Development Bank—are classified as concessional according to World Bank classification.

**Debt-for-climate swaps:** are agreements that convert debts into commitments related to climate adaptation or conservation measures.

**Debt buyback:** is the repurchase by a debtor of its own debt, either at a discount price or at par value. In the event of a buyback of long-term debt, the face value of the debt bought back will be recorded as a decline in stock outstanding of long-term debt, and the cash amount received by creditors will be recorded as a principal repayment.

**Debt distress:** as defined under the debt sustainability framework, is caused by unsustainable debt, wherein a country is unable to fulfill its financial obligations and debt restructuring is required.

**Debt restructurings:** are revisions to debt service obligations agreed on by creditors and debtors. Such agreements change the amount and timing of

future principal and interest payments. Debt restructuring is a complex process that requires the agreement of domestic and foreign creditors and involves burden sharing between different parties (for example, between residents and banks in most domestic restructurings).

**Debt service:** is the sum of principal repayments and interest paid on total long-term debt (public and publicly guaranteed debt and private nonguaranteed debt).

**Debt Service Suspension Initiative (DSSI)** : took effect on May 1, 2020, and allowed 73 eligible countries to apply for a temporary suspension of debt service payments owed to official bilateral creditors. The suspension period, originally set to end on December 31, 2020, was extended through December 2021.

**Debt sustainability:** is the condition under which a country (or its government) does not, in the future, need to default or renegotiate or restructure its debt, or make implausibly large policy adjustments.

**Debt swap (conversion)** : is an exchange of debt-typically at a discount-for a nondebt claim (such as equity) or for counterpart funds that can be used to finance a particular project or policy. In essence, public sector debt is extinguished and a nondebt liability created in a debt conversion.

**Debt transparency:** results in readily available data on public debt, allowing governments to make informed decisions about macroeconomic policy and debt sustainability.

**Disbursements:** are drawings during the year specified on loan commitments contracted by the borrower.

**Eurobond:** is a type of bond issued by governments or corporations outside of their home country and is denominated in a currency different from that of the issuer. Eurobonds are typically long-term debt instruments and are commonly denominated in US dollars. They can also be denominated in other currencies such as the euro, pound, Japanese yen, and Swiss franc.

**External debt flows:** are debt-related transactions during the year specified. They include disbursements, principal repayments, and interest payments.

**External debt stocks:** comprise public and publicly guaranteed long-term external debt, private nonguaranteed long-term external debt, use of International Monetary Fund credit and special drawing rights allocation, and short-term external debt.

**Debt stock to exports:** is the ratio of outstanding external debt to the value of exports of goods and services and receipts of primary income from abroad.

**Debt-to-GNI:** ratio is the ratio of outstanding external debt to gross national income (GNI).

**Fiscal sustainability:** refers to the future implications of current fiscal policies and, more precisely, to the question of whether the government can continue to pursue its set of budgetary policies without endangering its solvency.

**Foreign direct investment (FDI) :** refers to direct investment equity flows in the reporting economy. It is the sum of equity capital, reinvestment earnings, and other capital. Direct investment is a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy. Ownership of 10 percent or more of the ordinary shares or voting stock is the criterion for determining the existence of a direct investment relationship.

**Grace period:** is the time between the date on which a loan is committed and the date on which the first principal payment is due. The information presented in the International Debt Statistics database is the average grace period on all public and publicly guaranteed debt committed during the specified period.

**Grants:** are legally binding commitments that obligate a specific value of funds available for disbursement for which there is no payment requirement. They include debt forgiveness grants and grants from bilateral and multilateral agencies (such as the International Development Association).

**Green bonds:** are bonds that finance green projects and provide investors with regular or fixed income payments.

**Gross national income (GNI) :** is the sum of value added by all resident producers, plus any product taxes (less subsidies) not included in the valuation of output, plus net receipts of primary income compensation of employees and property income from abroad. Yearly average exchange rates are used to convert GNI from local currency to US dollars.

**The Group of Seven (G-7) :** is the collection of seven industrialized countries— Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States—that meets annually to discuss issues such as global economic governance, international security, and, most recently, artificial intelligence.

**The Group of Twenty (G-20) :** is the collection of 19 of the world's largest economies-Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, the Republic of Korea, Mexico, the Russian Federation, Saudi Arabia, South Africa, Türkiye, the United Kingdom, and the United States, and two regional bodies-the African Union and

European Union-established to discuss international economic and financial stability.

**Heavily Indebted Poor Country (HIPC):** Initiative is a program of the World Bank and the International Monetary Fund to provide debt relief to qualifying countries with unsustainable debt burdens.

**IDA-eligible countries:** are the countries that are eligible to receive International Development Association (IDA) resources. Eligibility for IDA support depends on a country's relative poverty, defined as gross national income per capita below an established threshold, which is updated annually.

**Imports of goods, services, and primary income:** constitute the total value of goods and services imported and income payable to nonresidents.

**Inflation:** is the rate of increase in prices over a given period in an economy.

**Interest payments:** are the amounts of interest paid in foreign currency, goods, or services in the year specified.

**Interest payment-to-GNI:** ratio is the ratio of interest payment to gross national income (GNI).

**Interest rate:** is the interest rate applicable to a loan commitment as specified in the loan contract. The information presented in the International Debt Statistics database is the average interest on all public and publicly guaranteed debt committed during the specified period.

**International reserves:** constitute the sum of a country's monetary authority's holdings of special drawing rights, its reserve position in the International Monetary Fund, its holdings of foreign exchange, and its holdings of gold (valued at year-end London prices).

**Lender of last resort:** is an institution, often a multilateral creditor or a country's central bank, that offers loans to banks or other eligible institutions that are experiencing financial difficulty or are considered highly risky or near collapse. Loans from such lenders can happen in periods of financial turmoil, when banks may have doubts about lending to each other and depositors may suddenly seek to withdraw their money from their bank account.

**Long-term external debt:** is debt that has an original or extended maturity of more than one year and that is owed to nonresidents by residents of an economy and is repayable in currency, goods, or services.

**Maturity:** is the date on which the final principal repayment on a loan is due. It is the sum of the grace and repayment periods. The information

presented in the International Debt Statistics database is the average maturity on all public and publicly guaranteed debt committed during the specified period.

**Monetary policy:** is used by central banks to manage economic fluctuations and achieve price stability with low and stable inflation. Central banks conduct monetary policy by adjusting the supply of money, usually through buying or selling securities in the open market. When central banks lower interest rates, monetary policy is easing. When they raise interest rates, monetary policy is tightening.

**Multilateral Debt Relief Initiative (MDRI):** is a program of the World Bank, the International Monetary Fund, the Inter-American Development Bank, and the African Development Bank that provides additional debt relief to countries that have completed the Heavily Indebted Poor Country Initiative process.

**Multilateral official creditors:** are official agencies owned or governed by more than one country and that provide loan financing. They include international financial institutions such as the World Bank, regional development banks, and other intergovernmental agencies.

**Multilateral to external debt stock:** is the ratio of the stock of debt owed to multilateral creditors to total external debt.

**Net debt flow:** is gross disbursements minus principal payments.

**Net transfers on external debt:** are net flows minus interest payments during the year; negative transfers show net transfers made by the borrower to the creditor during the year.

**Official creditors:** are governments or other bilateral public entities (such as export-import agencies or development agencies) and multilateral financial institutions (such as the World Bank and regional development banks).

**Panda bond:** is a bond denominated in renminbi that is issued by a non-Chinese entity and sold within mainland China.

**Paris Club:** is an informal group of official creditors whose role is to find coordinated and sustainable solutions to the payment difficulties experienced by debtor countries. Paris Club creditors provide appropriate debt treatment as debtor countries undertake reforms to stabilize and restore their macroeconomic and financial situations.

**Portfolio equity:** is the category of international investment that refers to portfolio equity inflows and covers investment in equity securities. Equity securities include shares, stocks, participation, or similar documents (such as US depositary receipts) that usually denote ownership of equity.

**Primary income on FDI:** (foreign direct investment) is payments of direct investment income (debit side) that consist of income on equity (dividends, branch profits, and reinvested earnings) and income on the intercompany debt (interest).

**Principal repayments:** are the amounts of principal (amortization) paid in currency, goods, or services in the year specified with respect to long-term external debt.

**Private creditors:** are bondholders, commercial banks, and other trade-related lenders.

**Private nonguaranteed (PNG) debt:** is debt owed by private sector borrowers to external creditors on loans that do not benefit from a public sector guarantee by the debtor country.

**Public and publicly guaranteed (PPG) debt:** comprises public debt (an external obligation of a public debtor, such as the general government or agency, the central bank, a political subdivision or agency, or an autonomous public body) and publicly guaranteed external debt (an external obligation of a private debtor that is guaranteed for repayment by a public entity).

**Public debt:** is an external obligation of a public debtor, including all levels of government, the central bank, state-owned enterprises, public

corporations, development banks, and any other autonomous public bodies of government.

**Repurchase agreement/loan:** is a transaction in which the borrower temporarily lends a security to the lender for cash with an agreement to buy it back in the future at a predetermined price. Ownership of the security does not change hands in a repurchase transaction. For that reason, these agreements are treated as collateralized loans.

**Samurai bond:** is a corporate bond denominated in yen that is issued by foreign companies in the Japanese market and is subject to Japanese regulations.

**SDR allocations:** are reserve-related liabilities, distributed to member countries in proportion to their quota shares at the International Monetary Fund. The SDR (special drawing right) allocations are included in the gross external debt position and classified as long-term debt.

**Short-term external debt:** has an original maturity of one year or less. Available data permit no distinctions among public, publicly guaranteed, and private nonguaranteed short-term external debt.

**Short-term debt stock to total debt stock:** is the ratio of total short-term debt to total debt stock.

**Sovereign credit ratings:** indicate the capacity and willingness of rated governments to repay commercial debt obligations in full and on time.

**Treasury bonds:** are long-term debt securities with a maturity period of 20 or 30 years. They are considered low-risk and are generally free of risk when held until maturity.

**Variable-rate loans:** are loans for which the interest fluctuates according to changes in market interest rates.

Source: [Publication: International Debt Report 2024](#)

Image: [Pixabay](#)

## 114. Highlights of the Recommendations of the 55th Meeting of the GST Council



- GST Council recommends reduction in GST rate on Fortified Rice Kernel (FRK), classifiable under 1904, to 5%
- GST council also recommends to fully exempt GST on gene therapy
- GST Council recommends exemption of GST on contributions by

general insurance companies from third-party motor vehicle premiums for Motor Vehicle Accident Fund

- GST Council recommends no GST on transaction of vouchers as they are neither supply of goods nor supply of services. The provisions related to vouchers are also being simplified.
- GST Council clarifies that no GST is payable on 'penal charges' levied and collected by banks and NBFCs from borrowers for non-compliance with loan terms
- GST Council recommends reduction of payment of pre-deposit for filing an appeal before the Appellate Authority in respect of an order passed which involves only penalty amount

The GST Council *inter-alia* made the following recommendations relating to changes in GST tax rates, provide relief to individuals, measures for facilitation of trade and measures for streamlining compliances in GST.

### **A. Changes in GST rates of goods**

#### **GOODS**

1. To reduce the GST rate on Fortified Rice Kernel (FRK), classifiable under 1904, to 5%.
2. To exempt GST on gene therapy.

3. To extend IGST exemption to systems, sub-systems, equipment, parts, sub-parts, tools, test equipment, software meant assembly/manufacture of LRSAM system under Notification 19/2019-Customs.
4. To reduce the rate of Compensation Cess to 0.1% on supplies to merchant exporters at par with GST rate on such supplies.
5. To exempt from IGST imports of all equipment and consumable samples by Inspection Team of the International Atomic Energy Agency (IAEA) subject to specified conditions.
6. To extend the concessional 5% GST rate on food inputs of food preparations under HSN 19 or 21 that are supplied for food preparations intended for free distribution to economically weaker sections under a government program subject to the existing conditions.

## SERVICES

1. To bring supply of the sponsorship services provided by the body corporates under Forward Charge Mechanism.
2. To exempt GST on the contributions made by general insurance companies from the third-party motor vehicle premiums collected by them to the Motor Vehicle Accident Fund, constituted under section 164B of the Motor Vehicles Act, 1988. This fund is constituted for

providing compensation/ cashless treatment to the victims of road accidents including hit and run cases.

3. To omit the definition of declared tariff and suitably amend the definition of specified premises (from the services rate and exemption notifications) to link it with actual value of supply of any unit of accommodation provided by the hotel and to make the rate of GST applicable on restaurant services in such hotels, for a given financial year, dependent upon the 'value of supply' of units of accommodation made in the preceding financial year, i.e. 18% with ITC if the 'value of supply' exceeded Rs. 7,500 for any unit of accommodation in the preceding financial year, and 5% without ITC otherwise. Further, to give an option to pay tax on restaurant service in hotels at the rate of 18% with ITC, if the hotel so chooses, by giving a declaration to that effect on or before the beginning of the financial year or on obtaining registration. The above changes to be made effective from 01.04.2025 to avoid any transition difficulties.
4. To exclude taxpayers registered under composition levy scheme from the entry at Sr. No. 5AB introduced vide Notification No. 09/2024-CTR dated 08.10.2024 vide which renting of any commercial/ immovable property (other than residential dwelling) by unregistered person to registered person was brought under reverse charge mechanism. Further, to regularize the period from the date when the notification No. 09/2024-CTR dated 08.10.2024, became

effective i.e. from 10.10.2024 till the date of issuance of the proposed notification on “*as is where is*” basis.

### **Other changes relating to goods and services**

1. To increase the GST rate from 12% to 18 % on sale of all old and used vehicles, including EVs other than those specified at 18% -Sale of old and used petrol vehicles of engine capacity of 1200 cc or more & of length of 4000 mm or more; diesel vehicles of engine capacity of 1500 cc or more & of length of 4000 mm and SUVs.[*Note: GST is applicable only on the Value that represents Margin of the Supplier, that is, the difference between the Purchase price and Selling price (depreciated value if depreciation is claimed) and not on the value of the vehicle. Also, it is not applicable in case of unregistered persons.*]
2. To clarify that Autoclaved Aerated Concrete (ACC) blocks containing more than 50% fly ash content will fall under HS 6815 and attract 12% GST.
3. To clarify that pepper whether fresh green or dried pepper and raisins when supplied by an agriculturist is not liable to GST.
4. To amend the definition of ‘pre-packaged and labelled’ to cover all commodities that are intended for retail sale and containing not more than 25 kg or 25 litre, which are ‘pre-packed’ as defined under the Legal Metrology Act, or a label affixed thereto is required to bear the declarations under the provisions of the Act and rules.

5. To clarify, ready to eat popcorn which is mixed with salt and spices are classifiable under HS 2106 90 99 and attracts 5% GST if supplied as other than pre-packaged and labelled and 12% GST if supplied as pre-packaged and labelled. However, when popcorn is mixed with sugar thereby changing its character to sugar confectionery (e.g. caramel popcorn), it would be classifiable under HS 1704 90 90 and attract 18% GST. It has been decided to regularise the issues for the past on “*as is where is*” basis. (Note: *There is no new imposition of any tax in this regard and is merely a clarification as certain field units were demanding different tax rates on the same. Therefore, it is a clarification being recommended by the GST Council to settle the disputes arising out of interpretation.*)

6. To clarify that the Explanation in Sl. No. 52B in notification No. 1/2017-Compensation Cess (Rate) dated 28.6.2017 regarding ground clearance is applicable with effect from 26.07.2023.

7. To clarify that RBI regulated Payment Aggregators are eligible for the exemption under entry at Sl. No. 34 of notification No. 12/2017-CT(R) dated 28.06.2017 since they fall within the ambit of ‘acquiring bank’ as defined in the said entry. To also clarify that this exemption does not cover payment gateway (PG) and other fintech services which do not involve settlement of funds.

8. To clarify that no GST is payable on the 'penal charges' levied and collected by banks and NBFCs from borrowers for non-compliance with loan terms.

## **B. MEASURES FOR FACILITATION OF TRADE**

### 1. Amendment in Schedule III of CGST Act, 2017

- To insert clause (aa) in paragraph 8 of Schedule III of the CGST Act, 2017 w.e.f. 01.07.2017, to explicitly provide that supply of goods warehoused in a Special Economic Zone (SEZ) or Free Trade Warehousing Zone (FTWZ) to any person before clearance of such goods for exports or to the Domestic Tariff Area, shall be treated neither as supply of goods nor as supply of services.
- This brings transactions relating to supply of goods warehoused in SEZ/FTWZ at par with the existing provision in GST for transactions in customs bonded warehouses.

### 2. Issues pertaining to taxability of Vouchers

In a significant move to address long-standing concerns regarding the taxability of vouchers under GST, the GST Council made the following recommendations:

- i. To omit sections 12(4) and 13(4) from CGST Act, 2017 and rule 32(6) from CGST Rules, 2017 to resolve ambiguities in the treatment of vouchers.
  - ii. To issue clarification on the following issues:
    - a. Transactions in vouchers shall be treated neither as a supply of goods nor as a supply of services.
    - b. Distribution of vouchers on principal-to-principal basis shall not be subject to GST. However, where vouchers are distributed on principal-to-agent basis, the commission/fee or any other amount charged by the agent for such distribution is taxable under GST.
    - c. Additional services such as advertisement, co-branding, marketing and promotion, customization and technology support, customer support etc. related to vouchers would be eligible to GST on the amount paid for these services.
    - d. Unredeemed vouchers (breakage) would not be considered as supply under GST and no GST is payable on income booked in the accounts in respect of breakage.
3. Issuance of clarifications through the circulars to remove ambiguity and legal disputes in certain issues.

- To issue circulars to provide clarity in the following issues due to varied interpretations by the field formations:
  - i. Clarification regarding requirement of reversal of Input Tax Credit by electronic commerce operators in respect of supplies made under section 9(5) of CGST Act, 2017: The GST Council recommended that no proportional reversal of ITC under section 17 (1) or section 17 (2) of CGST Act, 2017 is required to be made by the ECO in respect of supplies for which they are required to pay tax under section 9(5) of CGST Act, 2017.
  - ii. Clarification on availability of Input Tax Credit as per section 16(2)(b) of CGST Act, 2017 in respect of goods which have been delivered by the supplier at his (supplier's) place of business : The GST Council recommended to clarify that in an Ex-Works contract, where goods are delivered by the supplier to the recipient or a transporter at the supplier's place of business, and the property in goods transfers to the recipient at that point, the goods are considered to be "received" by the recipient under section 16(2)(b) of CGST Act, 2017 and the recipient may claim Input Tax Credit (ITC) on such goods, subject to the conditions outlined in Sections 16 and 17 of the CGST Act, 2017.
  - iii. Clarification regarding applicability of late fee for delay in furnishing of FORM GSTR-9C and providing waiver of late fee on delayed furnishing of FORM GSTR-9C for the period from 2017-18 to 2022-23:

- a. The GST Council recommended to clarify through a circular that the late fee under Section 47(2) of the CGST Act, 2017 is leviable for the delay in filing the complete annual return under Section 44 of the CGST Act, 2017, which includes both FORM GSTR-9 (Annual Return) and FORM GSTR-9C (Reconciliation Statement), where applicable.
- b. For the annual returns pertaining to the period 2017-18 to 2022-23, the GST Council also recommended to issue notification under section 128 of CGST Act, 2017 for waiver of the amount of late fee for delayed filing of FORM GSTR-9C, which is in excess of the amount of late fee payable till the date of filing of FORM GSTR-9 for the said financial years, provided the said FORM GSTR-9C is filed on or before 31<sup>st</sup> March 2025.

## **C. MEASURES FOR STREAMLINING COMPLIANCES IN GST**

1. Insertion of new provision for Track and Trace Mechanism
  - To insert an enabling provision in CGST Act, 2017 through Section 148A so as to empower the Government to enforce the Track and Trace Mechanism for specified evasion prone commodities.
  - The system shall be based on a Unique Identification Marking which shall be affixed on the said goods or the packages thereof. This will provide a legal framework for developing such a

system and will help in implementation of mechanism for tracing specified commodities throughout the supply chain.

2. Clarification regarding recording of correct details of name of the State of the un-registered recipient as well as correct declaration of place of supply in respect of supply of 'Online Services'

- To clarify that in respect of supply of 'Online Services' such as supply of online money gaming, OIDAR services, etc. to unregistered recipients, the supplier is required to mandatorily record the name of the State of the unregistered recipient on the tax invoice and such name of State of recipient shall be deemed to be the address on record of the recipient for the purpose of section 12(2)(b) of IGST Act, 2017 read with proviso to rule 46(f) of CGST Rules, 2017

#### **D. OTHER MEASURES PERTAINING TO LAW & PROCEDURE**

1. Amendment in section 17(5)(d) of CGST Act, 2017

- To align the provisions of section 17(5)(d) of CGST Act, 2017 with the intent of the said section, the Council has recommended amending section 17(5)(d) of CGST Act, 2017, to replace the phrase "plant or machinery" with "plant and machinery", retrospectively, with effect from 01.07.2017, so that the said

phrase may be interpreted as per the Explanation at the end of section 17 of CGST Act, 2017.

2. Amendment in section 107 and section 112 of CGST Act, 2017 to provide for payment of pre-deposit for filing an appeal in respect of an order passed which involves only penalty amount.

- To amend the provision to section 107(6) of CGST Act, 2017 providing for payment of pre-deposit at 10% instead of 25 %for filing appeals before Appellate Authority in cases involving only demand of penalty without involving the demand of tax.
- To insert a new provision to section 112(8) of CGST Act, 2017 providing for payment of pre-deposit at 10%for filing appeals before Appellate Tribunal in cases involving only demand of penalty without involving the demand of tax.

3. Amendment in section 2(69) of CGST Act, 2017 to insert an Explanation regarding definitions of Local Fund and Municipal Fund: To amend clause (c) of section 2(69) of CGST Act, 2017 and to insert an Explanation under the same to provide for definitions of the terms 'Local Fund' and 'Municipal Fund' used in the said clause.

4. Amendment in provisions pertaining to Input Services Distributor (ISD) mechanism under CGST Act, 2017 and CGST Rules, 2017

- To amend Section 2(61) and Section 20(1) of the CGST Act, 2017 to explicitly include inter-state RCM transactions under the ISD mechanism by including reference to supplies subject to tax under section 5(3) and 5(4) of IGST Act, 2017 in the said provisions.
- Consequently, to amend section 20(2) of CGST Act, 2017 and rule 39(1A) of the CGST Rules, 2017.
- These amendments in CGST Act, 2017 are to be made effective from 01.04.2025.

5. Provision for grant of Temporary Identification Number by Tax Officers to persons, not liable to be registered otherwise

- To insert new rule 16A in CGST Rules, 2017 to provide for a separate provision for generation of temporary identification number for persons, who are not liable to be registered under CGST Act, 2017 but are required to make any payment as per rule 87(4) of CGST Rules, 2017.
- To amend Rule 87 (4) of CGST Rules, 2017 incorporating a reference to the new Rule and consequential modification of FORM GST REG-12.

6. Amendment in the field 'category of registered person' for taxpayers who opted for composition levy through FORM CMP-02

- To amend sub-rule (1) of rule 19 of CGST Rules, 2017 to include reference to FORM GST CMP-02 in the said rule to allow the taxpayers to modify their "category of registered person" in Table 5 of FORM GST CMP-02 through FORM GST REG-14.

7. Amendment in CGST Act, 2017 and CGST Rules, 2017 in respect of functionality of Invoice Management System (IMS)

- The GST Council recommended inter-alia-
  - i. To amend section 38 of CGST Act, 2017 and rule 60 of CGST Rules, 2017 to provide a legal framework in respect of generation of FORM GSTR-2B based on the action taken by the taxpayers on the Invoice Management System (IMS).
  - ii. To amend section 34(2) of CGST Act, 2017, to specifically provide for the requirement of reversal of input tax credit as is attributable to a credit note, by the recipient, to enable the reduction of output tax liability of the supplier.
  - iii. To insert a new rule 67B in CGST Rules, 2017, to prescribe the manner in which the output tax liability of the supplier shall be adjusted against the credit note issued by him.

- iv. To amend section 39 (1) of CGST Act, 2017 and rule 61 of CGST Rules, 2017 to provide that FORM GSTR-3B of a tax period shall be allowed to be filed only after FORM GSTR-2B of the said tax period is made available on the portal.

#### **E. OTHER MEASURES**

- The GST Council approved the recommendation of the committee of officers suggesting measures for the various issues raised by the States in respect of issues pertaining to IGST settlement and asked the committee to conclude the desired changes by March, 2025.
- The GST Council took note of the procedural rules proposed for the internal functioning of the GSTAT, which would be notified after examination by the Law Committee. This would help in operationalization of the GSTAT.
- The Council also decided to extend the time frame for the Group of Ministers on the restructuring of the GST Compensation till 30<sup>th</sup> June, 2025.
- On the request of the State of Andhra Pradesh the Council recommended that a Group of Ministers be constituted to examine the legal and structural issues, and recommend a

uniform policy on imposition of levy in case of a natural disaster/calamity in the State.

The issue of whether charges collected by municipalities for granting FSI including additional FSI, chargeable to GST on reverse charge basis was brought up in the Council. The matter was deferred for further examination on the behest of the Central Government on the ground that this amount relates to Municipalities or local authority.

*Note: The recommendations of the GST Council have been presented in this release containing major item of decisions in simple language for information of the stakeholders. The same would be given effect through the relevant circulars/ notifications/ law amendments which alone shall have the force of law.*

Reference: [Recommendations of the 55th Meeting of the GST Council](#)

Image: [Pixabay](#)

## 115. Conservation of Forest



### **Legal Framework for Forest and Wildlife Protection**

India protects and manages its forest and wildlife resources through robust legal frameworks such as the Indian Forest Act (1927), Van (Sanrakshan Evam Samvardhan) Adhinyam (1980), Wildlife (Protection) Act (1972), and various State Forest Acts and Tree Preservation Acts. State Governments and Union Territory (UT) Administrations hold the primary responsibility

for implementing these laws. They take necessary actions to safeguard forests and wildlife under these provisions.

Under the Van (Sanrakshan Evam Samvardhan) Adhiniyam (1980), State Governments and UTs must minimize tree felling for developmental projects. They also mandate compensatory plantation to address environmental concerns.

### **Forest Fire Prevention and Management**

The National Action Plan on Forest Fire (2018) outlines measures to prevent forest fires, enhance forest resilience, and train communities in fire prevention and control.

### **Human-Animal Conflict Management**

The Ministry of Environment, Forest, and Climate Change (MoEFCC) issues advisories to States/UTs for managing human-animal conflicts. Key recommendations include:

- Coordinated interdepartmental actions.
- Identification of conflict hot spots.
- Formation of rapid response teams.
- Adherence to Standard Operating Procedures.

- Provision of funds for ex-gratia relief in cases of injury or death.

### **Joint Forest Management and Community Involvement**

In line with the National Forest Policy (1988), the Joint Forest Management (JFM) initiative promotes local community participation in forest management. States and UTs have formed Joint Forest Management Committees (JFMCs) and Eco Development Committees (EDCs) to involve communities in forest and wildlife conservation.

### **Centrally Sponsored Schemes for Conservation**

The Ministry supports forest and wildlife conservation through schemes like:

- Forest Fire Prevention and Management
- Green India Mission
- Nagar Van Yojana
- Development of Wildlife Habitat (DWH)
- Project Elephant and Tiger
- MISHTI (Mangrove Initiative for Shoreline Habitats and Tangible Incomes)

Funding for these schemes comes from CAMPA funds and annual operations plans submitted by States/UTs.

### **Indian Forest Management Standards (2023)**

The Ministry released the Indian Forest Management Standard under the National Working Plan Code (2023). This standard offers a framework with criteria, indicators, and verifiers to monitor sustainable forest management. It supports the Indian Forest and Wood Certification Scheme, addressing challenges faced by small-scale timber producers.

### **Forest Cover Assessment**

The Forest Survey of India (FSI), under the Ministry, assesses India's forest cover biennially. According to the India State of Forest Report (ISFR) 2021, India's total forest cover is 7,13,789 sq. km, or 21.71% of the geographical area. The last three ISFR reports show an increasing trend in forest cover, with a growth of 1,540 sq. km between ISFR 2019 and ISFR 2021.

### **Ek Ped Maa Ke Naam Campaign**

On June 5, 2024, the Hon'ble Prime Minister launched the Ek Ped Maa Ke Naam campaign, drawing parallels between Mother Earth's nurturing and a mother's love. This initiative encourages citizens to plant trees in honor of their mothers and pledge to protect nature.

India's comprehensive legal and policy measures, along with active community involvement and targeted initiatives, underscore its commitment to sustainable forest and wildlife conservation.

***Reference***

Press Information Bureau: [Conservation of forest](#)

Image: [Pixabay](#)

## 116. Decarbonize Existing Buildings

### Decarbonizing Buildings: India's Key Strategies

Decarbonizing buildings involves diverse approaches, from optimizing building components (envelope, structure, materials) to improving services (heating, shelter) and addressing various building types, sizes, and climate zones. The Government of India is actively working to reduce emissions in the building sector, focusing primarily on energy and material demand-side management through innovative design and technology.

### National Mission for Sustainable Habitat (NMSH)

The National Mission for Sustainable Habitat (NMSH), part of the National Action Plan on Climate Change, drives climate change mitigation and adaptation in buildings, waste management, and transportation. NMSH is implemented through four flagship programs:

- AMRUT (Atal Mission on Rejuvenation and Urban Transformation)
- Swachh Bharat Mission
- Smart Cities Mission
- Urban Transport Programme

## Building-Specific Decarbonization Policies

India has introduced several policies to decarbonize buildings, including:

- Energy Conservation Building Code (ECBC): Sets minimum energy performance standards.
- Building Energy Efficiency Programme: Focuses on enhancing energy performance.
- Star Rating System for Commercial Buildings: Recognizes energy-efficient buildings.
- Shunya Labelling Programme: Promotes net-zero energy buildings.
- Eco-Niwas Samhita: Targets energy-efficient residential buildings.
- Standards and Labeling Programme: Encourages the use of efficient appliances.
- UJALA (Affordable LEDs for All): Distributes energy-efficient LED bulbs.
- Pradhan Mantri Ujjwala Yojana: Promotes clean cooking fuels.
- PM Surya Ghar: Muft Bijli Yojana: Boosts solar rooftop adoption in residential households.

## **Guidelines for Sustainable Urban Development**

The Urban and Regional Development Plan Formulation and Implementation (URDPFI) [guidelines](#) include sustainability measures for green buildings, energy-efficient designs, eco-sensitive planning, and renewable energy use. These guidelines align with the Energy Conservation Building Code (ECBC) and encourage reduced greenhouse gas emissions.

The [Model Building Bye-Laws \(MBBL\) 2016](#) offers a framework for incorporating sustainable and eco-friendly practices, such as using local materials suited to geo-climatic conditions.

## **India's Long-Term Low Carbon Development Strategy (LT-LEDS)**

India submitted its LT-LEDS to the UNFCCC, highlighting transitions to low-carbon pathways in seven key sectors. Key building-sector initiatives include:

1. Integrating adaptation measures into urban planning.
2. Enhancing energy and resource efficiency in buildings.
3. Promoting climate-responsive, resilient building designs.
4. Pursuing low-carbon municipal services, focusing on waste and water management.

## Energy Efficiency Through ESCO Models

The Ministry of Power finalized guidelines for Energy Service Companies (ESCOs) to improve energy efficiency in existing buildings. Pilot projects are underway for large-scale ESCO deployment.

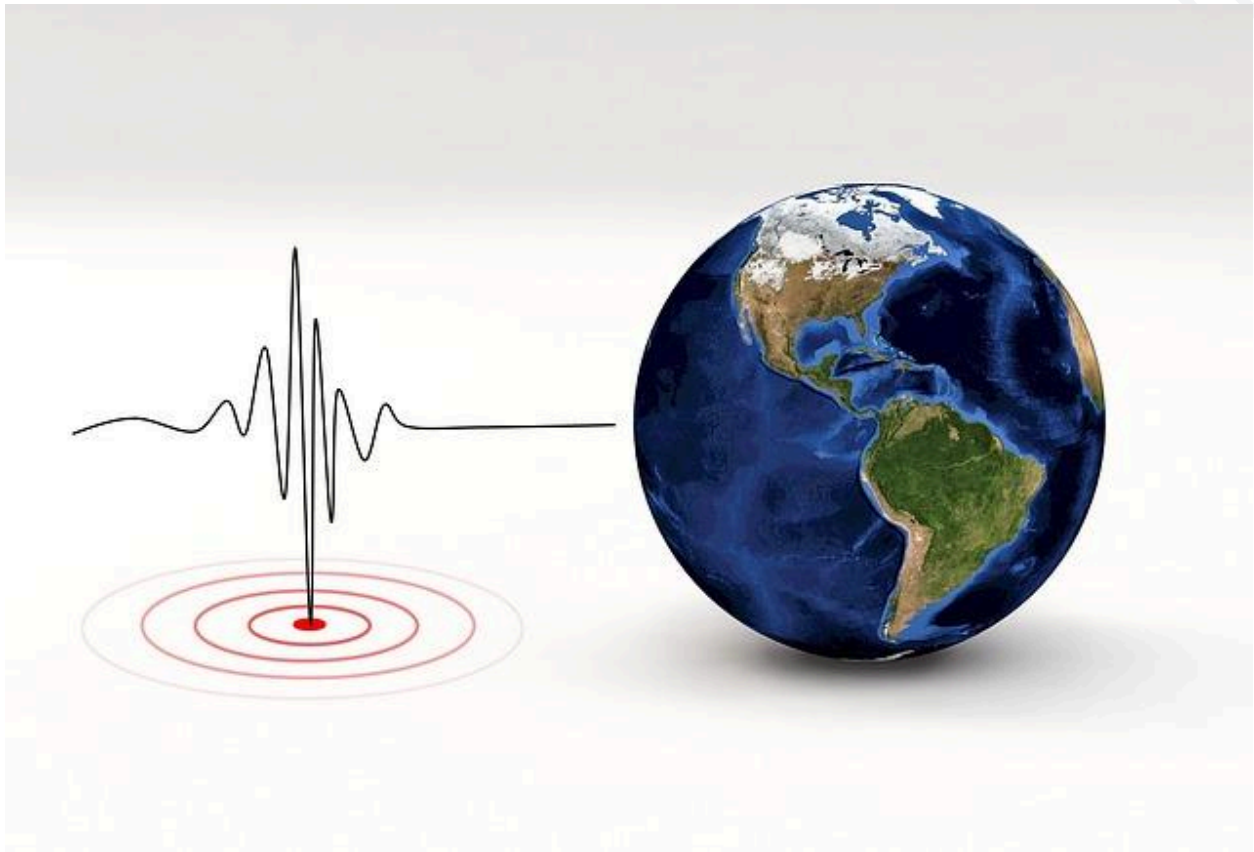
## Technological and Policy Advancements

India continues to prioritize sustainable urbanization by combining technological interventions, such as green building standards, with policy reforms. These initiatives reflect the nation's commitment to reducing emissions while promoting sustainable development.

### *Reference*

Press Information Bureau: [Decarbonize Existing Buildings](#)

## 117. Earthquake Prone Zones Need to be Prepared



The Kangra earthquake of 1905, one of the most devastating in India's history, serves as a poignant reminder of the seismic risks faced by regions in the Himalayan belt, including Himachal Pradesh. The earthquake caused widespread destruction and loss of life and left a lasting impact on the area. It underscored the crucial role of public awareness in earthquake

preparedness, alongside improved infrastructure and effective disaster management strategies, in earthquake-prone zones.

In a significant development, NCS-MoES is set to bolster India's seismological network with the addition of 100 new observatories. These initiatives, primarily focused on enhancing earthquake monitoring, early warning systems, and seismic research, are subject to varying operationalization timelines.

The National Centre for Seismology (NCS), operating under the Ministry of Earth Sciences, is the key agency responsible for monitoring seismic activity across the nation. With a national network of 166 stations, NCS conducts regular studies and maintains seismic networks for earthquake data analysis. It also uses advanced technology to disseminate this information to various stakeholders at national and state levels. The details of earthquakes detected and reported in and around the country by the National Seismological Network are available on NCS's website ([seismo.gov.in](http://seismo.gov.in)).

### ***Reference***

Press Information Bureau: [Need for preparedness in earthquake prone zones](#)

Image: [Pixabay](#)

## 118. Removing Dual Compliance of EC and CTE

### Streamlined Environmental Clearance Process: Key Updates

Under the EIA Notification, 2006, projects listed in its schedule must obtain prior environmental clearance. This ensures environmental impacts are assessed and mitigated before project commencement. Additionally, State Pollution Control Boards (SPCBs) issue Consent to Establish (CTE) and Consent to Operate (CTO) under the Water Act, 1974, and Air Act, 1981.

### Amendments and Industry Exemptions

The Central Government amended Section 21 of the Air Act and Section 25 of the Water Act in November 2024. Key changes include:

- Exemption for White Category Industries: White category industries are fully exempt from the consent process under notifications G.S.R. 702(E) and G.S.R. 703(E).
- Consent Waiver for Certain Projects: Projects with environmental clearance under the Environmental Protection Act, 1986, are exempt from obtaining CTE.

These reforms reduce compliance burdens, eliminate duplicate approvals, and promote Ease of Doing Business. Importantly, the integration of environmental clearance and SPCB conditions ensures no adverse

environmental impacts. SPCBs provide input during environmental appraisals, which are included in clearance conditions.

### **Standard Operating Procedure Issued**

The Ministry issued a Standard Operating Procedure on November 14, 2024, to guide the implementation of these reforms effectively.

### **Technological and Policy Reforms via PARIVESH**

The Ministry has launched PARIVESH 2.0, a platform that leverages technology to streamline the environmental clearance process. Key features include:

- Transparent and accountable governance.
- IT-enabled systems for better accessibility to stakeholders.
- Faster decision-making while ensuring environmental safeguards.

### **Other Key Initiatives**

- Decentralized Project Approvals: Projects related to mining, irrigation, power, and transportation are delegated to State-Level Environment Impact Assessment Authorities.

- Phased Capacity Expansion: Allows production capacity expansion up to 50% without public hearings, subject to environmental safeguards.
- Standard Terms of Reference (ToR): Predefined ToR expedites project appraisals.

These reforms reflect the Ministry's commitment to sustainable development by balancing environmental protection with developmental needs.

***Reference***

Press Information Bureau: [Removing dual compliance of EC and CTE](#)

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*Happiness is not something readymade. It comes from your own actions.*

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## 119. Incubating Greenfield Cities in India



15th Finance Commission (15th FC) has allocated ₹8,000 crore as performance-based challenge fund for incubation of eight new cities. A state can have only one new city through this fund.

In line with the recommendations of 15th FC, the Ministry has constituted an Expert Committee (EC) for finalizing bid parameters for incubation of

new cities. Consequently, the committee has finalized minimum eligibility conditions and bid parameters. Also, it has circulated Request for Proposal (RfP) to all States. The ministry has received 26 proposals from 21 States up to the last date. Due to non-receipt of qualitative proposals from North-Eastern states, it sought fresh/revised proposals. Finally, the ministry has received 28 proposals from 23 States.

All the proposals are at the competent level for examination/scrutiny.

To give impetus to the proposals from North-Eastern (NE)/Hilly states for incubation of new cities, the preferred size of proposed cities is more than 25 hectares. For all other states, the preferred size of proposed cities is more than 50 hectares. The envisaged population of the new city in NE and hilly states is at least 25,000. For all other states, the envisaged population is 1,00,000.

Further, considering the small urban population in NE/hilly States, the ministry has allocated Rs. 500 crore for a city.

*Reference*

Press Information Bureau: [Selection Of Greenfield Cities](#)

## 120. Highlights of the National Biodiversity Strategy and Action Plan in India

India submitted its updated National Biodiversity Strategy and Action Plan (NBSAP) on October 31, 2024, to the Convention on Biological Diversity Portal during CBD COP-16 in Cali, Colombia. The NBSAP aligns with the four goals and 23 targets of the Kunming-Montreal Global Diversity Framework (KMGBF) and tailors implementation to India's national circumstances, priorities, and capabilities.

### Core Objectives and Focus Areas

India's NBSAP emphasizes:

- Conservation of biodiversity: Protecting terrestrial and marine ecosystems.
- Sustainable use of resources: Managing wild species utilization and ecosystem services.
- Restoration efforts: Reviving degraded ecosystems and controlling pollution and invasive species.
- Urban biodiversity: Expanding green spaces and managing biodiversity in cities.

- Wildlife corridors: Developing pathways to reduce habitat fragmentation.
- Community involvement: Promoting active participation in biodiversity governance for inclusive and sustainable outcomes.

### **Consultative and Inclusive Approach**

India developed the NBSAP through a comprehensive consultation process involving 23 central ministries, state-level organizations, local communities, and diverse stakeholders. This approach ensures representation from women, youth, marginalized groups, and vulnerable communities. By decentralizing responsibilities and fostering intergenerational equity, the plan incorporates a “Whole-of-Government” and “Whole-of-Society” framework.

### **Strategic Insights**

The NBSAP highlights India’s biodiversity conservation achievements, identifies gaps and threats, and outlines strategies with actionable goals. It provides a detailed overview of the current biodiversity status, trends, existing policies, and institutional frameworks. Additionally, the plan explores biodiversity financing options and expenditure strategies.

## **Commitment to Sustainability**

India's updated NBSAP reaffirms its commitment to protecting biodiversity through inclusive governance, innovative solutions, and proactive action. By integrating stakeholder participation and equitable resource management, the plan sets a roadmap for achieving the KMGBF targets and securing a sustainable future.

This strategic document reflects India's dedication to preserving its rich biodiversity while fostering sustainable development.

### ***Reference***

Press Information Bureau: [National Biodiversity Strategy](#)

## 121. Samarth Udyog Bharat 4.0

The Ministry of Heavy Industries (MHI), under the Scheme for “Enhancement of Competitiveness in the Indian Capital Goods Sector,” has established four Smart Advanced Manufacturing and Rapid Transformation Hub (SAMARTH) Centres. These centres play a crucial role in enhancing the competitiveness of the Indian Capital Goods Sector by fostering innovation, promoting the adoption of Industry 4.0 technologies, and supporting the growth of start-ups and MSMEs. The SAMARTH Centres are located at:

S. No.	SAMARTH Centre	State
1.	IITD-AIA Foundation for Smart Manufacturing, IIT Delhi	Delhi
2.	Centre for Industry 4.0 (C4i4) Lab, Pune	Maharashtra
3.	I-4.0 India @ IISc, Bengaluru	Karnataka
4.	Smart Manufacturing Demo & Development Cell, CMTI, Bengaluru	Karnataka

Further, the Centre for Industry 4.0 (C4i4) Lab Pune, Maharashtra, has approved establishing ten cluster industry 4.0 experience centers across India.

### **The Impact of SAMARTH Centres**

The SAMARTH Centres are playing a crucial role in upskilling the workforce in Industry 4.0 technologies. They achieve this by organizing Awareness Seminars/Workshops and knowledge-sharing events on Industry 4.0, training industries to create awareness about Industry 4.0, and providing consultancy (in areas such as IOT Hardware, Software development, data analytics) and incubation support to start-ups, including MSMEs. This emphasis on upskilling is a reassuring sign for the future of the industry.

### **Reference**

Press Information Bureau: [Samarth Udyog Bharat 4.0](#)

## 122. Tele-Density and Wi-Fi Speed in the Country

The Annexure at the end of this post provides the teledensity in each State as of 30.06.2024. As of 31.05.2024, we have achieved a significant milestone with 99.21 percent of the population covered by mobile networks, and 99.0 percent covered by at least a 3G mobile network. The Wi-Fi speed experienced by subscribers, influenced by various factors such as Wi-Fi network standards, Internet Service Provider (ISP), plan type, technology used, etc., is not calculated State-wise.

Telecom Service Providers (TSPs) provide mobile services in an area based on their techno-commercial viability. The government and the Telecom Service Providers (TSPs) provide mobile coverage for inhabited uncovered villages in a phased manner. Further, the government is implementing various schemes/projects under Digital Bharat Nidhi (erstwhile USOF) for the expansion of telecom connectivity through the installation of mobile towers in rural, remote, and hilly areas of the country, including Odisha.

The details of ongoing DBN projects for the expansion of mobile services in Odisha are as follows:

1. Saturation of 4G mobile services in uncovered villages
2. Left Wing Extremism Phase-II
3. 7287 uncovered villages in Aspirational District

#### 4. Left Wing Extremism Phase-I upgradation project.

In addition, the BharatNet project (earlier known as National Optical Fiber Network), being funded by Digital Bharat Nidhi (DBN), is being implemented in a phased manner to provide broadband connectivity to all Gram Panchayats (GPs) in the country. The Cabinet's approval of the amended BharatNet Programme on 04.08.2023 is a significant step towards the up-gradation of the existing network of BharatNet Phase-I and Phase-II, the creation of the network in balance 42,000 GPs (approx.), Operation and Maintenance for 10 years and utilization at the total cost of Rs. 1,39,579 crores.

The Minister of State for Communications and Rural Development, Dr. Pemmasani Chandra Sekhar, provided this information in a reply to a question in Rajya Sabha on 19 Dec 2024.

**Annexure***State/ UT wise total Tele-Density as on 30th Jun 2024*

S.No.	State/UT	Total Tele-density (%)
1	Andhra Pradesh	84.99
2	Arunachal Pradesh	82.13
3	Assam	74.25
4	Bihar	55.80
5	Chhattisgarh	69.50
6	Goa	160.06
7	Gujarat	91.40
8	Haryana	118.77

9	Himachal Pradesh	119.81
10	Jharkhand	62.62
11	Karnataka	103.99
12	Kerala	120.93
13	Madhya Pradesh	69.37
14	Maharashtra	102.14
15	Manipur	77.04
16	Meghalaya	79.52
17	Mizoram	115.40
18	Nagaland	76.54
19	Odisha	78.05

20	Punjab	111.56
21	Rajasthan	82.66
22	Sikkim	115.48
23	Tamil Nadu	104.29
24	Telangana	111.03
25	Tripura	79.18
26	Uttar Pradesh	70.32
27	Uttarakhand	107.31
28	West Bengal	81.84
Union Territories		
1	Andaman and Nicobar Islands	131.93

2	Chandigarh	161.92
3	Dadra and Nagar Haveli and Daman and Diu	67.91
4	Delhi	185.56
5	Jammu and Kashmir	89.17
6	Ladakh	195.88
7	Lakshadweep	103.51
8	Puducherry	73.55
Total		85.95

Source: TRAI's Quarterly report on Telecom Services performance indicators (Apr-June 2024)

### **Reference**

Press Information Bureau: [Tele-Density and Wi-Fi Speed in the Country](#)

## 123. Key Terms From: India State of Forest Report 2023

### Glossary

*This glossary provides definitions of key technical terms and concepts.*

- **Above-ground biomass (vegetation):** All biomass of living vegetation, both woody and herbaceous, above the soil, including stems, stumps, branches, bark, seeds, and foliage. (*Source - 2006 IPCC Guidelines for National Greenhouse Gas inventories*)
- **Aerial photographs:** A photograph taken from an air-borne platform using a precision camera.
- **Afforestation:** Establishment of forest through planting and/or deliberate seeding on land that, until then, was under a different land use, implies a transformation of land use from non-forest to forest.
- **Agroforestry:** A land use system which integrates trees and shrubs on farm lands and rural landscapes to enhance productivity, profitability, diversity, and ecosystem sustainability. (*Source - National Agroforestry Policy, 2014*)
- **Anthropogenic:** Resulting from or produced by human activities.
- **Bamboo density:** Pure: 151 and more clump/ha for clump forming bamboo or 9001 and more culms / ha for non-clump forming.

- Dense: 51 to 150 clump/ha for clump forming or 3001 to 9000 culms / ha for non-clump forming.
- Scattered: 1 to 50 clump/ha for clump forming or 1 to 3000 culms/ha for non-clump forming.
- Below-ground biomass (vegetation): All biomass of live roots. Fine roots of less than 2 mm diameter are excluded because these often cannot be distinguished empirically from soil organic matter or litter. (*Source - 2006 IPCC Guidelines for National Greenhouse Gas inventories*)
- Biodiversity: Biodiversity, or, "Biological diversity" means the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems. (*Source - Convention on Biological Diversity*)
- Biomass: Biomass is the organic material that comes from plants or animals. Biomass can be above- ground, or below-ground, as defined above.
- Biomass equations: Biomass equations are the regression equations which are mathematical functions that relate biomass per tree as a function of a single or a combination of tree dimensions such as dbh, tree height, etc.
- Biotic influences: Any influence of living organisms. Usually restricted to the influence of animals including man. Usually in

forests, the biotic influences could include grazing, browsing, man-made fire, pollarding, illicit felling, and lopping.

- Block (of trees): Patch of trees outside RFA, of size 0.1 ha or more.
- Canopy: The cover of branches and foliage formed by the crown of trees.
- Canopy density: Percent area of land covered by canopy of trees. It is expressed as a decimal coefficient, taking closed canopy as unity.
- Carbon dioxide (CO<sub>2</sub>) equivalent (eq.): It is a metric measure used to compare the emissions from various greenhouse gases based on their global-warming potential, by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential.
- Carbon pools: Carbon pools are major components of an ecosystem that can either accumulate or release carbon.
- Carbon sequestration: It is a natural or artificial process by which carbon dioxide is removed from the atmosphere and held in solid or liquid form.
- Carbon stock: Carbon in all living and non-living biomass including Above Ground Biomass, Below Ground Biomass, Deadwood, Litter, and Soil carbon
- Change matrix: It presents change in land use/forest cover classes for a given area during the period of two consecutive assessments in a

tabular form by showing the changes of area from one class to another.

- **Climate change:** Climate change means a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods. (*Source - UNFCCC*)
- **Coral reefs:** Corals are colonial marine invertebrates. A coral reef is an underwater ecosystem characterised by structure-building stony corals.
- **Correlation:** The correlation between two variables is the degree of association between two variables. This degree of association is expressed by a single value called a correlation coefficient ( $r$ ), which can take values ranging between -1 and +1.
- **Crop composition:** It refers to the type of species or group of species, which are contained in a forest. According to crop composition, forest can be either pure or mixed.
- **Culturable Non Forest Area:** It is the net geographical area, lying outside recorded forest, which can support tree vegetation (thus, excluding areas under waterbodies, riverbeds, perennial snow covered mountains, Alpine pastures, Sand dunes etc.). CNFA is the area over which the sample data on TOF is aggregated for the assessment.

- **Dead wood:** All non-living woody biomass not contained in the litter, either standing, lying on the ground, or in the soil. Dead wood includes wood lying on the surface, dead roots, and stumps larger than or equal to 5 cm in diameter. (Source - 2006 IPCC Guidelines for National Greenhouse Gas inventories)
- **Decomposition:** It is the process by which dead organic materials are broken down into simpler organic or inorganic substances such as carbon dioxide, water, simple sugars, and minerals.
- **Deforestation:** The conversion of forest to other land use independently whether human-induced or not. It includes areas of forest converted to agriculture, pasture, water reservoirs, mining, and urban areas. (Source - GFRA, 2020)
- **Desertification:** Land degradation in arid, semi-arid, and dry sub-humid areas resulting from various factors, including climatic variations and human activities. (Source - [https://catalogue.unccd.int/1195 Desertification.pdf](https://catalogue.unccd.int/1195/Desertification.pdf), 26.07.2024)
- **Ecological restoration:** Ecological (Ecosystem) restoration means assisting in the recovery of ecosystems that have been degraded or destroyed, as well as conserving the ecosystems that are still intact. (Source - [www.decadeonrestoration.org](http://www.decadeonrestoration.org) - What is Ecosystem Restoration? | UN Decade on Restoration, 26.07.2024)

- Edaphic factors: A condition of the soil, whether physical, biological or chemical, that influences the organisms and processes that occur in the soil.
- Emission: The release of greenhouse gases and/or their precursors into the atmosphere over a specified area and period of time. (*UNFCCC Article 1.4*) (Source - 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories - Glossary)
- Emission factor: A coefficient that quantifies the emissions or removals of a gas per unit activity. Emission factors are often based on a sample of measurement data, averaged to develop a representative rate of emission for a given activity level under a given set of operating conditions. (Source - 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories - Glossary)
- Exotic species: Exotic species are organisms that have been introduced into an area outside their normal distribution.
  
- Forest area: The area recorded as a forest in the Government records. It is also referred to as "Recorded Forest Area".
- Forest Cover: All lands, more than or equal to one hectare in area, with a tree canopy of more than or equal to 10%, irrespective of ownership and legal status; and includes orchards, bamboo, and palm

- Forest ecosystem: A forest ecosystem is a dynamic complex of plant, animal and micro-organism communities and their abiotic environment interacting as a functional unit, where trees are a key component of the system. Humans, with their cultural, economic and environmental needs, are an integral part of many forest ecosystems.
- Forest health: From the Utilitarian standpoint, forest health is defined as the production of forest conditions which directly satisfy human needs. From an Ecosystem standpoint, it is defined by resilience, recurrence, perseverance, and biophysical processes which lead to sustainable ecological conditions (Kolb et al., 1994) (*detailed citation may be seen under chapter 8*)
- Forest Inventory: Forest inventory is the systematic collection of data on the forestry resources within a given area. It allows assessment of the current status and lays the ground for analysis and planning, constituting the basis for sustainable forest management. (*Source - fao.org/sustainable-forest-management/toolbox/modules/forest-inventory/basic-knowledge/en/?type=111, 26.07.2024*)
- Forest management: A system of practices for stewardship and use of forestland aimed at fulfilling relevant ecological (including biological diversity), economic and social functions of the forest in a sustainable manner.
- Forest phenology: The science that deals with the time of appearance of characteristic periodic events, such as leaf shedding, etc., in the life

cycle of organisms in nature; especially as those events are influenced by environmental factors. (Source - *Glossary of Technical Terms, FRI&C, Dehradun, 1983*)

- Forest productivity: Forest productivity refers to the total biomass of the given forest area at a specific time, per unit area.
- Forest resources: Forest resources encompass all the assets and elements derived from forests, including timber, non-timber products, biodiversity, clean water, recreational opportunities, and ecosystem services.
- Forest stand: Forest stand is an aggregation of tree or other growth, possessing sufficient uniformity in composition, constitution, age arrangement or structure and to be distinguished from adjacent crops forming a silvicultural unit.
- Geographic Information System: A computer based system for capturing, storing, manipulating, analysing and displaying data, which are spatially referenced to the earth.
- Geospatial technologies: Geospatial technology is an emerging technique to study real earth geographic information using Geographical Information System (GIS), Remote Sensing (RS) and other ground information from various devices and instruments.
- Girdling: The complete removal of a strip of bark (consisting of cork cambium or "phellogen", phloem, cambium and sometimes going

into the xylem) from around the entire circumference of either a branch or trunk of a woody plant.

- Global Forest Resource Assessment: It is led by the Forestry Department of FAO of UN, for an assessment of status and trends of the global forest resources. It contains information on various thematic elements of sustainable forest management and conservation.
- Green wash area: The extent of wooded areas generally shown in light green colour on the Survey of India topographic sheets.
- Greenhouse effect: The greenhouse effect is the process through which heat is trapped near Earth's surface by substances known as 'greenhouse gases.' (Source - <https://science.nasa.gov/climate-change/faq-What-is-the-greenhouse-effect/> - NASA Science, 26.07.2024)
- Greenhouse gas: Gases that have the property of absorbing infrared radiation (net heat energy) emitted from Earth's surface and reradiating it back to Earth's surface, thus contributing to the greenhouse effect. Greenhouse gases consist of carbon dioxide, methane, ozone, nitrous oxide, chlorofluorocarbons, and water vapour. Water vapour, which reacts to temperature changes, is referred to as a 'feedback', because it amplifies the effect of forces that initially caused the warming. (Source - <https://science.nasa.gov/climate-change/faq-What-is-the-greenhouse-effect/> - NASA Science, 26.07.2024)

- Growing stock: The sum (by number or volume) of all the trees growing/living in the forest or a specified part of it.
- Habitat: A physical portion of the environment that is inhabited by an organism or population of organisms. A habitat is characterized by a relative uniformity of the physical environment and fairly close interaction of all the biological species involved.
- Herbs: Herb is a plant with no persistent stem (non-woody) above ground and usually not exceeding 1 meter in height.
- Humus: The decomposed organic matter which remains associated with soil minerals is usually referred to as humus.
- Illicit felling: Any felling of trees done in a state forest, without permission granted by authorized bodies.
- Indicator species: An indicator species is a species or group of species chosen as an indicator of, or proxy for, the state of an ecosystem or of a certain process within that ecosystem.
- Infiltration: Infiltration refers to the entry of water into the soil.
- Invasive species: Species that are non-nature to a particular eco-system and whose introduction and spread causes, or is likely to cause socio-cultural, economic or environmental harm (including forest eco system) or harm to human health.

- Land Use, Land-Use Change and Forestry (LULUCF): Land use, land-use change, and forestry (LULUCF), also referred to as Forestry and other land use (FOLU) or Agriculture, Forestry and Other Land Use (AFOLU), is defined as a greenhouse gas inventory sector that covers emissions and removals of greenhouse gases resulting from direct human-induced land use such as settlements and commercial uses, land-use change, and forestry activities. (*Source: Glossary of Climate Change Acronyms and Terms, UNFCCC, 2006*)
- Landscape: An area of distinct character with significant ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values
- Large forest fire alert: Alert generated when fire is detected in 3 Contiguous Pixels Connected in the Side or Corner, in any geometry
- Linear (patch of trees): Trees on a strip along the road, railway, and canal side having width between 10m to 20m (by and large) and length more than 150m
- Litter: Woody material of trees having diameter <5cm and >2mm, which is not decomposed.
- Lopping: The repeated removal of side branches on a short cycle, leaving just a tuft at the top of the tree.

- Mangroves: Salt tolerant evergreen forest ecosystem found mainly in tropical and subtropical coastal and/or inter-tidal regions.
  - Microclimate: Local climate at or near the Earth's surface.
  - Minimum Mappable Unit (MMU): The MMU is the size of the smallest feature of a class that can be reliably mapped (2mm x 2mm) which corresponds to 1 ha on 1:50,000 scale for LISS III.
  - Moderately Dense Forest: All lands with forest cover having a canopy density between > 40, and less than 70 percent.
- 
- NATCOM: National Communication to UNFCCC
  - Nationally Determined Contribution: NDC articulates commitments by each country to reduce its national emissions and adapt to the impacts of climate change. Countries across the globe adopted this international climate agreement at the UNFCCC Conference of the Parties (COP21) in Paris in December 2015.
  - Natural forest: Natural forests are forests composed of indigenous trees, not planted by man. In other words forests excluding plantations.
  - Natural resources: Assets present in a particular area (below, surface or above) and available for potential use and utilization by its owners. These resources include renewable (reproducible) and non-renewable (non-reproducible, mined) resources, although many

resources can be included in both, depending on region or specific conditions.

- Niche: Niche is the role or job of a species in a habitat. The word niche comes from the French word *nicher*, which means “to nest.” An ecological niche describes how a species interacts with, and lives in, its habitat.
- Nutrient cycling: Biogeochemical cycle, in which inorganic nutrients move through the soil, living organisms, air and water. It refers to the return of nutrients absorbed by plants from the soil, back to the soil.
- Open Forest: Lands with forest cover having a canopy density between >10 and <40 percent.
- Physiographic Division: Physiographic divisions separate the Earth into different areas based on the predominant types of landforms found in each region. As example: Mountain, Plain, Plateau, Desert, Desert, Islands, etc. are different physiographic divisions.
- Plantation: A stand composed primarily of trees established by planting or artificial seeding.
- Protected Area: Protected area means a National Park, a Sanctuary, a Conservation Reserve or a Community Reserve notified under sections 18, 35, 36A and 36C of the Wildlife Protection Act.

- Protected Forests: An area notified under the provisions of the Indian Forest Act or other State Forest Acts, having limited degree of protection. In protected forest, all activities are permitted unless prohibited.
- Ramsar Convention: The Convention on Wetlands (Ramsar, Iran, 1971) is an intergovernmental treaty whose mission is "the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world".
- Recorded Forest Area: Area recorded as forest in Government records.
- Regeneration: The process of replacing old crops with younger generations either naturally or artificially is called regeneration.
- Remote Sensing: Remote sensing is the process of detecting and monitoring the physical characteristics of an area by measuring its reflected and emitted radiation at a distance (typically from satellite or aircraft) (Source - <https://www.usgs.gov/faqs> - What is remote sensing and what is it used for? | U.S. Geological Survey, usgs.gov, 26.07.2024)
- Reserved Forest: An area so constituted under the provisions of the Indian Forest Act or other State Forest Acts, having full degree of protection. In Reserved forests all activities are prohibited unless permitted.

- Rotation period: The planned number of years between the formation or regeneration of a crop and its final felling. In the case of Selection Forest, the average age at which a tree is considered mature for felling. (Source - *Glossary of Technical Terms, FRI&C, 1983*)
- Scattered (trees): Tress not included under Block, or Linear patches
- Scrub: Forest lands having canopy density less than 10 percent, generally with Shrubs interspersed with trees.
- Sedimentation: The entrained soil materials carried in water or air is known as sediment and the process of sediment deposition on the bottom layer is known as sedimentation.
- Shrubs: A woody perennial plant differing from a perennial herb in its persistent and woody stem and less definite form a tree in its low structure and its habit of branching from the base and usually not exceeding 3 meters in height.
- Silviculture: Silviculture is the art and science of controlling the establishment, growth, composition, health, and quality of forests and woodlands to meet the diverse needs and values of landowners and society such as wildlife habitat, timber, water resources, restoration, and recreation on a sustainable basis. (Source - <https://www.fs.usda.gov/forestmanagement/vegetation-management> *Silviculture (usda.gov)*, 26.07.2024)

- Size class: It refers to the average diameter class or girth class of the tree.
- Soil erosion: The displacement of the soil by the action of water or wind. Soil erosion is a major process of land degradation.
- Soil organic carbon: Carbon contained in soil organic matter.
- Soil organic matter: It is the organic component of soil containing small plant residues, small living soil organisms and decomposed organic matter.
- Stratification: Stratification is the division of the area into more homogenous units. The purpose of stratification is to increase precision of estimates.
- Succession: Sequential change in the relative abundances of the dominant species in a community (dominance based on biomass) over a long period.
- Sustainability: A dynamic process that guarantees the persistence of natural and human systems in an equitable manner.
- Sustainable Development Goals (SDGs): It is known as global goals, and are adopted as a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace as well as prosperity by 2030. All United Nations Member States adopted these goals in 2015.

- Terrestrial ecosystem: Ecosystem present on the land including forest ecosystem.
- Tree: A large woody perennial plant having a single well defined stem (bole or trunk) and more or less definite crown. It also includes bamboos, palms, fruit trees, etc., and excludes non- perennial non-woody species like banana and papaya, and tall shrubs or climbers.
- Tree cover: Tree cover comprises all tree patches outside the forest area, which are less than one hectare in extent including all the scattered trees found in the rural and urban settings, and not captured under the forest cover assessment.
- Tree Outside Forests (TOF): It refers to all trees growing outside recorded forest areas irrespective of patch size.
  
- Very Dense Forest: Lands with forest cover having a canopy density of 70 per cent and above.
- Volume equations: Volume equations are the mathematical equations which provide estimates of individual tree volumes based on easily measurable characteristics of trees like tree diameter, height, or others.

- WFS: The Web Feature Service (WFS) is an interface specified by the Open GIS Consortium (OGC) that allows for the exchange of geographic data across the Web. It defines the rules for requesting and retrieving geographic information using the Hyper Text Transmission Protocol (HTTP). WFS offers direct fine-grained access to geographic information at the feature and feature property level. Therefore, WFS describes discovery, query, or data transformation operations in the web platform.
- WMS: A Web Map Service (WMS) defines an interface that allows a client to get maps of geospatial data and gain detailed information on specific features shown on the map, without the facility of editing. A “map” is defined here as a visual representation of geospatial data, not the geospatial data itself.

*Source*

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## 124. Key Terms From the World Intellectual Property Indicators Report 2024

### Glossary

*This glossary provides definitions of key technical terms and concepts. Many are defined generically (for example, “application”), but apply to several or all of the various forms of intellectual property (IP) covered by this report.*

- **Applicant:** An individual or other legal entity that files an application for a patent, utility model, trademark or industrial design. There may be more than one applicant in an application. For the statistics in this publication, the name of the first named applicant is used to determine the origin of the application.
- **Application:** The procedure for requesting IP rights at an office, which then examines the application and decides whether to grant protection. Also refers to a set of documents submitted to an office by the applicant.
- **Application abroad:** For statistical purposes, an application filed by a resident of a given state or jurisdiction with the IP office of another state or jurisdiction. For example, an application filed by an applicant domiciled in France with the Japan Patent Office (JPO) is considered an application abroad from the perspective of France. This differs from a “non-resident application,” which describes an application filed by a resident of a foreign state or jurisdiction from the

perspective of the office receiving the application: the example above would be a non-resident application from the JPO's point of view.

- Application date: The date on which an IP office receives an application that meets the minimum requirements. Also referred to as the filing date.
- Budapest Treaty: Disclosure of an invention is a requirement for granting a patent. Normally, an invention is disclosed by means of a written description. Where an invention involves a microorganism or the use of a microorganism, disclosure is not always possible in writing and can sometimes only be effected by depositing a sample of the microorganism with a specialized institution. To eliminate the need to deposit a microorganism in every country where patent protection is sought, under the Budapest Treaty the deposit of a microorganism with any International Depositary Authority (IDA) is sufficient for the purposes of patent procedure at the national patent offices of all contracting states and at any regional patent office that recognizes the Treaty.
- Certification trademark: Certification marks are usually awarded for compliance with defined standards, but are not confined to any membership. They may instead be used by anyone able to certify that

the products involved meet certain established standards. In many countries, the main difference between collective marks and certification marks is that collective marks may only be used by a specific group of enterprises – for example, members of an association – while certification marks may be used by anybody who complies with the standards defined by the owner of the certification mark.

- Class: May refer to the classes defined in either the Locarno Classification or the Nice Classification. Classes indicate the categories of goods and services (where applicable) for which industrial design or trademark protection is requested. See “Locarno Classification” and “Nice Classification.”
- Class count: The number of classes specified in a trademark application or registration. In the international trademark system, and at certain national and regional offices, an applicant can file a trademark application specifying one or more of the 45 goods and services classes of the Nice Classification. Offices use either a multi-class or a single filing system. For example, the offices of Japan, the Republic of Korea and the United States of America (US), as well as many European IP offices, have multi-class filing systems. On the other hand, the offices of Brazil, Mexico and South Africa follow a single-class filing system, requiring a separate application for each class in which an applicant seeks trademark protection. To capture the differences in application and registration numbers across offices,

it is useful to compare their respective application and registration class counts.

- **Collective trademark:** Collective marks are usually defined as signs that distinguish the geographical origin, material, mode of manufacture or other common characteristics of goods or services of different enterprises using the collective mark. The owner may be either an association of which those enterprises are members or any other entity, including a public institution or a cooperative.
- **Community Plant Variety Office (CPVO) of the European Union (EU):** An EU agency that manages a system of plant variety rights covering all EU member states.
- **Designation:** A request made in an international application or registration by which the applicant/ international registration holder specifies the jurisdiction(s) in which they seek to protect their industrial designs (Hague System) or trademarks (Madrid System).
- **Design count:** The number of designs contained in an industrial design application or registration. Under the Hague System for the International Registration of Industrial Designs, it is possible for an applicant to obtain protection for up to 100 industrial designs for products belonging to one and the same class by filing a single application. Some national or regional IP offices allow applications to contain more than one design for the same product or within the

same class, while others allow only one design per application. In order to capture the differences in application and registration numbers across offices, it is useful to compare their respective application and registration design counts.

- **Equivalent application:** Applications at regional offices are equivalent to multiple applications, one in each of the member states of those offices. To calculate the number of equivalent applications for the Benelux Office for Intellectual Property (BOIP), the Eurasian Patent Organization (EAPO), the African Intellectual Property Organization (OAPI), the Patent Office of the Cooperation Council for the Arab States of the Gulf (GCC Patent Office) and the European Union Intellectual Property Office (EUIPO), each application is multiplied by the corresponding number of member states. For European Patent Office (EPO) and African Regional Intellectual Property Organization (ARIPO) data, each application is counted as one application abroad, if the applicant does not reside in a member state, or as one resident application and one application abroad, if the applicant resides in a member state. The equivalent application concept is used for reporting data by origin.
- **Equivalent grant (registration):** Grants (registrations) at regional offices are equivalent to multiple grants (registrations), one in each of the member states of those offices. To calculate the number of

equivalent grants (registrations) for BOIP, EAPO, the EUIPO, the GCC Patent Office or OAPI, each grant (registration) is multiplied by the corresponding number of member states. For EPO and ARIPO data, each grant is counted as one grant abroad, if the applicant does not reside in a member state, or as one resident grant and one grant abroad, if the applicant resides in a member state. The equivalent grant (registration) concept is used for reporting data by origin.

- European Patent Office (EPO): The EPO is the regional patent office created under the European Patent Convention (EPC), in charge of granting European patents for EPC member states. Under Patent Cooperation Treaty (PCT) procedures, the EPO acts as a receiving office, an International Searching Authority and an International Preliminary Examining Authority.
- European Union Intellectual Property Office (EUIPO): The EUIPO is the office responsible for managing the EU trademark and the registered community design. The validity of these two IP rights extends across the jurisdictions of the 27 EU member states.
- Foreign-oriented patent families: A special subset of patent families that comprises foreign-oriented patent families, this includes only those patent families with at least one filing office that differs from the office of the applicant's country of origin. Some foreign-oriented patent families include only one filing office, because applicants may

choose to file directly with a foreign office. For example, if a Canadian applicant files a patent application directly with the United States Patent and Trademark Office (USPTO) without having first filed at the patent office of Canada, that application will form a foreign-oriented patent family.

- Geographical indication: A geographical indication (GI) is a sign identifying a good as originating in a specific geographical area and possessing a given quality, reputation or other characteristic essentially attributable to that geographical origin. The main function of a GI is to identify goods while informing about a connection between the quality, characteristic or reputation of the good and its territory of origin.
- Grant: A set of exclusive rights legally accorded to the applicant when a patent or utility model is granted or issued.
- Gross domestic product (GDP): The total unduplicated output of economic goods and services produced within a country as measured in monetary terms.
- Hague System: The abbreviated form of the Hague System for the International Registration of Industrial Designs. The System

comprises two international treaties: the Hague Act of 1960 and the Geneva Act of 1999. The Hague System makes it possible for an applicant to register up to 100 industrial designs in multiple jurisdictions by filing a single application with the International Bureau of WIPO. It simplifies multinational registration by reducing the requirement to file separate applications at each IP office. The System also simplifies the subsequent management of the industrial design, since it is possible to record changes or renew a registration through a single procedural step for all designated Hague members.

- **Industrial design:** Industrial designs are applied to a wide variety of industrial products and handicrafts. They refer to the ornamental or aesthetic aspects of a useful article, including compositions of lines or colors or any three-dimensional forms that give a special appearance to a product or handicraft.

The holder of a registered industrial design has exclusive rights against unauthorized copying or imitation of the design by third parties. Industrial design registrations are valid for a limited period. The term of protection is usually 15 years in most jurisdictions. However, differences in legislation exist, notably in China (which provides for a 10-year term from the application date).

- In force: Refers to IP rights that are currently valid or, in the case of trademarks, active. To remain in force, IP protection must be maintained.
- Intellectual property (IP): Refers to creations of the mind: inventions, literary and artistic works, and symbols, names, images and designs used in commerce. IP is divided into two categories: industrial property – which includes patents, utility models, trademarks, industrial designs and geographical indications of source – and copyright, which includes literary and artistic works (such as novels, poems, plays, films), musical works, artistic works (such as drawings, paintings, photographs and sculptures) and architectural designs. Rights related to copyright include those of performing artists in their performances, those of producers of sound recordings in their recordings and those of broadcasters in their radio and television programs.
- International Depositary Authority (IDA): A scientific institution – typically a culture collection – capable of storing microorganisms that has acquired the status of an International Depositary Authority under the Budapest Treaty and provides for the receipt, acceptance and storage of microorganisms and the furnishing of samples thereof. As of September 2024, 51 such authorities were in existence around the world.
- International Patent Classification (IPC): An internationally recognized patent classification system, the IPC has a hierarchical

structure of language-independent symbols and is divided into sections, classes, sub-classes and groups. IPC symbols are assigned according to the technical features in patent applications. A patent application that relates to multiple technical features can be assigned several IPC symbols.

- International Union for the Protection of New Varieties of Plants (UPOV): An intergovernmental organization established by the International Convention for the Protection of New Varieties of Plants (the UPOV Convention) that was adopted on December 2, 1961. UPOV provides and promotes an effective system of plant variety protection aimed at encouraging the development of new varieties of plants for the benefit of society.
- Invention: A new solution to a technical problem. To qualify for patent protection, the invention must be novel, involve an inventive step and be industrially applicable, as judged by a person skilled in the art.
- Lisbon System: The Lisbon System was established in 1958 and revised first in 1967 and then again in 2015 in order to facilitate the international protection of appellations of origin and geographical indications through a single registration procedure. Registration with the WIPO International Bureau ensures protection in all Lisbon contracting parties, without the need for renewal and for as long as

the appellation of origin or the GI remains protected in its contracting party of origin. However, the decision on whether to protect a newly registered appellation of origin or GI at the national or regional level remains the prerogative of each contracting party, and each Lisbon member can refuse protection based on any ground foreseen at national or regional level within one year of being notified of a new appellation of origin or GI by the WIPO International Bureau. The Lisbon System is flexible with regard to the means by which countries may provide protection at national or regional level for their appellations of origin or GIs (e.g., sui generis systems, trademark laws or specific ad hoc decrees, as well as judicial and administrative decisions).

- **Locarno Classification:** The abbreviated form of the International Classification for Industrial Designs under the Locarno Agreement used for registering industrial designs. The Locarno Classification consists of 32 classes and their respective subclasses with explanatory notes, plus an alphabetical list of the goods in which industrial designs are incorporated and an indication of the classes and subclasses into which they fall.
- **Madrid System:** An abbreviation describing the system for the international registration of trademarks, originally established by the Madrid Agreement Concerning the International Registration of

Marks and later also governed by the Protocol Relating to the Madrid Agreement. Following a decision by the Madrid Union Assembly in October 2016, the Protocol is now the sole governing treaty of the Madrid System. The Madrid System is administered by the International Bureau

- of WIPO.
- Maintenance: An act by the applicant to keep an IP grant/registration valid (in force), primarily by paying the required fee to the IP office of the state or jurisdiction providing protection. That fee is also known as a “maintenance fee.” A trademark can be maintained indefinitely by paying renewal fees; however, patents, utility models and industrial designs can be maintained for only a limited number of years.
- Microorganism deposit: The transmittal of a microorganism to an International Depository Authority (IDA), which receives and accepts it, the storage of such a microorganism by the IDA, or both transmittal and storage.
- National phase under the PCT: The phase that follows the international phase of the PCT procedure and which consists of the entry and processing of the international application in the individual countries or regions in which the applicant seeks protection for an invention.

- National route: Applications for IP protection filed directly with the national office of, or acting for, the relevant state or jurisdiction (see also “Hague route,” “Madrid route” and “PCT route”). The national route is also called the direct route or Paris route.
- Nice Classification: The abbreviated form of the International Classification of Goods and Services for the Purposes of Registering Marks, an international classification established under the Nice Agreement. The Nice Classification consists of 45 classes, which are divided into 34 classes for goods and 11 for services. (See “Class.”)
- Non-resident: For statistical purposes, a “non-resident” application refers to an application filed with the IP office of, or acting for, a state or jurisdiction in which the first named applicant in the application is not domiciled. For example, an application filed with the Japan Patent Office ( JPO) by an applicant residing in France is considered to be a non-resident application from the perspective of the JPO. Non-resident applications are sometimes referred to as foreign applications. A non-resident grant or registration is an IP right issued on the basis of a non- resident application.
- Origin (country or region): For statistical purposes, the origin of an application means the country or territory of residence of the first named applicant in the application. In some cases (notably in the

United States of America), the country of origin is determined by the residence of the assignee rather than that of the applicant.

- Paris Convention: The Paris Convention for the Protection of Industrial Property, signed on March 20, 1883, is one of the most important treaties, as it establishes general principles applicable to all IP rights.

It establishes the “right of priority” enabling an IP applicant, when filing an application in countries other than the original country of filing, to claim priority of an earlier application filed up to 12 months previously for patents and utility models, and up to six months previously for trademarks and industrial designs.

- Paris route: An alternative to the Hague, Madrid or PCT routes, the Paris route (also called the direct route or national route) enables individual IP applications to be filed directly with an IP office of a country/territory that is a signatory to the Paris Convention.
- Patent: A set of exclusive rights granted by law to applicants for inventions that are new, non-obvious and commercially applicable. A patent is valid for a limited period (generally 20 years), during which time patent holders can commercially exploit their inventions on an exclusive basis. In return, applicants are obliged to disclose their inventions to the public in a manner that enables others skilled in the

art to replicate the invention. The patent system is designed to encourage innovation by providing innovators with time-limited exclusive legal rights, thus enabling them to appropriate returns from their innovative activity.

- Patent family: Applicants often file patent applications in multiple jurisdictions, meaning some inventions are recorded more than once. To take this into account, WIPO has indicators related to patent families, defined as patent applications interlinked by one or more of: priority claim, Patent Cooperation Treaty national phase entry, continuation, continuation-in-part, internal priority, and addition or division. WIPO's patent family definition includes only those patent families associated with patent applications for inventions and excludes those associated with utility model applications.
- PCT System: The PCT, an international treaty administered by WIPO, facilitates the acquisition of patent rights in a large number of jurisdictions. The PCT System simplifies the process of multiple national patent filings by reducing the requirement to file a separate application in each jurisdiction. However, the decision on whether to grant patent rights remains the prerogative of national and regional patent offices, and patent rights remain limited to the jurisdiction of the patent granting authority. The PCT application process starts with the international phase, during which an international search and, possibly, a preliminary examination are performed, and concludes with the national phase, during which a national or

regional patent office decides on the patentability of an invention according to national law.

- Pending patent application: In general, this refers to a patent application filed with a patent office for which a patent has yet to be either granted or refused, and for which the application has not been withdrawn. In jurisdictions where a request for examination is required in order to begin the examination process, a pending application may refer to an application for which a request for examination has been received or one for which a patent has neither been granted nor refused, and for which the application has not been withdrawn.
- Plant Patent Act (PPA) of the United States of America: Under the law commonly known as the “Plant Patent Act,” whoever invents or discovers and asexually reproduces any distinct and new variety of plant, including cultivated sports, mutants, hybrids and newly-found seedlings, other than a tuber-propagated plant or a plant found in an uncultivated state, may obtain a patent therefor.
- Plant variety: According to the UPOV Convention, plant variety means a plant grouping within a single botanical taxon of the lowest known rank which, regardless of whether the conditions for the granting of a breeder’s right are fully met, can be defined by the expression of the characteristics resulting from a given genotype or combination of genotypes, distinguished from any other plant grouping by the expression of at least one of the said characteristics

and considered as a unit with regard to its suitability for being propagated unchanged.

- Plant Variety Protection Act (PVPA) of the United States of America: Under the PVPA, the United States of America protects all sexually reproduced plant varieties and tuber-propagated plant varieties, excluding fungi and bacteria.
- Plant variety title: Under the UPOV Convention, the breeder's right is granted (title of protection is issued) only when the variety is new, distinct, uniform, stable and has a suitable denomination.
- Prior art: All information disclosed to the public about an invention, in any form, before a given date. Information on prior art can assist in determining whether the claimed invention is new and involves an inventive step (i.e., is non-obvious) for the purposes of international searches and international preliminary examination.
- Priority date: The filing date of the application on the basis of which priority is claimed. (See "Paris Convention.")
- Publication date: The date on which an IP application is disclosed to the public. On that date, the subject matter of the application becomes prior art.
- Regional application/grant (registration): An application filed with or granted (registered) by an IP office having regional jurisdiction over more than one country. There are currently seven regional offices: the

African Intellectual Property Organization (OAPI), the African Regional Intellectual Property Organization (ARIPO), the Benelux Office for Intellectual Property (BOIP), the Eurasian Patent Organization (EAPO), the European Patent Office (EPO), the European Union Intellectual Property Office (EUIPO) and the Patent Office of the Cooperation Council for the Arab States of the Gulf (GCC Patent Office).

- Registered Community Design: A registration issued by the EUIPO based on a single application filed directly with the office by an applicant seeking protection within the EU as a whole.
- Registration: An exclusive set of rights legally accorded to the applicant when an industrial design or trademark is registered or issued. See “Industrial design” or “Trademark.” Registrations are issued to applicants allowing them to make use of and exploit their industrial designs or trademarks for a limited period of time and can, in some cases (particularly in the case of trademarks), be renewed indefinitely.
- Renewal: The process by which the protection of an IP right is maintained (kept in force). This usually consists of paying renewal fees to an IP office at regular intervals. If renewal fees are not paid, the registration may lapse. See also “Maintenance.”
- Resident: For statistical purposes, a resident application refers to an application filed with the IP office of, or acting for, the state or jurisdiction in which the first named applicant in the application is

resident. For example, an application filed with the Japan Patent Office (JPO) by a resident of Japan is considered a resident application from the perspective of the JPO. Resident applications are sometimes referred to as “domestic applications.” A resident grant/registration is an IP right issued on the basis of a resident application.

- **Trademark:** A sign used to distinguish the goods or services of one undertaking from those of another. A trademark may consist of words and combinations of words (for instance, names or slogans), logos, figures and images, letters, numbers, sounds, or, in rare instances, smells or moving images, or a combination thereof. The procedures for registering trademarks are governed by the legislation and procedures of national and regional IP offices and WIPO. Trademark rights are limited to the jurisdiction of the IP office that registers the trademark. Trademarks can be registered by filing an application at the relevant national or regional office(s), or by filing an international application through the Madrid System.
- **Utility model:** A special form of patent right granted by a state or jurisdiction to an inventor or the inventor’s assignee for a fixed period of time. The terms and conditions for granting a utility model

are slightly different from those for normal patents (including a shorter term of protection and less stringent patentability requirements). The term “utility model” can also describe what are known in certain countries as “petty patents,” “short-term patents” or “innovation patents.”

- World Intellectual Property Organization (WIPO): A United Nations specialized agency dedicated to the promotion of innovation and creativity for the economic, social and cultural development of all countries through a balanced and effective international IP system. WIPO was established in 1967 with a mandate to promote the protection of IP throughout the world through cooperation between states and in collaboration with other international organizations.

Source:

[World Intellectual Property Indicators 2024](#)

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*The season of giving is upon us, and there's no better time to show love and gratitude.*

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## 125. IP Systems at a Glance from the World Intellectual Property Indicators Report 2024

### The Patent System

A patent is a set of exclusive rights granted in law to applicants for an invention that meets the standards of novelty, non-obviousness and industrial applicability. It is valid for a limited period (generally 20 years), during which time the patent holder may commercially exploit the invention on an exclusive basis. In return, applicants are obliged to disclose their inventions to the public, so that they may be replicated by others skilled in the art. The patent system is designed to encourage innovation by providing innovators with time-limited exclusive legal rights, thus enabling them to appropriate returns from their innovative activity.

The procedures for acquiring patent rights are governed by the rules and regulations of national and regional patent offices. These offices are responsible for issuing patents and rights limited to the jurisdiction of the issuing authority. To obtain patent rights, applicants must file an application describing the invention with a national or regional office.

Applicants can also file an international application through the Patent Cooperation Treaty (PCT) System, an international treaty administered by WIPO that facilitates the acquisition of patent rights in multiple jurisdictions. The PCT System simplifies the process of multiple national

patent filings by delaying the requirement to file a separate application in every jurisdiction in which protection is sought. However, the decision on whether to grant a patent remains the prerogative of national or regional patent offices and patent rights limited to the jurisdiction of each patent granting authority.

The PCT application process begins with the international phase, during which an international search and optional preliminary examination and supplementary international search are performed. It concludes with the national phase, during which national (or regional) patent offices decide on the patentability of an invention according to national law. Further information about the PCT System is available at [www.wipo.int/pct](http://www.wipo.int/pct).

### **The Utility Model System**

Like a patent, a utility model (UM) confers a set of rights to an invention for a limited period, during which time the UM rights holder can commercially exploit their invention on an exclusive basis. The terms and conditions for granting a UM differ from those for granting a traditional patent. For example, UMs are issued for a shorter period (6–10 years) and at most offices protection is granted without substantive examination. As with patents, procedures for granting UM rights are governed by the rules and regulations of national IP offices and rights limited to the jurisdiction of the issuing authority. In this report, the term “utility model” refers to

UMs and other types of protection similar to UMs, such as short-term patents in the Republic of Ireland.

### **Microorganism Under the Budapest Treaty**

The Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure plays an important role in relation to biotechnological inventions. Disclosing an invention is a generally recognized requirement for receiving a patent. When an invention involves microorganisms, national laws in most countries require the applicant to deposit a sample at a designated International Depository Authority (IDA).

To eliminate the need to deposit a microorganism in every country where patent protection is sought, under the Budapest Treaty the deposit of a microorganism with any IDA is sufficient for the purposes of patent procedures at the national patent offices of all contracting states and at any regional patent office that recognizes the Treaty. An IDA is a scientific institution – typically a “culture collection” – capable of storing microorganisms. As of September 2024, there were 51 IDAs around the world. Further information about the Budapest Treaty is available at [www.wipo.int/treaties/en/registration/budapest](http://www.wipo.int/treaties/en/registration/budapest).

## The Trademark System

A trademark is a sign used to distinguish the goods or services of one enterprise from those of another and is protected as an intellectual property (IP) right. Trademarks can be registered for both goods and services. In the latter case, the term “service mark” is sometimes used. For simplicity, this report uses “trademark,” regardless of whether the registration concerns goods or services. The holder of a registered trademark has the exclusive right to use the mark in relation to the goods or services for which it is registered and can block unauthorized use of the trademark, or a confusingly similar mark, to prevent consumers from being misled. Unlike patents, trademark registrations can be maintained indefinitely, provided that the trademark holder pays the required renewal fees.

The procedures for registering trademarks are governed by the legislation and procedures of national and regional IP offices. Therefore, trademark rights are limited to the jurisdiction of the authority that has registered the trademark. Trademark applicants can file an application with a relevant national or regional IP office or an international application through the Madrid System. However, when an applicant files internationally via the Madrid System, the decision to issue a trademark registration remains the prerogative of the national or regional IP office concerned and trademark rights remain limited to the jurisdiction of the authority issuing that registration.

Between December 1995 and October 2016, two treaties administered by the World Intellectual Property Organization (WIPO) governed the Madrid System for the International Registration of Marks – the Madrid Agreement Concerning the International Registration of Marks, adopted in 1891, and the Protocol Relating to the Madrid Agreement, adopted in 1989. As of October 11, 2016, following a decision by the Madrid Union Assembly that no country could accede only to the Agreement, the Protocol is now the sole governing treaty of the Madrid System.

The Madrid System offers many advantages to trademark holders and IP offices compared with the alternative method of obtaining international protection for marks called the Paris route or the direct route. The Paris route involves filing separate applications directly at the IP office in the countries or regions where protection is sought (under the Paris Convention for the Protection of Industrial Property). In contrast, by paying a single set of fees in a single currency (Swiss francs), the Madrid System allows trademark holders to submit a single application in one language (English, French or Spanish) indicating the Madrid members where protection is sought (designations).

The Madrid System also simplifies managing the mark once it has been registered by making it possible to request centrally the recording of further changes or to renew the registration through a single procedural step. A registration recorded in the International Register has the same effect as a registration made directly with every designated Contracting

Party (Madrid member), if the competent authority of that jurisdiction has not issued a refusal within a specified time period. Further information about the Madrid System is available at [www.wipo.int/web/madrid-system](http://www.wipo.int/web/madrid-system).

### **The Industrial Design System**

Industrial designs are applied to a wide variety of industrial products and handicrafts.<sup>1</sup> They refer to the ornamental or aesthetic aspects of a useful article, including compositions of lines or colors or three-dimensional forms that give a special appearance to a product or handicraft. The holder of a registered industrial design has exclusive rights over the design and can prevent unauthorized copying or imitation of the design by others.

The procedures for registering industrial designs are governed by national or regional laws. An industrial design can be protected if it is new or original and rights are limited to the jurisdiction of the issuing authority. Registrations can be obtained by filing an application with a relevant national or regional IP office or by filing an international application through the Hague System. Once a design is registered, the term of protection is generally five years and may be renewed for additional five-year periods up to a total of 15 years, in most cases. In some countries, industrial designs are protected through the delivery of a design patent rather than design registration.

The Hague System comprises two international treaties – the Hague Act and the Geneva Act. The system makes it possible for an applicant to register industrial designs in multiple territories by filing a single application with the International Bureau of WIPO, thus simplifying the multinational registration process. Moreover, by allowing the filing of up to 100 different designs per application, the System offers considerable opportunities for efficiency gains. It also streamlines the subsequent management of industrial design registration, since it is possible to record changes or renew a registration through a single procedure for all territories. Further information about the Hague System is available at [www.wipo.int/web/hague-system](http://www.wipo.int/web/hague-system).

### **Plant Variety Protection**

To obtain protection, a plant breeder must file an individual application with every authority entrusted with granting breeders' rights. A breeder's right is granted only when a variety is new, distinct, uniform and stable, and has a suitable denomination.

In the United States of America (US), two legal frameworks protect new plant varieties: the Plant Patent Act (PPA) and the Plant Variety Protection Act (PVPA). Under the PPA, whoever invents or discovers and asexually reproduces any distinct and new variety of plant – including cultivated sports, mutants, hybrids and newly-found seedlings, other than a tuber-propagated plant (in practice, Irish potato and Jerusalem artichoke)

or a plant found in an uncultivated state – may obtain a patent. Under the PVPA, the United States of America protects all sexually-reproduced plant varieties and tuber-propagated plant varieties, excluding fungi and bacteria.

### **The Geographical Indication System**

A geographical indication (GI) is a sign identifying a good as originating in a specific geographical area and possessing a given quality, reputation or other characteristic essentially attributable to that geographical origin. Thus, the main function of a GI is to indicate a connection between the quality, characteristics or reputation of the good and its territory of origin.

World-renowned examples of GIs include “Café de Colombia” (Colombia), “Bordeaux” (France), “Kampot Pepper” (Cambodia), “Penja Pepper” (Cameroon) and “Scotch Whisky” (United Kingdom).

Geographical indications are mainly used for agricultural and food products, which typically tend to have a close natural link with their place of origin. However, there are many GIs for other kinds of products, whose specific characteristics may derive from traditional manufacturing skills or from a combination of local know-how and natural resources. Examples of GIs for handicraft and manufactured goods include “Bohemia Crystal” (Czech Republic), “Solingen” for cutlery (Germany), “Isfahan Handmade Carpet” (Islamic Republic of Iran) and “Swiss Made” for watches (Switzerland).

Although GIs are commonly names of places, they may also consist of non-geographical terms with a traditional geographical connotation (traditional denominations); for example, “Argane” (Morocco) serves as a GI, although not a geographical name.

Geographical indications can only be used on goods that conform to the applicable requirements concerning the area of origin, processing method and typicity of the product. Goods from production sites located outside the area of origin and goods that do not meet the applicable requirements are prohibited from using the protected indication.

### **Appellations of Origin**

An appellation of origin is a special kind of geographical indication. It generally consists of a geographical name or a traditional denomination that serves to designate a product as originating in a defined geographical area, where the quality or characteristics of the product are due exclusively or essentially to that geographical environment, including natural and human factors, and which have given the good its reputation. The most important difference between appellations of origin and other GIs is that the link with the geographical area should be stronger in the case of an appellation of origin; in other words, appellations of origin are a more restrictive sub-category of GI.

## Protection of GIs

At the national and regional levels, GIs are protected through a variety of legal means. These include sui generis systems – that is, laws specifically designed to protect geographical indications,<sup>2</sup> often based on a registration procedure. Sui generis systems generally provide protection against any direct and indirect commercial use of a GI, as well as against its imitation. Sui generis systems for GI protection are used in many countries and also by two regional intergovernmental organizations: namely, the African Intellectual Property Organization (OAPI) and the European Union (EU).

Geographical indications can also be protected on the basis of trademark law, commonly through the use of collective and certification marks. Because trademarks incorporating geographical terms are typically not recorded by IP offices as a separate category of trademark, and because not all trademarks incorporating geographical terms can be considered to be GIs, it may be difficult to determine the exact number of registered GIs within jurisdictions. It is also worth noting that GI protection via sui generis or trademark systems are not mutually exclusive, but often coexist under many legal frameworks and are available for the benefit of GI holders.

Finally, GIs are typically also protected under unfair competition regulations, consumer protection laws and administrative and judicial

decisions, as well as under specific laws or decrees recognizing individual GIs.

As for other IP rights, the effects of a GI right obtained in a particular jurisdiction are limited to the territory of that jurisdiction. Thus, where a right over a GI is obtained in one jurisdiction, it is protected there but not abroad. In order to obtain protection in a foreign jurisdiction, GI holders must, in principle, seek protection under the relevant national or regional laws of the jurisdiction in question. However, international agreements can facilitate the acquisition of GI rights abroad. In particular, bilateral and regional agreements have incorporated lists of GIs that are to be protected within the jurisdiction of the relevant parties to the agreement. The listed GIs may relate to existing or subsequent GI rights, but protection may also emanate from the trade agreements themselves.

Another way of obtaining protection for GIs abroad is through two international registration systems administered by WIPO: namely, the Lisbon System and the Madrid System.

### **The Lisbon System**

The Lisbon System was established in 1958 to facilitate the international protection of appellations of origin through a single registration procedure.<sup>3</sup> Registration with the WIPO International Bureau ensures protection in all Lisbon contracting parties, without the need for renewal and for as long as the appellation of origin remains protected within its

contracting party of origin. However, the decision as to whether to protect a newly registered appellation of origin at the national or regional level remains the prerogative of each contracting party and each Lisbon member can refuse protection based on any ground foreseen at national or regional level within one year of being notified of a new appellation of origin by the WIPO International Bureau.

Globally-renowned examples of appellations of origin protected under the Lisbon System include “Tequila” for spirits (Mexico), “Chianti” for wines (Italy), “Habanos” for cigars (Cuba) and handicrafts such as “Chulucanas” for ceramics (Peru) and “Herend” for porcelain (Hungary). The scope of the System extends to non-geographical traditional names, such as “Reblochon” for cheese (France) and “Vinho Verde” for wines (Portugal).

In 2015, with the adoption of the Geneva Act of the Lisbon Agreement on Appellations of Origin and Geographical Indications – which entered into force on February 26, 2020 – Lisbon contracting parties modernized the System in order to attract a wider membership, while preserving its principles and objectives. The Geneva Act formally extends the scope of the Lisbon System to the general category of GIs in addition to appellations of origin. The new Act also opened the Lisbon System to accession by intergovernmental organizations, such as the EU and OAPI. It also made the Lisbon System more flexible so as to secure a wider recognition for, and inclusion of, the various means by which countries may protect appellations of origin and GIs at a national or regional level (e.g., sui

generis systems, trademark laws or specific ad hoc decrees, as well as judicial and administrative decisions).

### **Protection of GIs Abroad Through the Madrid System**

Geographical indications can be protected in several countries as trademarks (most commonly collective and certification marks) through the Madrid System, an international registration system legally governed by the Madrid Agreement (1891) and the Madrid Protocol (1989) and administered by WIPO. A famous example of a collective/certification mark registered under the Madrid System is Napa Valley for wines from the United States of America.

*Source*

[World Intellectual Property Indicators 2024](#)

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*"Creativity comes from looking for the unexpected and stepping outside your own experience."*

Ibuka Masaru

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## 126. Zakir Hussain

*In recent context, we lost the eternal Ustad Zakir Hussain at the age of 73 on 15 December 2024 to a condition known as "Idiopathic Pulmonary Fibrosis". It is a chronic lung disease in which the air sacs of the lungs become bruised and fibrous, hampering the ability to exchange oxygen effectively.*



### Introducing Ustad Ji

Zakir Hussain Allahrakha Qureshi (9 March 1951 – 15 December 2024) was a legendary tabla player/maestro and one of India's greatest cultural icons.

He recently passed away at the age of 73 years in the US. He is widely known for taking Indian classical music to the global platform. He was the eldest son of tabla maestro Ustad Allah Rakha. He was popular and earned respect for his rare and incredible speed, capability, and creativity. He won the hearts of audiences all across the globe and across multiple cultures. Thus, he became an iconic and outstanding musician of all time.

### **Ustad Ji's Honors**

Ustad Ji won four Grammys and the United States National Endowment for the Arts National Heritage Fellowship. This award is the highest honor given to traditional artists and musicians. He is the recipient of the esteemed Padma Awards – Padma Vibhushan 2023, Padma Bhushan 2002, Padma Shri 1998, Padma Shri 1988. The Government of India honored him with the 1990 Sangeet Natak Akademi Award.

Consequently, in 2018, he received the Sangeet Natak Akademi Fellowship and Ratna Sadsyata. Ustad Ji had seven Grammy award nominations, with four wins, including three in 2024. The prestigious Guardian newspaper mentioned him as the most recognizable player of the tabla instrument. Also, The New York Times was amazed that the "blur of his fingers rivals the beat of a hummingbird's wings."

He specialized in Hindustani Classical Music, Jazz, and Fusion. He gave his beautiful musical genius to many Bollywood movies, such as Parasmani, Muhafiz, Mr and Mrs Iyer, Parzania, and Manto.

## **Ustad Ji's Early Life and Education**

He was born in present-day Mumbai, Maharashtra, India, on 9 March 1951 to Allah Rakha Qureshi, a tabla maestro. He attended St. Michael's High School in Mahim and graduated from St. Xavier's College in Mumbai. Ustad Ji's works range from playing from George Harrison's 1973 album *Living in the Material World* and John Handy's 1973 *Hardwork* to being a founding member of Bill Laswell's world music supergroup *Tabla Beat Science*. Also, President Obama invited him to the International Jazz Day 2016 All-Star Global Concert at the White House.

## **The Book on Ustad Ji**

Nasreen Munni Kabir compiled 15 interview sessions (each lasting around two hours) from 2016 to 2017 into a book. Finally, in the memorable year of 2018, we got Ustad Ji's biography, "*Zakir Hussain: A Life in Music*." The book takes the reader through Hussain's life, from his youth to his intense training years and growth and development as a musician.

## **Personal Life**

Zakir Hussain married Antonia Minnecola, a Kathak dancer, teacher, and his manager as well. He had two daughters from this marriage, Anisa Qureshi and Isabella Qureshi. Hussain also had two brothers: Taufiq Qureshi, a percussionist, and Fazal Qureshi, a table player.



### **Other Affiliations and Achievements**

The Humanities Council at Princeton University called him an Old Dominion Fellow. He had lived and stayed in Princeton during the 2005 – 2006 semester as a full music department professor, adding another feather to his cap. He was a visiting professor at Stanford University, which is also one of his outstanding achievements.

In May 2022, the reputed University of Mumbai granted him the honorary Doctor of Law degree for his contributions to the area of music.

- BBC said he was one of the world's greatest table players.

- Hon'ble Prime Minister Narendra Modi said he was a true genius who revolutionized the world of Indian classical music.
- Even guitarist John McLaughlin, who performed in collaboration with Hussain in the band Shakti, went on to describe him as the king, in whose hands rhythm became magic.

Indeed, India and the world at large, have lost a rare gem!

*Images : [Wikimedia Commons](#) and [Flickr](#) under Creative Commons License*

## 127. Shyam Benegal: A Giant of Indian Cinema

*Renowned Indian filmmaker Shyam Benegal has passed away at 90 due to chronic kidney disease. Throughout his illustrious career, Benegal directed influential films such as Ankur, Nishant, Manthan, and Bhumika. His contributions earned him numerous accolades, including the prestigious Dadasaheb Phalke Award and 18 National Film Awards.*



### Early Life

Born in Hyderabad on December 14, 1934, Benegal discovered his passion for filmmaking early, creating his first film at age twelve.

He was from a Chitrapur Saraswat Brahmin family that was a Konkani language speaking family. Benegal's father, Sridhar B. Bengal, was an accomplished photographer. At the tender age of twelve, Shyam made his first film utilizing a camera, his father's gift. He went on to earn a Master's in Economics from Osmania University and co-founded the Hyderabad Film Society.

## Professional Career

Benegal began his career as a copywriter and quickly became the creative head at Lintas Advertising in Mumbai. In 1962, he released his first documentary, *Gher Betha Ganga* (Ganges at the Doorstep). Over his advertising career, he directed more than 900 documentaries, gaining recognition for *A Child of the Streets* (1967).

As a teacher at the Film and Television Institute of India (FTII), he nurtured future talent. His debut feature film, *Ankur* (1973), highlighted economic exploitation in Telangana and won the National Film Award for Second Best Feature Film. Other notable works include *Nishant* (1975), *Manthan* (1976), and *Bhumika* (1977), solidifying his reputation in the new wave cinema movement.

In the 1980s, Benegal transitioned to television, directing acclaimed series like *Bharat Ek Khoj* (1988), based on Jawaharlal Nehru's *Discovery of India*. He explored biographical films, including *Satyajit Ray* (1985) and a trilogy on Indian Muslim women: *Mammo* (1994), *Sardari Begum* (1996), and *Zubeidaa* (2001). His later works, such as *Welcome to Sajjanpur* (2008) and the political satire *Well Done Abba* (2010), received positive responses.

Benegal also owned Sahyadri Films and served as the president of the Federation of Film Societies of India. A published author, he wrote three books about his filmmaking process: *The Churning* (1984), *Satyajit Ray* (1988), and *The Marketplace* (1989).

## Benegal's Influence

Shyam Benegal's influence on Indian cinema is profound; he championed realistic storytelling while addressing social issues, thereby paving a path for 'parallel' cinema. His approach has inspired future filmmakers, emphasizing the importance of combining artistic expression with commercial viability.

Benegal leaves behind a legacy of impactful cinema, enriching India's cultural landscape. He is survived by his wife, Nira, and daughter, Pia Benegal, a costume designer. His contributions will continue to inspire and motivate new generations of filmmakers. After Zakir Hussain, the industry has lost another gem with the passing of this cinematic pioneer.

*Image sourced from Wikimedia Commons under Creative Commons License*

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Shyam Benegal's [Bharat Ek Khoj on YouTube](#)

## 128. Survival Strategies of Some of the Primitive Organisms on Earth

### Understanding Archaea

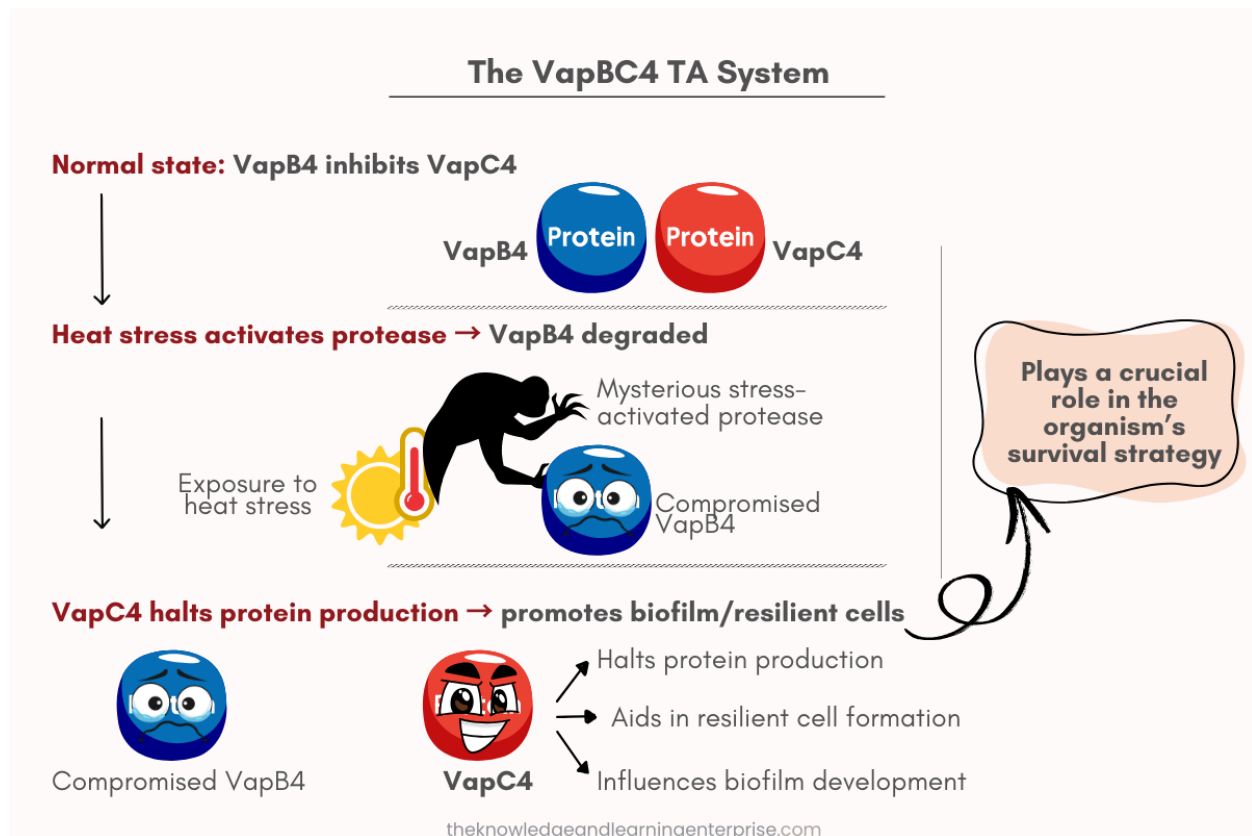
Scientists studying archaea, ancient organisms, have discovered survival strategies that help these microorganisms adapt to harsh conditions using their toxin-antitoxin (TA) systems. As the planet experiences rapid climate change, rising ocean and surface water temperatures make it crucial to understand how these heat-loving organisms thrive in extreme heat.

Archaea, meaning "ancient things" in Greek, are some of Earth's oldest life forms and belong to the third domain of life. These microorganisms often inhabit some of the harshest environments on the planet, making them ideal subjects for studying life's resilience.

### The Research

Dr. Abhrajyoti Ghosh and his team at the Department of Biological Sciences at Bose Institute explored how specific TA systems enable certain archaea to cope with high temperatures. Unlike more complex organisms, archaea use distinct TA systems to withstand stress from environmental factors and other living things. While we recognize the presence of TA systems in many bacteria and archaea, their specific functions in archaea remain unclear.

## The VapBC4 TA System



In a recent study published in the journal *mBio*, Dr. Ghosh and his team identified a novel function of the TA system in a heat-loving archaeon called *Sulfolobus acidocaldarius*. This research investigates how the TA system aids this organism in managing stress, surviving harsh conditions, and forming biofilms.

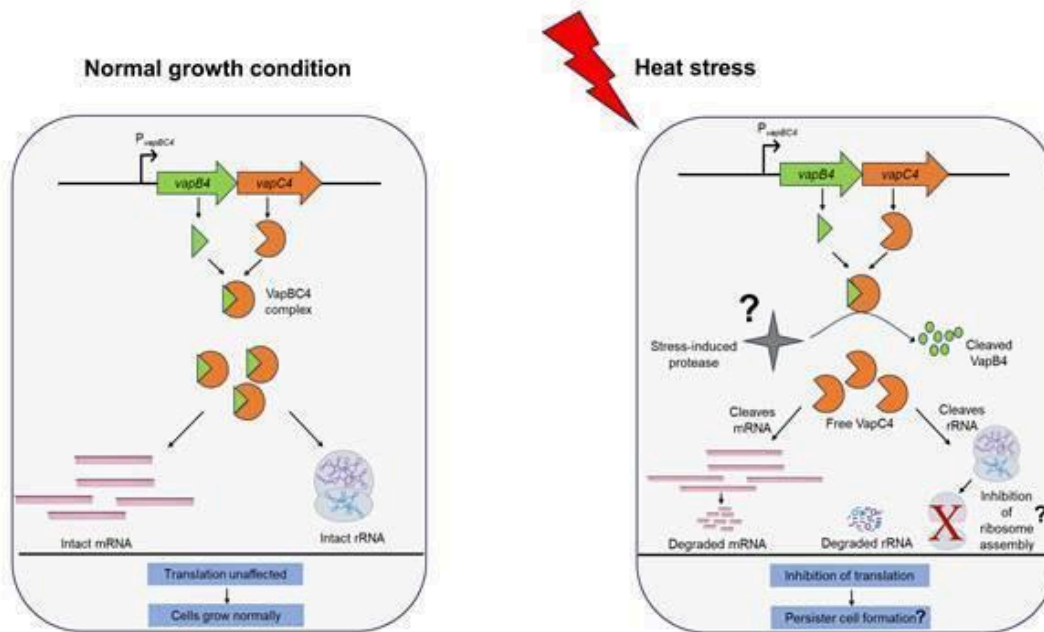
*S. acidocaldarius* thrives in environments with boiling volcanic pools, such as Barren Island in the Andaman & Nicobar Islands, where temperatures

can reach 90°C. The study highlights the unique challenges it faces and its survival mechanisms.

The analysis of the VapBC4 TA system reveals its significant role in high-temperature environments. The findings show multiple functions of the VapC4 toxin, including halting protein production, aiding in resilient cell formation, and influencing biofilm development. When exposed to heat stress, a stress-activated protease—yet to be identified in archaea—may degrade the VapB4 protein, which normally inhibits VapC4 toxin activity. Once VapB4 is compromised, VapC4 inhibits protein production, playing a crucial role in the organism's survival strategy.

This blockage in protein synthesis allows *S. acidocaldarius* to form "persister cells," which enter a resting state, conserving energy and avoiding the production of damaged proteins. This dormancy enables the cells to endure challenging conditions until the environment improves.

Overall, this research enhances our understanding of TA systems in extreme environments and sheds light on how microorganisms adapt to harsh conditions. For further reading, explore the journal *mBio* and research articles on archaea and TA system functions.



Proposed model showing the mode of action of the VapBC4 TA system during heat stress

## References

[American Society for Microbiology: mBio](#)

[Understanding Archaea: A Guide](#)

[Press Information Bureau: Scientists revealed the survival strategies of some of the primitive organisms on earth](#)

## **129. Year End Review of Ministry of Finance : Department of Revenue**

In 2024, the Central Board of Direct Taxes (CBDT) and Central Board of Indirect Taxes and Customs (CBIC), part of the Ministry of Finance, advanced citizen-centric initiatives to enhance the taxpayer experience.

The CBDT focused on taxpayer outreach with helpdesks and faceless processes, advocating transparency. They processed over 3.87 crore Income Tax Returns (ITRs) in just seven days and refunded Rs. 2.35 lakh crore. Innovations like TIN 2.0 and pre-filled ITRs simplified processes, with 47.52 lakh updated returns filed.

The CBIC improved the Goods and Services Tax (GST) system using advanced data analytics and AI for rigorous applicant verification. Initiatives such as geo-tagging, system-based suspensions, and risk-based processing targeted fraud. Measures like sequential filing of GSTR-1 and GSTR-3B promoted timely compliance.

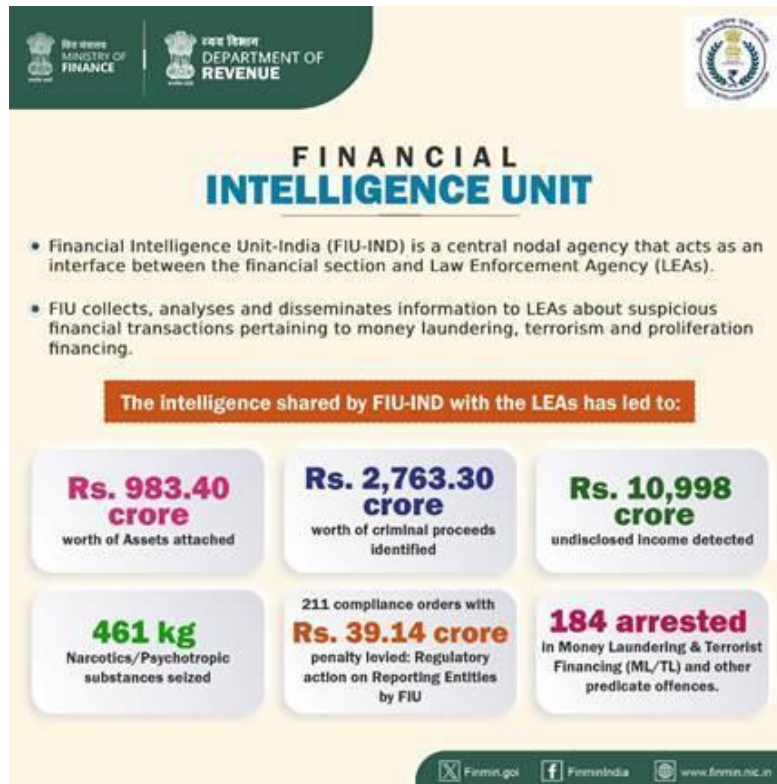
Business initiatives included electronic cash ledger transfers, small taxpayer exemptions, and e-commerce facilitation. GST exemptions for satellite services and simplified late fee structures enhanced compliance.

In Customs, CBIC implemented regulatory reforms like duty rate rationalization and decriminalization. Technologies like ICEGATE 2.0 and Anonymised Escalation Mechanism modernized administration. Infrastructure upgrades boosted operational efficiency and compliance.

The Department of Revenue also boosted financial intelligence through multiple measures. The Financial Intelligence Unit-India (FIU-IND), a central nodal agency, played a crucial role in combating illicit finance. They collected and analyzed financial data, resulting in:

- Rs. 983.40 crore assets attached
- Rs. 2,763.30 crore criminal proceeds identified
- Rs. 10,998 crore undisclosed income detected
- 461 kg narcotics seized
- 211 compliance orders with Rs. 39.14 crore in penalties
- 184 arrests in money laundering and related offenses

These efforts significantly improved compliance and transparency in 2024.



## FATF Places India in its Highest Category

- The Financial Action Task Force (FATF) is the global money laundering and terrorist financing watchdog. It sets international standards that aim to prevent these illegal activities and the harm they cause to society.

- India has achieved a high-level of technical compliance across the FATF Recommendations and has taken significant steps to implement measures to tackle illicit finance.
- FATF has placed India in its highest category “regular follow-up” after mutual evaluation done during 2023-24.
- It is a distinction shared by only four G20 countries.
- FATF has recognized India’s efforts in mitigating risks from money laundering, terror and proliferation financing.

## **Broad Achievements Under the Central Board of Direct Taxes (CBDT) in 2024**

### **Issue of Refunds**

Refunds amounting to about Rs 3.08 lakh crore issued between 1st April, 2024 and 27th November, 2024 which is about 46.31% higher than refunds during the same period in preceding year.



### Achievements in Income Tax Return(ITR) Filing

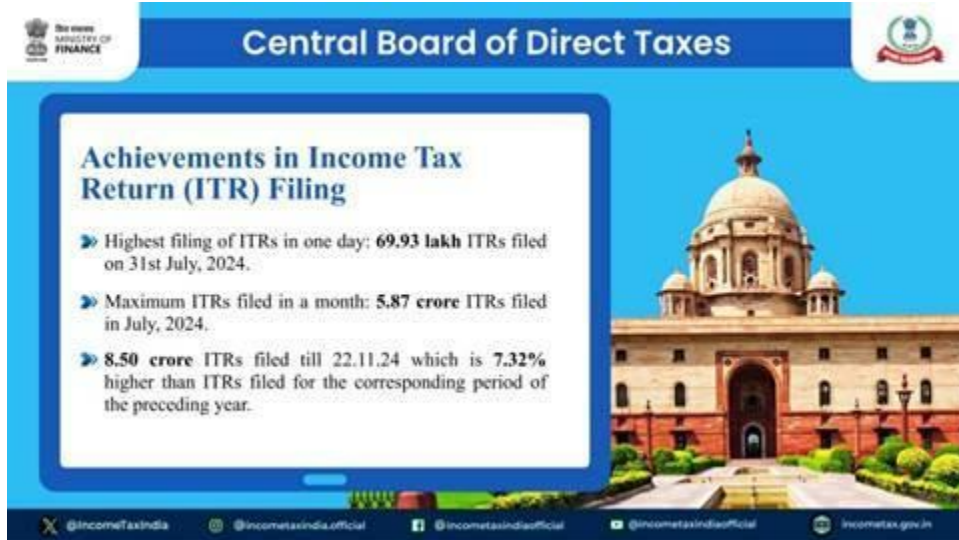
- ITR filing per second (Max): 917 (at 8:13:54 AM on 17th July, 2024)
- ITR filing per minute (Max): 9,367 (at 8:08 PM on 31st July, 2024)
- ITR Filing per hour (Max): 5.07 lakh (between 7PM to 8PM on 31st July, 2024)
- About 98.35% of ITRS filed till 22.11.2024 have been e-verified.

- Highest filing of ITRS in one day: 69.93 lakh ITRS filed on 31st July, 2024.
- Maximum ITRS filed in a month: 5.87 crore ITRS filed in July, 2024.
- 8.50 crore ITRS filed till 22.11.24 which is 7.32% higher than ITRs filed for the corresponding period of the preceding year.

The infographic is titled "Central Board of Direct Taxes" and "Achievements in Income Tax Return (ITR) Filing". It lists the following achievements:

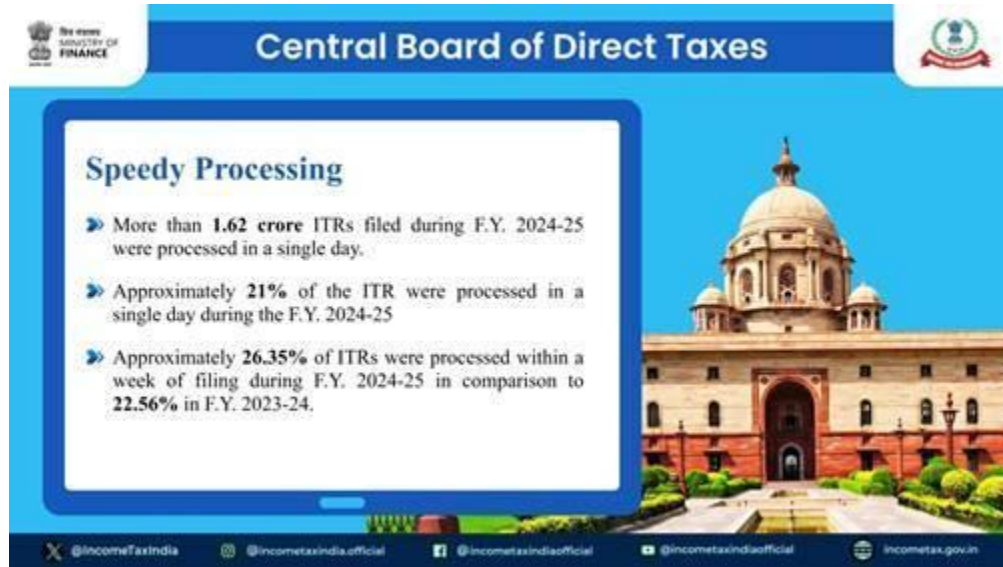
- ▶ ITR filing per second (Max): **917** (at 8:13:54 AM on 17th July, 2024)
- ▶ ITR filing per minute (Max): **9,367** (at 8:08 PM on 31st July, 2024)
- ▶ ITR Filing per hour (Max): **5.07 lakh** (between 7PM to 8PM on 31st July, 2024)
- ▶ About **98.35%** of ITRs filed till 22.11.2024 have been e-verified.

The infographic also features the logo of the Ministry of Finance and the Central Board of Direct Taxes, along with social media handles for @IncomeTaxIndia and @incometaxindia.official, and the website income.gov.in.



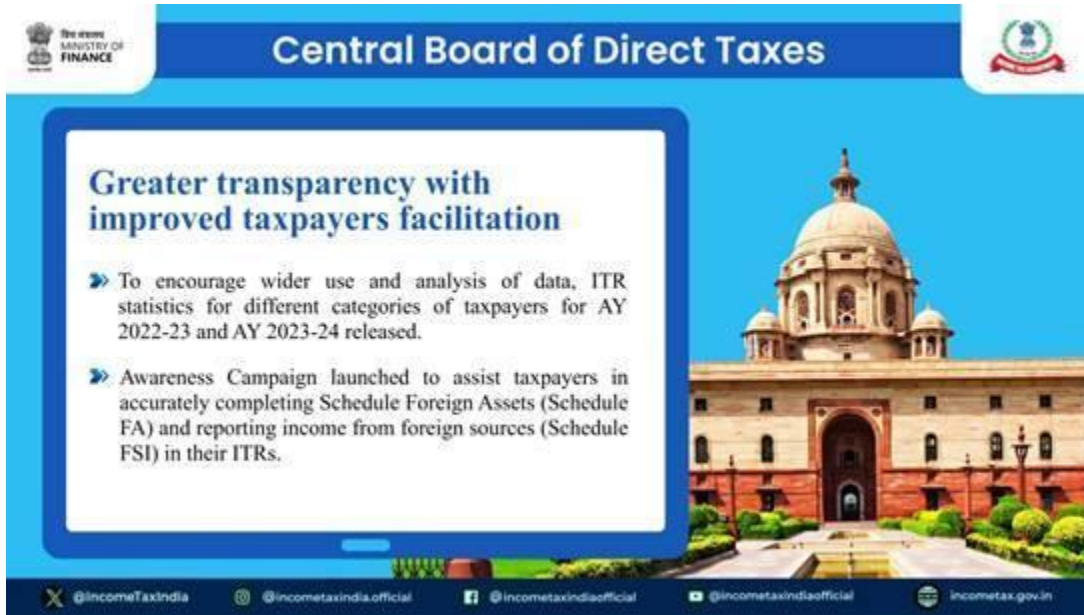
## Speedy Processing

- More than 1.62 crore ITRS filed during F.Y. 2024-25 were processed in a single day.
- Approximately 21% of the ITR were processed in a single day during the
- F.Y. 2024-25.
- Approximately 26.35% of ITRS were processed within a week of filing during F.Y. 2024-25 in comparison to 22.56% in F.Y. 2023-24.



## Greater Transparency with Improved Taxpayer Facilitation

- To encourage wider use and analysis of data, ITR statistics for different categories of taxpayers for AY 2022-23 and AY 2023-24 released.
- Awareness Campaign launched to assist taxpayers in accurately completing Schedule Foreign Assets (Schedule FA) and reporting income from foreign sources (Schedule FSI) in their ITRs.



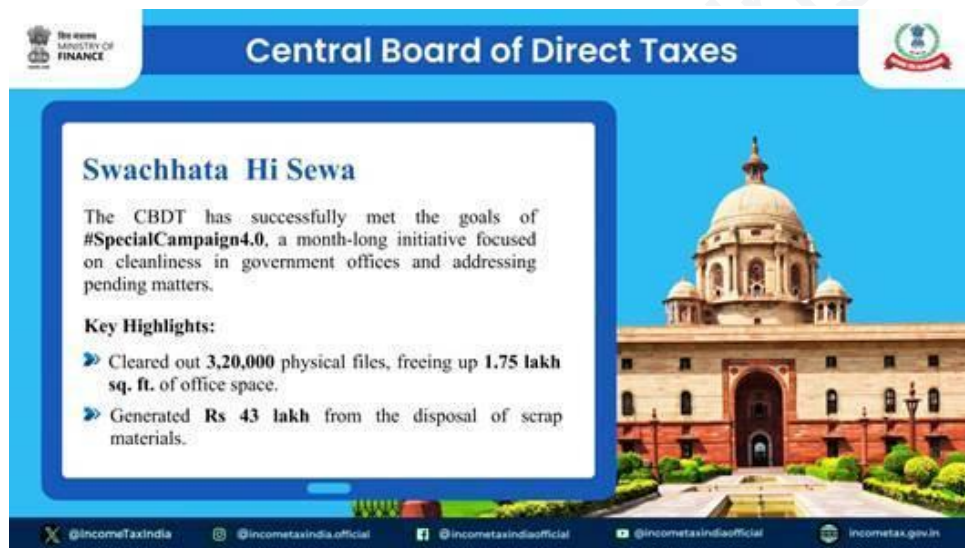
### *Swachhata hi Sewa*

The CBDT has successfully met the goals of #SpecialCampaign4.0, a month-long initiative focused on cleanliness in government offices and addressing pending matters.

### *Key Highlights:*

- Cleared out 3,20,000 physical files, freeing up 1.75 lakh sq. ft. of office space.
- Generated Rs 43 lakh from the disposal of scrap materials.
- Conducted over 1450 cleanliness campaigns across India.

- Enhanced the reclaimed space for a more conducive work environment.
- Resolved 53,000 public grievances.
- Implemented unique and innovative "Best Practices" throughout the campaign.



## Facilitation to the Taxpayers

- The validation introduced at the upload level of the ITRS is another move to nudge or to relook at the possible inconsistencies and to facilitate correction before filing of the ITRS.

- This resulted in reduction of filing of revised return, rectification request and grievance.
- The ITR forms for A.Y. 2024-2025 with all associated functions were rolled out on 1st April, 2024 on the E- filing portal.
- More than 76 crore emails & SMSS were sent under E- campaign to popularize the EVC mode during the year under consideration.
- As a result 96% of ITR filers adopted the EVC mode for verification of ITRS in A.Y. 2024-25.

### **Establishment of Demand Management Facilitation Centre (DFC)**

During the period 01.01.24 to 13.10.2024, 1,31,180 number of demands amounting to Rs 5,00,224 cr. have been reduced/resolved.

- The DFC currently consists of 170 agents who work 6 days a week.
- Scheduled calls are made to the tax payers and JAOS for the purpose of resolution of demand.

### **Broad Achievements Under the Central Board of Indirect Taxes and Customs (CBIC) in 2024**

Goods and Services Tax (GST)

Recent measures for simplification, trade facilitation and Ease of Doing Business under GST:

- Insertion of section 128A in CGST Act, 2017 has been carried out to provide for conditional waiver of interest or penalty or both relating to demands raised under Section 73, for FY 2017-18 to FY 2019-20 : Considering the difficulties faced by the taxpayers, during the initial years of implementation of GST, amendments have been made in the CGST Act, to provide for continued waiver of interest and penalties for demand notices issued under Section 73 of the CGST Act for the fiscal years 2017-18, 2018- 19 and 2019-20, in cases where the taxpayer pays the full amount of tax demanded in the notice up to 31.03.2025.
- Reduction of Government Litigation by Fixing monetary limits for filing appeals under GST. The CBIC has issued Circular No. 207/01/2024-GST dated 26.06.2024 to prescribe monetary limits, subject to certain exclusions, for filing of appeals in GST by the department before GST Appellate Tribunal, High Court, and Supreme Court, to reduce government litigation.
- Amendment in Section 107 and Section 112 of CGST Act for reducing the amount of pre-deposit required to be paid for filing of appeals under GST: Provisions have been made for reducing the amount of pre-deposit for filing of appeals under GST to ease cash flow and working capital blockage for the taxpayers. The maximum amount for filing an appeal with the appellate authority has been

reduced from Rs. 25 crores CGST and Rs. 25 crores SGST to Rs. 20 crores CGST and Rs. 20 crores SGST. Further, the amount of pre-deposit for filing appeal with the Appellate Tribunal has been reduced from 20% with a maximum amount of Rs. 50 crores CGST and Rs. 50 crores SGST to 10 % with a maximum of Rs. 20 crores CGST and Rs. 20 crores SGST.

- Reduction in rate of TCS to be collected by the ECOs for supplies being made through them: Electronic Commerce Operators (ECOs) are required to collect Tax Collected at Source (TCS) on net taxable supplies under Section 52(1) of the CGST Act. The Central Government has issued Notification No. 15/2024-Central Tax dated 10.07.2024 (notified w.e.f. 10.07.2024), Notification No. 01/2024-Union Territory Tax dated 10.07.2024 (notified w.e.f. 10.07.2024) & Notification No. 01/2024-Integrated Tax dated 10.07.2024 (notified w.e.f. 10.07.2024) to reduce the TCS rate from present 1% (0.5% CGST + 0.5% SGST/ UTGST, or 1% IGST) to 0.5 % (0.25%

CGST + 0.25% SGST/UTGST, or 0.5% IGST), to ease the financial burden on the suppliers making supplies through such ECOs.

- Change in due date for filing of return in FORM GSTR-4 for composition taxpayers from 30th April to 30th June: Amendments have been done in clause (ii) of sub-rule (1) of Rule 62 of CGST Rules, 2017 and FORM GSTR- 4 to extend the due date for filing of

return in FORM GSTR-4 for composition taxpayers from 30th April to 30th June following the end of the financial year. This will apply for returns for the financial year 2024-25 onwards. The same would give more time to the taxpayers who opt to pay tax under composition levy to furnish the said return.

- Amendments of Section 16(4) of CGST Act, to be made effective from July 1st, 2017, to relax condition of section 16(4) of the CGST Act in respect of initial years of implementation of GST, i.e. financial years 2017-18, 2018-19, 2019-20 and 2020-21.
- Considering the difficulties faced by the taxpayers during the initial years of implementation of GST, based on the recommendations of the GST Council, retrospective amendment has been made in Section 16(4) of CGST Act to relax the time limit to avail input tax credit in respect of any invoice or debit note under Section 16(4) of CGST Act, through any GSTR 3B return filed upto 30.11.2021 for the financial years 2017-18, 2018-19, 2019-20 and 2020-21, may be deemed to be 30.11.2021.

This would benefit a large number of taxpayers, especially smaller ones, who could not file returns in a timely manner in the initial years of GST, due to various reasons by which time, the time limit for availment of Input tax credit, under section 16(4) of CGST Act had already expired, which has led to issuance of demands denying them the benefit of input tax credit.

**Amendment of Rule 88B of CGST Rules, 2017 in respect of interest under Section 50 of CGST Act on delayed filing of returns, in cases where the credit is available in Electronic Cash Ledger (ECL) on the due date of filing the said return:**

- The Central Government has issued Notification No. 12/2024-Central Tax dated 10.07.2024 for amendment in rule 88B (w.e.f. 10.07.2024) of CGST Rules to provide that an amount which is available in the Electronic Cash Ledger on the due date of filing of return in FORM GSTR-3B, and is debited while filing the said return, shall not be included while calculating interest under section 50 of the CGST Act in respect of delayed filing of the said return. This will reduce the interest burden on such taxpayers.

**Provision of new optional facility for taxpayers to amend the details in GSTR-1:**

- The Central Government has provided for a new optional facility by way of FORM GSTR-1A (w.e.f. 10.07.2024) to facilitate the taxpayers to amend the details in FORM GSTR-1 for a tax period and/ or to declare additional details, if any, before filing of return in FORM GSTR-3B for the said tax period. This will facilitate taxpayer to add any particulars of supply of the current tax period missed out in reporting in FORM GSTR-1 of the said tax period or to amend any

particulars already declared in FORM GSTR-1 of the current tax period (including those declared in IFF, for the first and second months of a quarter, if any, for quarterly taxpayers), to ensure that correct liability is auto-populated in FORM GSTR-3B.

A consolidated guidelines dated 30.03.2024 were issued to all CGST Zones in respect of Ease of Doing Business (EODB) to be followed during investigations of cases against regular taxpayers

Besides, based on the recommendations of the GST Council, a large number of notifications and circulars have been issued on contentious issues, so as to avoid legal disputes.

### **RECOMMENDATIONS OF THE 55<sup>th</sup> GST COUNCIL MEETING**

- The GST Council recommended reduction in the GST rate on Fortified Rice Kernel (FRK), classifiable under 1904, to 5% .
- The GST council also recommended to fully exempt GST on gene therapy.
- The GST Council recommended exemption of GST on contributions by general insurance companies from third-party motor vehicle premiums for Motor Vehicle Accident Fund.

- The GST Council recommended no GST on transaction of vouchers as they are neither supply of goods nor supply of services. The provisions related to vouchers are also being simplified.
- The GST Council clarified that no GST is payable on 'penal charges' levied and collected by banks and NBFCs from borrowers for non-compliance with loan terms.
- The GST Council recommended reduction of payment of pre-deposit for filing an appeal before the Appellate Authority in respect of an order passed which involves only penalty amount.

*Reference*

Press Information Bureau: [Recommendations of the 55th Meeting of the GST Council](#)

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RECOMMENDATIONS OF THE 54<sup>th</sup> GST COUNCIL MEETING

**Recommendations Relating to GST Rates on Goods:**

- i. GST rate on extruded or expanded products, salted or savoury, reduced from 18% to 12%, aligning them with GST rate on namkeens, bhujia, mixture, and similar ready-to-consume items.

- ii. GST rate on cancer drugs such as Trastuzumab Deruxtecan, Osimertinib, and Durvalumab reduced from 12% to 5%.
- iii. Reverse Charge Mechanism introduced on the supply of metal scrap by unregistered persons to registered persons. A Tax Deducted at Source (TDS) of 2% applies to B2B supply of metal scrap by registered persons.

### **Duties & Exemptions**

- Export duty on various varieties of rice has been reduced.
- A Group of Ministers (GoM) has been constituted to holistically look into the issues pertaining to GST on life insurance and health insurance.
- It has been recommended to notify GST @ 5% on the transport of passengers by helicopters on seat share basis and also to regularise the GST for past periods on 'as is where is' basis.
- It has been recommended to clarify by way of a circular that the approved flying training courses conducted by DGCA approved Flying Training Organizations (FTOs) are exempt from the levy of GST.
- It has been recommended to exempt supply of research and development services by a Government Entity; or a research

association, university, college or other institution, notified under clauses (ii) or (iii) of sub-section (1) of section 35 of the Income Tax Act, 1961 using Government or private grants. It has also been recommended to regularize past demands on 'as is where is' basis.

- It has been recommended to clarify that location charges or Preferential Location Charges (PLC) paid along with the consideration for the construction services of residential/commercial/industrial complex before issuance of completion certificate forms part of composite supply where supply of construction services is the main service and PLC is naturally bundled with it and are eligible for same tax treatment as the main supply that is, construction service
- It has been recommended to clarify that affiliation services provided by educational boards like CBSE are taxable. It has also been recommended to exempt affiliation services provided by State/Central educational boards, educational councils and other similarly placed bodies to Government Schools prospectively. The issue for the past period between 01.07.2017 to 17.06.2021 is recommended to be regularized on 'as is where is' basis.
- It has been recommended to clarify by way of circular that the affiliation services provided by universities to their constituent

colleges are not covered within the ambit of exemptions provided to educational institutions in the notification No. 12/2017-CT(R) dated 28.06.2017 and GST at the rate of 18% is applicable on the affiliation services provided by the universities.

- It has been recommended to exempt import of services by an establishment of a foreign airlines company from a related person or any of its establishments outside India, when made without consideration. The council also recommended to regularise the past period on 'as is where is' basis.
- It has been recommended to bring renting of commercial property by an unregistered person to a registered person under Reverse Charge Mechanism (RCM) to prevent revenue leakage.
- It has been recommended to clarify that when ancillary/intermediate services are provided by GTA in the course of transportation of goods by road and GTA also issues consignment note, the service will constitute a composite supply and all such ancillary/intermediate services like loading/unloading, packing/unpacking, transshipment, temporary warehousing etc. will be treated as part of the composite supply. If such services are not provided in the course of transportation of goods and invoiced separately, then these

services will not be treated as composite supply of transport of goods.

- It has been recommended to regularise the GST liability for the past period prior to 01.10.2021 on 'as is where is' basis, where the film distributor or sub- distributor acts on a principal basis to acquire and distribute films.
- It has been recommended to exempt supply of services such as application fees for providing electricity connection, rental charges against electricity meter, testing fees for meters/ transformers/capacitors, labour charges from customers for shifting of meters/service lines, charges for duplicate bills etc. which are incidental, ancillary or integral to the supply of transmission and distribution of electricity by transmission and distribution utilities to their consumers, when provided as a composite supply. It has also been recommended to regularize GST for the past period on 'as is where is' basis.

## RECOMMENDATIONS OF THE 53<sup>rd</sup> GST COUNCIL MEETING

### **Recommendations Relating to GST Rates on Goods**

- i. Uniform Integrated GST (IGST) rate of 5% on imports of parts, components, testing equipment, tools, and tool-kits of aircraft, regardless of their HS classification to stimulate Maintenance, Repair,

and Overhaul (MRO) activities in the aviation sector, subject to specified conditions.

- i. All milk cans made of steel, iron, or aluminium will attract a GST rate of 12%, irrespective of their intended use.
- ii. The GST rate on cartons, boxes, and cases made of both corrugated and non-corrugated paper or paperboard (HS codes 4819 10 and 4819 20) has been reduced from 18% to 12%.
- iii. solar cookers, whether single or dual energy source, will attract a GST rate of 12%.
- iv. The existing entry covering poultry keeping machinery attracting 12% GST has been amended to specifically include "parts of poultry keeping machinery," regularizing past practices due to interpretational issues.
- v. All types of sprinklers, including fire water sprinklers, will attract a GST rate of 12%, and past practices will be regularized.
- vi. IGST exemption on imports of specified items for defense forces has been extended for an additional five years until 30th June 2029.
- vii. IGST exemption has been extended to imports of research equipment and buoys under the Research Moored Array for

African-Asian-Australian Monsoon Analysis and Prediction (RAMA) programme, subject to specified conditions.

- viii. Compensation Cess on imports into Special Economic Zones (SEZ) by SEZ units or developers for authorized operations is exempted retrospectively from 1st July 2017.
- ix. Compensation Cess is exempted on the supply of aerated beverages and energy drinks to authorized customers by Unit Run Canteens under the Ministry of Defense.
- x. An ad-hoc IGST exemption is provided on imports of technical documentation for AK-203 rifle kits imported for the Indian Defense forces.

### **Measures for Facilitation of Trade**

- Section 9(1) of the CGST Act, 2017, is amended to explicitly exclude rectified spirit or ENA from the scope of GST when supplied for manufacturing alcoholic liquor for human consumption.
- Services provided by Indian Railways to general public, namely, sale of platform tickets, facility of retiring rooms/waiting rooms, cloak room services and battery-operated car services and Intra-Railway transactions have been exempted [vide

Notification No. 04/2024-CTR dated 12.07.2024 w.e.f., 15.07.2024]. The issue for the past period has also been regularized [Circular No. 228/22/2024-GST dated 15.07.2024].

- Services provided by Special Purpose Vehicles (SPV) to Indian Railway by way of allowing Indian Railway to use infrastructure built & owned by SPV during the concession period and maintenance services supplied by Indian Railways to SPV have been exempted [vide Notification No. 04/2024-CTR dated 12.07.2024 w.e.f., 15.07.2024]. The issue for the past has also been [Circular No. 228/22/2024-GST dated 15.07.2024];
- A separate entry has been created in notification No. 12/2017-CTR 28.06.2017 under heading 9963 to exempt accommodation services having value of supply of accommodation up to Rs. 20,000/- per month per person subject to the condition that the accommodation service is supplied for a minimum continuous period of 90 days [vide Notification No. 04/2024-CTR dated 12.07.2024 w.e.f., 15.07.2024]. Similar benefit has been extended for past cases [Circular No. 228/22/2024-GST dated 15.07.2024]
- Co-insurance premium apportioned by lead insurer to the co-insurer for the supply of insurance service by lead and co-insurer to the insured in coinsurance agreements, has been declared as no supply under Schedule III of the CGST Act, 2017 and past cases have

been regularized on 'as is where is' basis [Circular No. 228/22/2024-GST dated 15.07.2024].

- Transaction of ceding commission/re-insurance commission between insurer and re-insurer has been declared as no supply under Schedule III of CGST Act, 2017 and past cases have been regularized on 'as is where is' basis [Circular No. 228/22/2024-GST dated 15.07.2024].
- GST liability on reinsurance services of specified insurance schemes covered by Sr. Nos. 35 & 36 of notification No. 12/2017-CT (Rate) dated 28.06.2017 have been regularized on 'as is where is' basis for the period from 01.07.2017 to 24.01.2018 [Circular No. 228/22/2024-GST dated 15.07.2024].
- GST liability on reinsurance services of the insurance schemes for which total premium is paid by the Government that are covered under Sr. No. 40 of notification No. 12/2017-CTR dated 28.06.2017 have been regularized on 'as is where is' basis for the period from 01.07.2017 to 26.07.2018 [Circular No. 228/22/2024-GST dated 15.07.2024].
- Clarification has been issued that retrocession is 're-insurance of re-insurance' and therefore, eligible for the exemption under Sl. No. 36A of the notification No. 12/2017-CTR dated 28.06.2017 [Circular No. 228/22/2024- GST dated 15.07.2024].

- Clarification has been issued that statutory collections made by Real Estate Regulatory Authority (RERA) are exempt from GST as they fall within the scope of entry 4 of No.12/2017-CTR dated 28.06.2017 [Circular No. 228/22/2024-GST dated 15.07.2024].
- Clarification has been issued that further sharing of the incentive by acquiring bank with other stakeholders, where the sharing of such incentive is clearly defined under Incentive scheme for promotion of RuPay Debit Cards and low value BHIM-UPI transactions and is decided in the proportion and manner by NPCI in consultation with the participating banks is not taxable [Circular No. 228/22/2024-GST dated 15.07.2024].

## CUSTOMS

Budget 2024-25- major announcements:

- i. Basic Customs Duty (BCD) on shea nuts reduced from 30% to 15%.
- ii. BCD is reduced to nil on critical minerals such as Antimony, Beryllium, Bismuth, Cobalt, Copper, Gallium, Germanium, and others. BCD reduced to 2.5% on minerals like Graphite, Silicon Quartz, and Silicon Dioxide.
- iii. BCD on prawn and shrimp feed and fish feed reduced to 5%. BCD on live Specific Pathogen Free (SPF) Vannamei shrimp and Black Tiger

shrimp broodstock reduced to 5%. BCD is reduced on various inputs like mineral and vitamin premixes, krill meal, fish lipid oil, and others, subject to IGCR conditions.

- iv. BCD increased for ammonium nitrate from 7.5% to 10%.
- v. BCD on PVC flex films increased to 25%.
- vi. Customs duty exempted on cancer drugs-Trastuzumab Deruxtecan, Osimertinib, and Durvalumab.

#### **Issuance of Instruction No. 06/2024-Customs dt. 23.03.24**

Smooth and fair elections require coordinated and focused attention, including proper sharing of information by various LEA's. To this effect, vide Instructions No. 06/2024-Customs dt. 23.03.24 a detailed Standard Operating Procedure was issued for all formations under CBIC to curb the flow of suspicious cash, illicit liquor, drugs/narcotics, freebies and smuggled goods during elections. It includes instructions regarding reporting of major seizures (more than Rs.1 crore) during election & implementation of ESMS for reporting interceptions/seizures made by various enforcement agencies on a real-time basis.

#### **Handing over of Antiquities seized by Customs to ASI**

- Consequent to repatriation of a 16th century stolen idol of Maa Kotrakshi, in presence of Hon'ble Minister of Education and Skill Development & Entrepreneurship; a project for handing over of antiquities seized pan India by Customs to ASI was undertaken. A handing over ceremony was organized on 29.02.2024 chaired by the Hon'ble Finance Minister and 101 such antiquities were handed over to ASI. A handbook titled 'Puravshesh ke Prahari' describing the historical importance of these antiquities and role of Customs in preserving our cultural heritage was also released on the occasion.
  - DGFT extended the RoDTEP Scheme to include good exported from EOU and SEZ sector. To give effect to this, CBIC issued notification nos. 20/2024- Customs (NT) dated 11.03.2024 and 50/2024 -Customs (N.T.) dated 19.07.2024, respectively.
  - Notification No. 33/2024-Customs (N.T.) dated 30.04.2024. was issued for amendment in Notification No. 77/2023-Customs (N.T.) dated 20.10.2023 relating to All Industry Rates (AIRs) of Duty Drawback including defence goods.
  - Circular No. 04/2024-Customs dated 07.05.2024 was issued regarding changes made in All Industry Rates (AIRs) of duty Drawback notified vide Notification No77/2023-Customs (N.T.) dated 20.10.2023 and 33/2024- Customs (N.T.) dated 30.04.2024.

- For disbursal of All Industry Rates (AIR) of duty drawback, CBIC has moved from manually issued physical Cheque (to the nodal bank) based process to end-to-end automated PFMS based disbursal of duty drawback amount directly to exporter's bank accounts since 05.06.2024. For this CBIC issued Instruction No.15/2024-Customs dated 29.05.2024. This paperless functionality is expected to expedite credit of AIR of drawback amount to exporters' accounts and increase transparency.
- Notification No. 55/2024-Customs (N.T.) on August 23.08.2024, was issued for revising the All-Industry Rates (AIR) of duty drawback for gold and silver jewellery and articles of silver. This notification amends the earlier Notification No. 77/2023-Customs (N.T.) dated October 20, 2023.
- The Drawback Division of CBIC assisted the RoDTEP Committee-2023 for reviewing RoDTEP Rates for various eligible goods, including defence goods, for exports from DTA, AA, EOU & SEZ units. Based on the Committee's recommendations, revised RODTEP rates have been notified by DOC effective from 10.10.2024.
- Indian Customs has always been at the forefront when it comes to adopting cutting edge technology for providing better services. In this regard, the Board has launched the Exchange

Rate Automation Module and the modalities have been explained in Circular 07/2024-Cus dated 25.06.2024. The exchange rates shall be published on ICEGATE website at 6:00 p.m. twice a month (i.e. 1st & 3rd Thursdays of every month) and shall be accessible for public viewing on ICEGATE website. Thus, the automated system has now replaced the manual process of publication of exchange rates.

- CBIC vide Notification No. 60/2024-Customs (NT) dated 12.09.2024 amended the Courier Imports and Exports (Electronic Declaration and Processing) Regulations, 2010 to allow export incentives viz. Drawback,
- RoDTEP (Remission of Duties and Taxes on Exported Products), RoSCTL (Rebate of State and Central Levies and Taxes) to exports through Courier. Circular No. 15/2024-Customs dated 12.09.2024 explaining the said amendments and informing the stakeholders about extending the export benefits to courier exports has also been issued.
- CBIC and the Department of Posts (DoP) have jointly developed a “hub and spoke” system to facilitate export through postal routes. The system leverages digital technology and the vast postal network for creating a paperless, contactless and intermediary-free environment for enhancing exports through

postal mode. In continuation of the already authorized 1001 booking post offices, CBIC vide Circular No. 01/2024 dated 01.02.2024 has further authorized an additional 14 booking post offices taking the total number of booking post offices covered under the automated system to a total of 1015. Further, the project for automation of IGST refund on postal exports made using the DNK portal has been implemented with effect from 17th September, 2024.

- Agreement between the Government of the Republic of India and the Government of the Republic of Madagascar on Cooperation and Mutual Administrative Assistance in Customs Matters signed on 27.06.2024 on the side-lines of WCO Council Meeting in Brussels.
- Agreement between the Government of the Republic of India and the Government of the Republic of Belarus on Cooperation and Mutual Assistance in Customs Matters was signed on 28.06.2024 on the side-lines of the WCO Council Meeting in Brussels.
- MoU between the CBIC and General Department of Viet Nam Customs on Capacity Building was signed on 31.07.2024
- Cooperative Arrangement between the Central Board of Indirect Taxes and Customs of the Government of the Republic of India

and the New Zealand Customs Service in Customs Matter was signed on 06.08.2024

- For providing connectivity to landlocked developing country Bhutan, CBIC in February this year-2024 has issued a Standard Operating Procedure allowing transit of goods between Bhutan and Bangladesh using the riverine route through India with the entry/exit points at Jogighopa and Pandu ports in Assam.
- CBIC hosted the 5th Joint Group of Customs Meeting between India & Bhutan from 6th -7th May, 2024 in Leh, India.
- Circular No. 09/2024-Customs dated 09.07.2024 has been issued amending circular No. 29/2020- Customs dated 22.6.2020 for allowing transshipment of Bangladesh export cargo to third Countries through Air Cargo Complex, Kempegowda International Airport Bengaluru.
- Recently, CBIC led the Capacity Building Program on "Advancing Bhutan-India Trade and Economic Partnership" at Thimpu, Phuentsholing, Gelephu and Samdrup from 29th July-01st August, 2024.
- The 4th National Conference on the Functioning of Land Customs Stations (LCSs) was organized on 28th and 29th August, 2024.

- Circular No. 19/2024-Customs dated 30.09.2024 has been issued regarding Digitization of Customs Bonded Warehouse Procedures relating to obtaining Warehouse license, Bond to Bond Movement of Warehoused goods, and uploading of Monthly Returns.

### **Indian Customs Electronic Commerce/Electronic Data Interchange (ICEGATE) 2.0**

ICEGATE 2.0 website is a complete bilingual website which has been designed to provide contemporary user interface for enhanced user experience. A new feature “widget” is also being provided to show important information such as Message filing status, details of tickets, refunds, and duty payments etc. in a personalized dashboard without going for enquiries. Data available in the widgets is also downloadable. Customized notifications facility is being provided to the registered users to choose the events for which they want to receive notifications. Registered users can file their documents themselves using online Web forms on ICEGATE as well which is advancement from earlier offline webforms.

### **USE of ICETABs for efficient examination and clearance process**

The ICETAB is part of the CBIC’s ongoing initiatives to simplify trade procedures. The ICETAB is a mobile tablet designed to facilitate the quick

and real-time upload of examination reports, enabling Customs Officers to enhance efficiency while on the go.

The ICETAB has an exclusive Mobile Application to enable examining officers to view RMS Instructions, Examination Order and Bill of Entry (BE) details along with other supporting documents, capture images of cargo examination for integration with the Bill of Entry and submit examination reports immediately on completion of the cargo examination.

The ICETAB by Customs Officers is aimed at enhancing transparency and efficiency in customs processes for speedy examination of import consignments with capability to attach photographs with geo-referencing and no requirement for any paper documents for the purpose of examination. This will also facilitate quick upload of the examination report on the go on a real time basis and making the examination process transparent and faster. The detailed guidelines for the use of ICETAB are outlined in CBIC Circular No. 10/2024-Customs dated 20.08.2024.

### **Exchange Rate Automation Module**

Indian Customs has always been at the forefront when it comes to adopting cutting edge technology for providing better services. In this regard, the Board has launched the Exchange Rate Automation Module and the modalities have been explained in Circular 07/2024-Customs dated 25.06.2024 and its amendment Circular No. 17/2024-Customs dated

18.09.2024. The exchange rates shall be published on ICEGATE website at 6:00 p.m. twice a month (i.e. 1st & 3rd Thursdays of every month) and shall be accessible for public viewing on ICEGATE website. Thus, the automated system has now replaced the manual process of publication of exchange rates.

### **Encouraging Women participation in International Trade**

**The Zones have been instructed by the Board Circular No. 2/2024-Customs, dated March 8, 2024 to promote women's representation and support within customs and trade activities by:**

- i. ensuring women's representation in PTFC and CCFC meetings, preferably through women's associations; ensuring women's representation in PTFC and CCFC meetings, preferably through women's associations;
- ii. including at least one agenda point from women perspective;
- iii. encouraging Trade bodies/ custodians to establish dedicated help desks and processing mechanisms for women traders and women logistics service providers;
- iv. supporting the upskilling women logistics service providers, freight forwarders and custom brokers by offering relevant training for women.

This initiative highlights the importance of gender equality in trade (be it as traders, customs house agents, freight forwarders, or customs brokers) advocating for active efforts from Partner Government Agencies and trade bodies to support the increasing participation of women across various roles in the logistics sector. The detailed guidelines for encouraging Women participation in International Trade are outlined in CBIC Circular No. 2/2024-Customs dated 08.03.2024.

Mandatory additional qualifiers in import/export declarations in respect of Synthetic or Reconstructed Diamonds w.e.f., 01.12.2024:

- As per the Bill of Entry (Electronic Integrated Declaration and Paperless Processing) Regulations, 2018 and Shipping Bill (Electronic Integrated Declaration and Paperless Processing) Regulations, 2019, it will be mandatory to be declared additional qualifiers/identifiers for Lab Grown Diamond at the time of filing of import/export declarations with effect from 01.12.2024. Declaration of additional qualifiers would improve quality of assessment and streamline intervention and enhance facilitation. The detailed instructions in this regard are outlined in CBIC Circular No. 21/2024-Customs dated 30.10.2024.

### **Extended export related benefits for exports made through courier mode**

- Until now, the Express Cargo Clearance System (ECCS) was used for handling courier import and export shipments at the notified International Courier Terminals (ICTs). However, due to limitations in the system's architecture, certain export-related payments, such as Duty Drawback, RoDTEP, and RoSCTL, could not be processed through ECCS. To address this issue, it has been decided to implement the Indian Customs EDI System (ICES) at the International Courier Terminals for processing these payments, effective from 12.09.2024. The modalities for this implementation have been outlined in Circular No. 15/2024-Customs, dated 12.09.2024.

### **Disbursal of Drawback amounts into the exporters' account through PFMS**

- With effect from 5th June, 2024; payment of Drawback amounts into the exporters' accounts post scroll out, will be facilitated through the Public Finance Management System (PFMS). The scrolls generated at different locations will be automatically processed by the Customs automated system (CAS) for onward transmission to the Central Nodal e-DDO and the nominated central nodal e-DDO shall forward the consolidated scroll to the nodal e-PAO. After approval from the nodal e-PAO, duty

drawback amounts shall be credited into the exporters' bank accounts linked with PFMS. The detailed instructions have been issued through Instruction No. 15/2024-Customs dated 29.05.2024.

Digitization of Customs Bonded Warehouse procedures relating to obtaining Warehouse License, Bond to Bond Movement of warehoused goods, and uploading of Monthly Returns:

- The CBIC has launched a Warehouse Module on ICEGATE for Customs Bonded Warehouses, enabling: (i) online filing of applications for obtaining a Warehouse License; (ii) online submission and processing of requests to transfer warehoused goods to another person and/ or warehouse; and (iii) uploading Monthly returns for Customs Bonded Warehouses. The Directorate General of Systems (DG Systems) has issued comprehensive User Manuals for both trade members and departmental officers. Detailed procedures are outlined in Circular No. 19/2024- Customs, dated 30.09.2024.

Performance of ongoing schemes/ programs:

- a. India's overall trade facilitation score in the Global Survey on Digital and Sustainable Trade Facilitation conducted by the UNESCAP, 2023, increased from 78.49% in 2019 to 93.55% in 2023, indicating a marked

improvement in the efficiency of cross-border trade procedures.  
(Source: CBIC Circular No. 10/2024- Customs dated 20.08.2024)

- b. India's Score in UN Trade Facilitation survey on "women in Trade Facilitation" has increased from 0% in 2019 to 66% in 2021 and this has resulted in overall improvement in India ranking in UN Trade Facilitation survey.

Provisioning services to SEZ Units at ICEGATE:

- EDI Enablement of SEZ Sites was successfully completed. Some key services like Registration of SEZ Users, Child User Registration, Amendment in Registration, filing services, Inter and Intra Goods Movement, DTA Procurement, ETP Webform and facilitating DSC Amendment for SEZ users were provisioned for the SEZ users at ICEGATE.

Launch of module for SCMTR (Sea Cargo Manifest and Transshipment Regulations):

The SCMTR also specifies changes to the formats and timelines for filing manifest declarations. Some of the features of the SCMTR include:

- Requesting additional details about each cargo, such as the invoice value and HSN

- Advancing the time of reporting to the port of departure  
Ensuring track and trace of reported cargo
- Including features for moving vessels within India
- Capturing details electronically, such as crew lists, instead of manually.

#### Document Download Utility:

- A utility developed at ICEGATE to allow users to download various documents like BE, SB, LEO, OOC, Gatepass for OOC, Gatepass for LEO in the e-Copy functionality at ICEGATE.

#### Revamp of ICEGATE 2.0 Website:

- ICEGATE website was made more informative and user-friendly.

#### AI-based interactive Chatbot (Vaani):

- This has been launched for trade at the ICEGATE website to help users with information to access various services of ICEGATE.

#### Exchange Rate Automation Module:

- A module was launched to automate the integration of Exchange Rates of various Currency codes used in the Customs System.

This involved API based integration with SBI to receive the Exchange Rates of the currency codes. These rates are automatically updated on the website as well as the application for the purpose of trade without any manual intervention.

Tracking the details of NOC/Release Order Issuance details from the PGAs

- A facility has been enabled on the dashboard of the users to provide the tracking details of the NOC/Release Order issued by the respective PGA (FSSAI, AQCS and PQMS) on the ICEGATE website against the Bill of entry filed by the user.

API integration with Custodians (Sea and Land):

- The existing MFTP based integration was migrated to API based integration with CONCOR and Adani Land and Sea Ports respectively. This has facilitated the exchange of data between ICEGATE application and Custodians to share the data on a real time basis.

Integration with Department of Post:

- There has been an integration with the Department of Post to claim IGST refund for the concerned Shipping Bills filed and claim other export benefits.

IGST Refund for Export through Dak Niryat Kendra (DNK):

- A module has been launched on ICEGATE to enable IGST Refund for export through Dak Niryat Kendra (DNK).

Integration with ECCS for SB filing, Custodian Registration and Message Exchange with ICEGATE:

- There has been an integration with ECCS to claim various export benefits against the Shipping Bills filed.

Export benefits (RoDTEP, RoSCTL & Drawback) to goods exports through Courier mode:

- Export benefits (RoDTEP, RoSCTL& Drawback) extended for exports through the Courier mode.

Warehouse Licensing Code, Warehouse to warehouse goods movement and digitizing the monthly return for warehouse:

- A module has been launched on ICEGATE to provision the generation of Warehouse Licensing Code for Warehouse users. This module also facilitates the goods movement from warehouse to warehouse. There is also a facility to digitize the filing of monthly returns for Warehouse.

### Launch of Mobile Application for Internal and External Users over Android Platform:

- Services of ICEGATE like Filing, e-Payment, accessing various enquiries over Android based mobile have been launched. This will soon be available on the iOS platform.
- Migration of critical functionalities like Integration with eSeal Vendors, eScrip, Customs E- payment Platform, Integration with DGFT, Examination Module, Integration with GSTN, Container Scanning Module from ICEGATE 1.0 to ICEGATE 2.0. The former being based on legacy-based architecture was migrated to a micro services-based architecture.

### Integration with FSSAI, PQMS, AQCS under Single Sign On services:

- A facility has been provided to the registered users to access the respective portal of the agencies like FSSAI, AQCS and PQMS from the ICEGATE website without any login at the respective PGA portal. This will be made live with other PGAs as well in the future.

### Integration with BIS:

- API based integration between BIS and ICEGATE to share the license details of the manufacturer for reference to the officer.

### Integration with DGFT for RCMC details:

- API based integration between DGFT and ICEGATE to share the RCMC details of the user from DGFT. These details are shown to the user on the dashboard at ICEGATE.

### Export benefits to courier

- Export incentives (Drawback, RoDTEP, RoSCTL) to the exports of goods where the value of consignment is less than rupees 10 lakh made through courier and in order to claim export incentives, for e-commerce shipments through ICT, shipping bill would be filed at ICEGATE/ICES.
- Scroll will be generated automatically and there would be no manual intervention.
- The scrips will be generated at ICEGATE portal.

### IGST Refund for DAK Niryat

- A mechanism for refund of IGST on exports through post is developed, wherein, the exporters will provide the details for seeking IGST refund at the time of filing postal bill of exports, and such details shall be pushed to the ICES System after physical export of goods, for GST verification with GSTN, and for preparation of scrolls.

- The IGST refunds would be processed in a manner similar to that being done for exports through courier/ ECCS.

#### Post EGM Amendment Module

- A functionality for allowing the officer to amend the shipping bill after filing of EGM has been developed. Once a shipping bill is amended, the export incentives would be processed again and the benefits would be paid to the exporter as per the existing functionalities.

#### Hand carriage of cargo

- A functionality is being developed after which an exporter can export goods to be carried by foreign bound passengers authorized by the exporter on his behalf as personal baggage.

#### ICETAB

- Access to examinee officer to ICES at examination shed Instant report submission in Realtime
- Reduction in dwell time
- Help in storing date and time of picture including Latitude and Longitude of place where picture taken

- Access to RMS instruction, e-Sanchit, BE details at examination shed.

#### Newly launched development

- Launch of ICETAB for field officers for faster examination at the time of Export/Import in August 2024.
- Provisioning of export benefits (RoDTEP, RoSCTL and Drawback) to commercial exports being processed through the integrated Courier Terminals (ICT) launched on 13.09.2024.
- IGST refund for exports through Dak Niryat Kendras (DNK) rolled out on 17.09.2024.
- 4. 273 SEZ sites launched in ICES on 01.07.2024.

#### Upcoming development

- Amendment in a shipping bill Post EGM.
- Hand carriage of Cargo (New automation of manual process)

#### Reference

Press Information Bureau: [Ministry of Finance Year Ender 2024: Department of Revenue](#)

### **130. Year End Review of Ministry of Finance : Department of Revenue**

In 2024, the Central Board of Direct Taxes (CBDT) and Central Board of Indirect taxes and Customs (CBIC), under the Department of Revenue, Ministry of Finance, have continued their citizen-centric initiatives, driving significant reforms to enhance taxpayer experience.

The CBDT maintained its focus on taxpayer outreach and assistance through active help desks and embraced faceless processes, reinforcing its commitment to transparency and efficiency. Speedy processing of returns and refunds remained a priority, with over Rs. 2.35 lakh crore refunded and more than 3.87 crore Income Tax Returns (ITRs) processed within 7 days. Innovations like TIN 2.0, pre-filing of ITRs, and updated returns continued to streamline processes, resulting in 47.52 lakh updated returns filed.

The CBIC continued to review and reform initiatives towards enhancing the efficiency and integrity of the Goods and Services Tax (GST) system in its seventh year. The CBIC leveraged advanced data analytics and artificial intelligence to further strengthen its registration processes by refining the risk rating system for applicants, ensuring rigorous verification to prevent fraud. Initiatives such as geo-tagging of business locations, system-based suspension of registrations for non-filers, and risk-based refund processing continued to demonstrate CBIC's commitment to curbing malpractices.

To simplify compliance, the sequential filing of GSTR-1 and GSTR-3B was enforced, promoting timely returns and seamless availability of input tax credits. Special drives against fake registrations, automated intimation of mismatches, and a dedicated functionality for unregistered persons to apply for temporary registrations highlighted CBIC's proactive compliance measures.

Additionally, initiatives supporting businesses included the transfer of balances in electronic cash ledgers, exemptions for small taxpayers, and facilitation of intra-state supply through e-commerce operators. The extension of GST exemptions for satellite launch services and further simplification of late fee structures were also noteworthy.

On the Customs front, the CBIC introduced regulatory and policy reforms, such as rationalisation of Customs duty rates and steps toward decriminalisation. Technological advancements like ICEGATE 2.0 and the Anonymised Escalation Mechanism continued to modernise tax administration. Infrastructural upgrades, including pre-gate processing facilities and modernisation of control laboratories, enhanced operational efficiency. These efforts collectively reinforced CBIC's commitment to transparency, Ease of Doing Business, and robust compliance frameworks in the year 2024.

Besides these, the Department of Revenue also continued to contribute towards strengthening financial intelligence gathering and enabling

enforcement through multiple measures. One major highlight of the FIU was India achieving a high-level of technical compliance across the Financial Action Task Force (FATF) recommendations to tackle illicit finance.

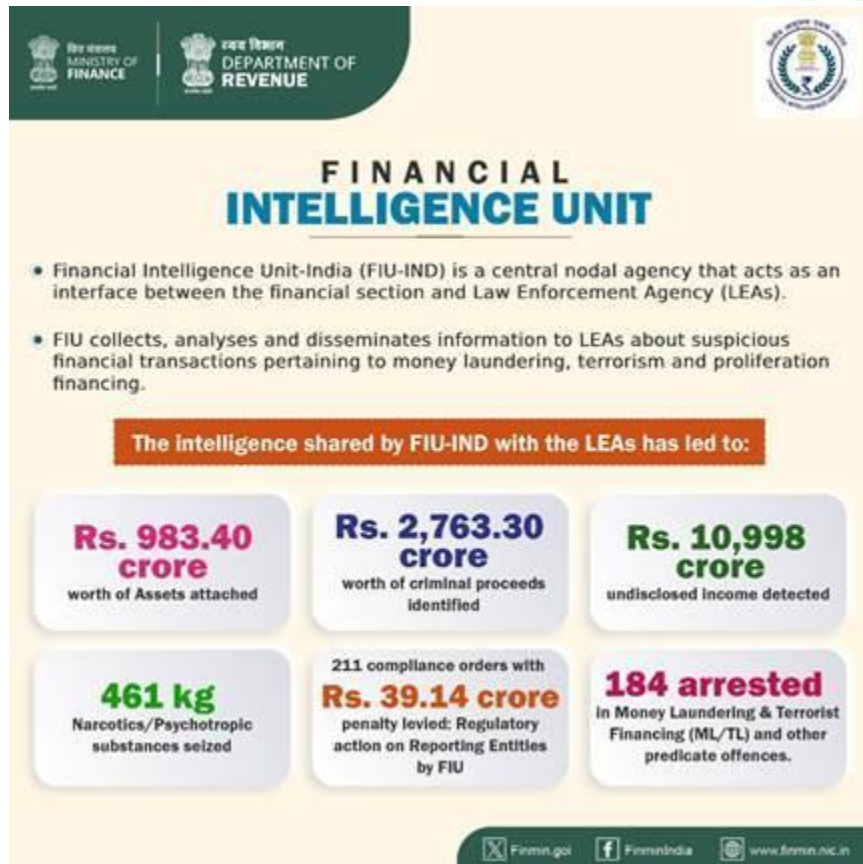
Major achievements of 2024 by Financial Intelligence Unit (FIU) under the Department of Revenue, Ministry of Finance.

- Financial Intelligence Unit-India (FIU-IND) is a central nodal agency that acts as an interface between the financial section and Law Enforcement Agency (LEAs).
- FIU collects, analyses and disseminates information to LEAs about suspicious financial transactions pertaining to money laundering, terrorism and proliferation financing.

The intelligence shared by FIU-IND with the LEAs has led to:

- a. Rs. 983.40 crore worth of Assets attached
- b. Rs 2,763.30 crore worth of criminal proceeds identified
- c. Rs. 10,998 crore undisclosed income detected
- d. 461 kg Narcotics/Psychotropic substances seized
- e. 211 compliance orders with Rs 39.14 crore penalty levied: Regulatory action on Reporting Entities by FIU

- f. 184 arrested in Money Laundering and Terrorist Financing (ML/TL) and other predicate offences.



## FATF PLACES INDIA IN ITS HIGHEST CATEGORY

- The Financial Action Task Force (FATF) is the global money laundering and terrorist financing watchdog. It sets international standards that aim to prevent these illegal activities and the harm they cause to society.
- India has achieved a high-level of technical compliance across the FATF Recommendations and has taken significant steps to implement measures to tackle illicit finance.
- FATF has placed India in its highest category “regular follow-up” after mutual evaluation done during 2023-24.
- It is a distinction shared by only four G20 countries.
- FATF has recognized India’s efforts in mitigating risks from money laundering, terror and proliferation financing.

**FATF**  
places India in its highest category

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**Anti-money laundering and counter-terrorist financing measures India**  
Mutual Evaluation Report  
September 2024

Finmin.gov | FinminIndia | www.finmin.nic.in

Reference: [Ministry of Finance Year Ender 2024: Department of Revenue](#)

## 131. From the Book

### **Trust, Not Your Title, Gives You Authority**

New managers often fail, at least initially, because they have misconceptions about what it means to be a boss. One of these myths is that people listen to you because of the formal authority of your title. In fact, people will follow you because of three informal traits:

- Character: whether you do the right thing
- Competence: how well you support your team's success
- Influence: how you use resources and cross-functional relationships to get things done

Don't rely on your title alone to drive results; great employees are unlikely to simply follow orders. Instead, focus on building trust and credibility with peers and team members.

#### *Reference*

*"Becoming the Boss," by Linda A. Hill, Harvard University Press*

## 132. Good Governance Day

### Empowering Lives, One Drop at a Time



A little girl named Muskaan clapped her hands in joy as clean water gushed from the new tap in her home. It was a moment of celebration in Damhedi village, where the tap water's introduction transformed lives in ways the residents had never imagined. Her mother, overwhelmed with emotion, performed a small ritual to mark the occasion. She knew that this tap signified more than just convenience. It was a source of dignity, health, and a promise of a brighter future. For Muskaan, it meant she could play without worrying about pestering her mother for water. For her mother, it meant time saved and fewer worries about her children's health. This simple act of water flowing into a home symbolizes how good governance can uplift lives.

## **Celebrating Good Governance Week and the Jal Jeevan Mission**

Good Governance Day, celebrated on December 25 in honor of former Prime Minister Shri Atal Bihari Vajpayee's birthday, highlights governance that improves citizens' lives. Shri Vajpayee exemplified accountability, transparency, and inclusivity, principles that continue to guide the government.

From December 19 to 25, Good Governance Week spreads these values from districts to villages, reinforcing commitment to transparent and accountable governance. Through activities, the government demonstrates its dedication to uplifting citizens.

### **What is Governance?**

Governance involves decision-making that benefits society, with good governance emphasizing participation, equity, and sustainability. According to the United Nations, effective governance is participatory, accountable, transparent, responsive, effective, equitable, inclusive, and law-abiding.

Historically, Indian governance has been rooted in Rajadharma, emphasizing justice and welfare. Today, the Jal Jeevan Mission embodies these values, transforming lives by ensuring clean water access.

## **Rural Water Connections**

In 2019, only 17% of rural households had tap water. The Jal Jeevan Mission, launched by Prime Minister Narendra Modi, has connected over 12 crore households with tap water by December 2024, transforming access for millions.

## **Jal Jeevan Mission's Impact**

Transparency and responsiveness define the mission's success. Real-time data and community meetings ensure effective resource use and grievance redressal. Access to tap water frees women from fetching water and protects children from waterborne diseases, highlighting how good governance uplifts communities.

In tribal and marginalized areas, the mission empowers by prioritizing clean water access. It embodies leadership rooted in equity and inclusiveness.

## **Additional Government Schemes**

Government initiatives like Pradhan Mantri Awas Yojana, Pradhan Mantri Kisan Samman Nidhi, and Ayushman Bharat address housing, financial, health, and entrepreneurial needs, showcasing comprehensive governance.

Muskaan's laughter at home symbolizes the power of good governance, which listens and uplifts. On Good Governance Day, the Jal Jeevan Mission

represents hope, progress, and dignity for all, resonating with Rajadharmas ideals and inclusive development.

*References:*

<https://static.pib.gov.in/WriteReadData/specificdocs/documents/2021/sep/Jal%20Jeevan%20Eng.pdf>

<https://www.unescap.org/sites/default/files/good-governance.pdf>

<https://ejalshakti.gov.in/jjmreport/IJMIndia.aspx>

[Click here to download PDF](#)

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*Don't judge each day by the harvest you reap but by the seeds that you plant.*

ROBERT LOUIS STEVENSON

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## 133. Startup Nation: India

### The Future Hub of Global Entrepreneurship

India has emerged as one of the most vibrant startup ecosystems globally, earning its place as the third-largest startup hub. With over 100+ unicorns, the Indian startup landscape is shaping the future of innovation and entrepreneurship. India has more than 73,000 startups with at least one woman director that have been recognized under the Startup India Initiative. This represents nearly half of the 1,57,066 startups supported by the government, showcasing the crucial role women play in driving innovation and economic growth.

### The Entrepreneurship Landscape

The entrepreneurial spirit in India has undergone a paradigm shift in the last decade. Cities like Bengaluru, Hyderabad, Mumbai, and Delhi-NCR have become epicenters of innovation. The widespread availability of affordable internet, coupled with a young and dynamic workforce, has fueled the growth of startups in diverse sectors, including fintech, edtech, health tech, and e-commerce.

According to the "Indian Startup Ecosystem Report" by Startup India, India's startups have leveraged emerging technologies such as artificial intelligence (AI), blockchain, and IoT to solve local and global problems. This culture of innovation, supported by incubators, accelerators, and

robust mentoring networks, has fostered a unique ecosystem that bridges grassroots challenges with cutting-edge solutions.

### **Government Initiatives to Support Entrepreneurship**

Recognizing the transformative potential of startups, the Indian government has introduced several initiatives to support and nurture entrepreneurship. The flagship Startup India program, launched in 2016, has been a cornerstone of this effort. As of December 25, 2024, the Department for Promotion of Industry and Internal Trade (DPIIT) has recognized 157,066 startups, and 759,303 users have registered on the portal. Key features of the program include:

- **Ease of Doing Business:** Simplified compliance, self-certification, and single-window clearances have reduced bureaucratic hurdles for startups.
- **Tax Benefits:** As per PIB reports, startups registered under the scheme enjoy tax exemptions for three consecutive financial years.
- **Funding Support:** The Fund of Funds for Startups (FFS) initiative has allocated ₹10,000 crore to boost early-stage funding.
- **Sector-Specific Policies:** Tailored policies for industries like biotechnology, agriculture, and renewable energy have encouraged sectoral growth.

- **Bharat Startup Knowledge Access Registry (BHASKAR):** Platform designed to centralize, streamline, and enhance collaboration among key stakeholders within the entrepreneurial ecosystem, including startups, investors, mentors, service providers, and government bodies.

### **Additional Initiatives**

In addition, initiatives such as the Atal Innovation Mission (AIM) and the National Initiative for Developing and Harnessing Innovations (NIDHI) provide infrastructure and financial support to innovators. Further, the Startup Accelerator of MeitY for Product Innovation, Development, and Growth (SAMRIDH) scheme launched in 2021, aims to support 300 software product startups over four years with an outlay of ₹99 crore, providing funding up to ₹40 lakh per startup through accelerators to scale their businesses.

### **Contribution of Startups in India's Economic Development**

Startups have become pivotal to India's economic development. Indian startups have:

1. **Generated Employment:** Startups have created over 1.6 million jobs nationwide, demonstrating their role as significant employment generators.

2. **Boosted GDP Growth:** Startups contribute directly to GDP through innovation-driven productivity and indirectly by fostering ancillary industries.
3. **Attracted Foreign Investments:** India has become a magnet for global venture capital (VC) and private equity (PE) investments.
4. **Promoted Inclusivity:** Rural-focused startups and social enterprises are addressing critical gaps in healthcare, education, and agriculture, improving the quality of life for millions.

### **Contribution of Startups in India's Global Reach**

India's startups are not just solving local problems; they are making waves globally. Companies like BYJU, Zomato, Ola, and Nykaa have expanded their operations worldwide, showcasing India's ability to scale and compete globally. The success of Indian-origin startups in Silicon Valley further highlights the country's global influence. According to the Startup India International Guide, Indian startups are increasingly partnering with global corporations and entering international markets. India's leadership in affordable technology solutions, such as UPI and Aadhaar-enabled services, inspires similar innovations globally. Additionally, India's unicorns outperform global peers in valuation growth, proving that the ecosystem's foundation is robust and scalable.

Demographic, economic, and policy factors drive India's journey toward becoming the world's leading startup ecosystem. The country is poised for exponential growth with a young, educated population, a growing middle class, and an increasing penetration of digital technologies. Government-backed policies, an investor-friendly environment, and a focus on fostering innovation have positioned India as a global startup leader. Furthermore, the collaboration between academia, industry, and policymakers ensures a sustainable and inclusive ecosystem. As India continues to innovate and export its solutions globally, it is well on its way to setting benchmarks for the global startup community.

#### *References*

[Secretary, MeitY launches 2nd Cohort of Startup Accelerators of MeitY for Product Innovation, Development and Growth \(SAMRIDH\)](#)

[India's Women Entrepreneurs](#)

[Recognised startups create over 16.6 lakh direct jobs across more than 55 varied industries](#)

[Government initiatives to promote startups across the country](#)

[DPIIT to launch BHASKAR: A Revolutionary Platform for India's Startup Ecosystem](#)

[https://sansad.in/getFile/loksabhaquestions/annex/183/AU3465\\_cdXkwd.pdf?source=pqals](https://sansad.in/getFile/loksabhaquestions/annex/183/AU3465_cdXkwd.pdf?source=pqals)

[Startup India](#)

[Indian Startup Ecosystem](#)

[Press Information Bureau](#)

[Startup Nation: India](#)

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*Travelling through life with curiosity rather than judgement is how one finds the magic in each moment*

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### **134. Year End Review-2024: Ministry of Tourism**

India recorded 18.89 Million International Tourist Arrivals in 2023  
Foreign Exchange Earnings (FEEs) through tourism during 2023 surged to Rs. 231927 Crore

2509 Million Domestic Tourist Visits during 2023

40 projects worth Rs. 3295.76 Crore approved under Special Assistance to States for Capital Investment (SASCI) for the Development of Iconic Tourist Centres on a Global Scale across 23 States

34 Projects sanctioned for Rs. 793.20 Crore under Swadesh Darshan 2.0

The 'Chalo India' Campaign was launched to invite the Indian diaspora to showcase India to their non-Indian friends worldwide; One lakh free e-visas for foreign tourists visiting India under the Campaign

'Incredible India Content Hub' unveiled to provide the global travel and tourism industry with a unified source of content on Incredible India

The 'Paryatan Mitra & Paryatan Didi' initiative was launched to empower locals in key tourist destinations as ambassadors to enhance tourist experiences while promoting employment and community engagement

'Dekho Apna Desh People's Choice 2024' – a Nationwide poll launched to identify the most preferred tourist attractions

Four Regional States/UTs Tourism Ministers Conferences were organized to ideate and discuss the vision for the Tourism sector for Viksit Bharat@2047

36 villages were recognized as winners across 8 categories of the Best Tourism Villages Competition 2024

Central Institutes of Hotel Management signed MoUs with Eight leading national and global hospitality groups to globalize Indian hospitality education and enhance employability

The major initiatives and achievements of the Ministry of Tourism during the Year 2024 are as follows:

### **Infrastructure Development**

- Ministry of Tourism has sanctioned a total of 76 projects for an amount of Rs.5287.90 Crore under the Swadesh Darshan Scheme, out of which 75 projects are physically complete.



### **Floating Huts and Eco Rooms, Uttarakhand**

- Ministry of Tourism has revamped its Swadesh Darshan Scheme as Swadesh Darshan 2.0 (SD2.0) with the objective to develop sustainable and responsible destinations following a tourist & destination-centric approach. 34 projects have been sanctioned for Rs.793.20 Crore under SD2.0.



- Ministry of Tourism has sanctioned a total of 48 projects for an amount of Rs.1646.99 Crore under the PRASHAD Scheme, out of which 23 projects have been completed.



### **Illumination at Kusum Sarovar, Govardhan, UP**

- A total of 65 projects for an amount of Rs 937.56 Crore have been sanctioned under the Assistance to Central Agencies Scheme, out of which 38 projects have been physically completed.
- The Ministry of Tourism has formulated guidelines for 'Challenge Based Destination Development' as a scheme of Swadesh Darshan 2.0 Scheme to enhance the tourist experience across all points of the tourist value chain. Under this scheme, proposals have been invited under four thematic categories (i) Spiritual Tourism, (ii) Culture & Heritage, (iii) Vibrant Village Program, (iv) Ecotourism and Amrit

Dharohar Sites. The Ministry of Tourism has selected 42 destinations under various tourism themes for development under the scheme.

- As a follow-up to the Budget Announcements 2024-25, a total of 40 projects across 23 States have been sanctioned for an amount of Rs. 3295.76 Crore under the Special Assistance to States for Capital Investment (SASCI) – Development of Iconic Tourist Centres to Global Scale to infuse long term interest-free loans for 50 years to States for comprehensive development of iconic tourist centers in the country and branding & marketing them at global scale.

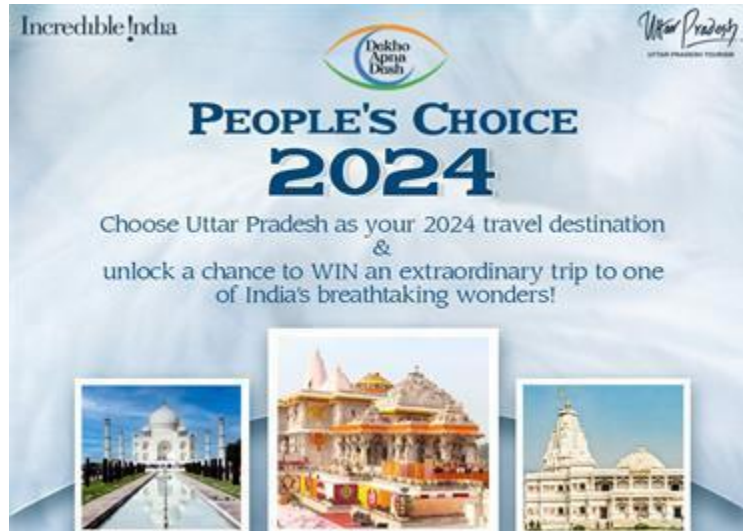
### **Promotion and Marketing**

- The Ministry of Tourism organized the "Bharat Parv" event at the Red Fort grounds, Delhi, as part of the Republic Day Celebrations from 23<sup>rd</sup> to 31<sup>st</sup> January 2024. Thematic Pavilions of States/ UTs were set up to showcase diverse tourist attractions of the country. Cultural performances by various regional cultural associations were also organized. The event promoted Vocal for Local, through the participation of local artisans from across the country by displaying and selling their products.



### **Bharat Parv 2024**

- Launched 'Dekho Apna Desh People's Choice 2024' – a Nationwide poll to identify the most preferred tourist attractions under 5 categories. It is also an effort to identify attractions and destinations for development in mission mode, contributing to India's journey towards *Viksit Bharat@2047*.



- Ministry of Tourism in collaboration with the Ministry of Education is organizing a nationwide Dekho Apna Desh Schools Contest for Kendriya Vidyalaya (KV) and Navodaya Vidyalaya (NV) Schools. The students are expected to create physical brochures of their District's tourism attractions, destinations, experiences, and other offerings. The initiative aims to make the students aware of the tourism wonders and attractions present in each district of the country.
- Chalo India Global Diaspora Campaign was launched to enable Indian diaspora members to become Incredible India ambassadors. The campaign has been implemented in the spirit of Jan Bhagidari for Atulya and Viksit Bharat to encourage the Indian diaspora to invite their 5 non-Indian friends to travel to India every year. One lakh free

e-visas for foreign tourists visiting India under the 'Chalo India' campaign have been announced for the remaining part of the current Financial Year.

- On the occasion of the 46th Session of the World Heritage Committee held at Bharat Mandapam, New Delhi in July 2024, an 'Incredible India' exhibition was set up at Bharat Mandapam to highlight India's rich cultural heritage, age-old civilization, geographical diversity, hidden gems in tourism along with modern developments, for the delegates. All 36 States and Union Territories along with 10 Central Ministries & Departments, showcased their offerings in the exhibition. In addition, the Ministry also arranged heritage walks and tours for delegates in the city of Delhi.



## India Exhibition: World Heritage Committee Meeting

- The Vice President of India graced the World Tourism Day Celebrations, organized by the Ministry of Tourism on 27th September 2024, in New Delhi. The theme for this year's World Tourism Day was 'Tourism & Peace'. The event was also attended by the Union Ministers of Civil Aviation, Union Minister of Tourism and Culture, Minister of State for Tourism, Petroleum, and Natural Gas, Ambassadors from various Foreign Missions in India, senior officials from various Ministries and Departments of Government of India, officials from State/UT Governments, travel trade, and hospitality industry.
- The Incredible India Content Hub was launched to provide the travel and tourism industry around the world access to high-quality images, videos, and other information they might need to promote Incredible India.
- The Ministry of Tourism has been organizing International Tourism Mart (ITM) in the North Eastern Region to showcase the tourism potential of North Eastern States of India. The 12th edition of International Tourism Mart (ITM) was held in Kaziranga, Assam from 26th to 29th, November, 2024.

## 12th ITM, Kaziranga, 2024

- Ministry of Tourism participates in travel fairs/exhibitions held in overseas markets to showcase India's tourism destinations and products. During this year, the Ministry of Tourism has participated in several international exhibitions including ITB Berlin, MITT Moscow, FITUR Madrid, ATM Dubai, IMEX Frankfurt, PATA Travel Mart, Japan Tourism Expo, IFTM Top Resa, WTM London, etc.



*India Pavilion at Fitur***Tourism Statistics**

- International Tourist Arrivals (ITAs) in India during 2023 were 18.89 Million.
- Foreign Tourist Arrivals (FTAs) in India during 2023 were 9.52 Million.
- Foreign Exchange Earnings (FEEs) through tourism during 2023 were Rs.231927 Crore.
- Domestic Tourist Visits (DTVs) in India during 2023 were 2509 Million.

**Meetings and Conferences**

Ministry of Tourism organized Four Regional States/UTs Tourism Ministers Conferences from 22nd August 2024 to 9th September 2024 in Chandigarh, Goa, Shillong, and Bangalore to ideate and discuss the vision for the tourism sector for Viksit Bharat@2047.



Southern States/ UTs Tourism Ministers Conference

## **Sustainable Development**

Ministry of Tourism launched the second edition of the Best Tourism Village Competition 2024 to acknowledge villages that best exemplify tourism destinations. This competition was conducted in partnership with States, Industry, and other tourism stakeholders. 36 villages were recognized as winners across 8 categories of the Best Tourism Villages Competition 2024.

## **Skill Development**

- Ministry of Tourism launched a national responsible tourism initiative by the name of 'Paryatan Mitra & Paryatan Didi' on 27th September 2024, World Tourism Day to enable tourism as a vehicle for social inclusion, employment, and economic progress as well as to

elevate the overall experience for tourists in destinations, by having them meet 'tourist-friendly' people who are proud Ambassadors and Storytellers for their destination.

- The Ministry of Tourism enabled the signing of Memorandums of Understanding (MoUs) between 8 leading hospitality chains and 21 Institutes of Hotel Management. This partnership aims to leverage the expertise of private hotel chains to provide students with exposure to the industry's best practices, enhancing their employability and ensuring that tourists visiting India receive top-quality services.

### **Ease Of Doing Business**

Ministry of Tourism has launched a handbook offering a step-by-step guide to support the efforts of States/UTs in granting and implementing 'industry status' for the tourism and hospitality sector with the aim to attract greater investments and generate job opportunities within this sector across States/UTs.

*Reference: [Year End Review-2024 : Ministry of Tourism](#)*

## 135. Enhancing Services Trade through Free Trade Agreements

### Bilateral Trade Agreements



India has bilateral trade agreements, including Trade in Services, with countries such as Singapore, South Korea, Japan, Malaysia, Mauritius, UAE, and Australia. Additionally, India has an FTA in Services and Investment with the Association of Southeast Asian Nations (ASEAN). The

India-EFTA Trade and Economic Partnership Agreement (TEPA) was signed in March 2024.

India is actively negotiating FTAs, including Trade in Services, with the UK, EU, Oman, Peru, and Sri Lanka. It is also working on a Comprehensive Economic Cooperation Agreement (CECA) with Australia, building on commitments under the India-Australia Economic Cooperation Trade Agreement (ECTA). These negotiations aim to secure market access, non-discriminatory treatment, and a transparent regulatory environment for India's Services exports.

### **Multilateral Engagements**

World Trade Organization (WTO)

The 13th Ministerial Conference (MC13) of the WTO took place in Abu Dhabi, UAE, from February 26 to March 2, 2024. India actively defended its interests in agriculture, sustainable development, fisheries, investment, e-commerce, and SPS/TBT negotiations, while addressing concerns of developing nations and the Global South.

- **New Members:** Comoros and Timor-Leste joined the WTO, increasing membership to 166.
- **Agriculture:** India successfully blocked attempts to divert attention from critical issues like the Permanent Solution on Public Stockholding for Food Security.

- E-Transmissions: India contributed to extending the moratorium on customs duties on electronic transmissions until MC14 (or March 31, 2026), with no further extensions planned.
- Dispute Settlement: Ministers adopted [WT/MIN(24)/37, March 4, 2024], committing to a fully functional dispute settlement system for all Members by 2024.

India plays a proactive role in the Sanitary and Phytosanitary (SPS) Committee, safeguarding its interests and advancing key proposals. India raised 20 Specific Trade Concerns (STCs) and addressed 6 STCs. During the sixth SPS Agreement review, India submitted three proposals:

- Challenges posed by stringent Maximum Residual Limits (MRLs).
- Adapting SPS measures to regional conditions.
- Increasing transparency.

India's thematic sessions on Maximum Residual Limits (MRLs) and Regionalization will occur in March 2025. In the Technical Barriers to Trade (TBT) Committee, India raised 15 STCs and responded to 17 STCs.

India's paper on Technology Transfer for environmentally sound technologies received positive feedback from the Committee of Trade and Environment (CTE). It may form the basis for a Ministerial Declaration at MC14 on climate-resilient technologies.

## Fisheries Subsidies Negotiations

India remains an active participant in fisheries subsidies negotiations, prioritizing the needs of its fishing communities. Key proposals include:

- Extended transition periods for developing countries.
- Permanent carve-outs for small-scale and artisanal fishers without geographical limits.
- Protection of Exclusive Economic Zones (EEZs) to safeguard sovereign rights.
- Disciplines on non-specific fuel subsidies and government-to-government access arrangements.

India submitted four proposals to ensure balanced outcomes in the fisheries subsidies agreement, highlighting these critical concerns.

### *Reference*

Press Information Bureau: [2024 Year End Review for Department of Commerce](#)

## 136. The Indo-Pacific Economic Framework for Prosperity (IPEF)



The Indo-Pacific Economic Framework for Prosperity (IPEF) focuses on four key pillars: Trade, Supply Chain Resilience, Clean Economy, and Fair Economy, with an overarching agreement providing political oversight. In November 2023, India signed the Pillar II (Supply Chain Resilience) agreement, which took effect in February 2024. India also signed agreements for Pillar III (Clean Economy), Pillar IV (Fair Economy), and

the IPEF Overarching Agreement on September 21, 2024, which became effective in October 2024.

India holds the position of Vice Chair of the Supply Chain Council (SCC) under Pillar II. At the SCC's inaugural meeting in Washington in September 2024, Action Plan Teams were formed for Chemicals, Semiconductors, Minerals (focused on batteries), and Pharmaceuticals/Healthcare. India leads the Action Plan Team for Pharma/Healthcare. Two subcommittees—Logistics and Movement of Goods and Data and Analytics—were also established.

In June 2024, an Indian delegation, including 20 energy start-ups, participated in the IPEF Clean Economy Investor Forum in Singapore. This forum connected investors, clean economy companies, and regional start-ups to drive investments in sustainable infrastructure, climate technology, and renewable energy.

India spearheads Cooperative Work Programs under the Clean Economy Agreement (Pillar III) with a focus on urban e-waste mining.

The Terms of Reference for all three bodies under Pillar II—the Supply Chain Council (SCC), Crisis Response Network (CRN), and Labour Rights Advisory Board (LRAB)—are now finalized.

#### *Reference*

Press Information Bureau: [2024 Year End Review for Department of Commerce](#)

## **137. Council of Scientific and Industrial Research (CSIR) Year End Review 2024**

### **Significant Scientific and Technical Attainments During the Year**

#### **[CSIR-CRRI's REJUPAVE technology deployed in Arunachal Pradesh and Ladakh for high-altitude road construction](#)**

The indigenous road construction technology “REJUPAVE” developed by CSIR-Central Road Research Institute (CSIR-CRRI), to construct high altitude bituminous roads at low and sub-zero temperature conditions, was successfully utilized by the Border Road Organization (BRO) for high-altitude bituminous roads construction on China Border in state of Arunachal Pradesh. The technology has also been used by the BRO’s project Vijayak in Kargil to construct high-altitude bituminous roads on the Drass-Umbala-Sankoo Road in Drass, Ladakh.

#### **India’s First National Highway Steel Slag Road section on NH-66 Mumbai-Goa National Highway inaugurated**

V.K. Saraswat, Member (S&T), NITI AAYOG inaugurated India’s First National Highway Steel Slag Road section on NH- 66 Mumbai-Goa National Highway on 15 January 2024. JSW Steel, under the CSIR-CRRI technological guidance, has constructed the 1

km long four lane steel slag road section on Indapur-Panvel Section of NH-66 Mumbai-Goa. For construction of this road around 80,000 tons of CONARC Steel slag were converted as processed steel slag aggregates at JSW Steel Dolvi, Raigad plant.

### **CSIR's technical contributions in construction of Ram Mandir, Ayodhya and 'Surya Tilak' for Lord Ram on every Ram Navami**

The construction of Shri Ram Mandir, Ayodhya, has been technically assisted by CSIR. The "Surya Tilak" system has been designed by CSIR-Central Building Research Institute (CSIR-CBRI) and it will channel the ray on the idol's forehead from 12 noon for about six minutes. Every Ram Navami, an intricate network of lenses and mirrors will be used to channel a ray of sunlight in the *sanctum sanctorum* of the Ram temple in Ayodhya and converge on the forehead of Ram Lalla as "Surya Tilak". The Ram Mandir in Ayodhya has been meticulously engineered to endure seismic events that occur once every 2,500 years.

### **CSIR-NIO, Goa launches underwater vehicle, C-Bot, to monitor coral reefs**

CSIR launched the coral monitoring autonomous underwater vehicle, Coral Reef Monitoring and Surveillance Robot, or C-Bot, for long-term monitoring of coral reefs, developed by CSIR-National Institute of

Oceanography (CSIR-NIO), Goa. The C-Bot can reach depths of 200 meters.

### **India's first Lithium battery recycling pilot facility inaugurated**

India's first Lithium Battery Recycling Plant installed under CSIR's Bulk Chemical Mission at CSIR-National Metallurgical Laboratory (CSIR-NML), Jamshedpur was inaugurated. The initiative aligns with the *Atma Nirbhar Bharat* vision, contributing to self-reliance in battery manufacturing. The Lithium Battery Recycling Plant at CSIR-NML is poised to contribute significantly to India's efforts towards environmentally responsible and resource-efficient technologies.

### **Successful Flight Tests of High-Altitude Pseudo Satellite**

CSIR-National Aerospace Laboratories (CSIR-NAL) successfully flew a prototype of a new-generation unmanned aerial vehicle (UAV), High-Altitude Pseudo Satellite (HAPS) that can fly at great heights, about 20 km from ground, runs entirely on solar power, and can remain in the air for months. The primary utility of HAPS vehicles is in the field of surveillance and monitoring, and other situations, like disaster management, wherein it can be very useful.

## **CSIR in partnership with KPIT, developed India's first indigenously built Fuel Cell Vessel**

India's first indigenously developed hydrogen fuel cell catamaran built by the Cochin Shipyard Limited (CSL) based on the Fuel Cell Technology of CSIR and KPIT, was launched. Built at a cost of Rs18 crore, the ferry will be handed over to the Inland Waterways Authority of India by the CSL after rigorous trials.



## **CSIR-NIIST Develops Sustainable Technology for Organic Wastewater Treatment**

The CSIR-National Institute for Interdisciplinary Science and Technology (CSIR-NIIST) has made a breakthrough by developing and patenting a sustainable technology for treatment and disposal of organic waste water discharged by hotels, restaurants, catering units and similar businesses, which is a big problem in cities, especially in locations without proper sewerage network. As a sustainable solution,

the on-site wastewater technology, named NOWA, has the advantage of recovering valuable resources like reuse quality water, bio-energy and organic manure and soil conditioner from waste-water.

### **CSIR-NEIST Discovers A New Flowering Plant, "Begonia Narahari" in Arunachal Pradesh; named 'Narahari' to honour former Director**

CSIR-North East Institute of Science and Technology (CSIR-NEIST), Jorhat in collaboration with University of Science and Technology Meghalaya (USTM), has discovered a new flowering plant named "Begonia Narahari" in the Lohit district of Arunachal Pradesh. After meticulous examination and comparison with known Begonia species worldwide, the researchers confirmed its identity as a previously undescribed and new species within the genus Begonia. The species has been named "Begonia Narahari", to honour Prof G Narahari Sastry, the former director of CSIR-NEIST, Jorhat, for his remarkable efforts in establishing the Germplasm Conservation Centre for the bio-resources of Northeast India and his dedication to the region's welfare.

### **CSIR-CDRI Introduces Distinctive Oral Pill for Accelerated Fracture Healing**

CSIR-Central Drug Research Institute (CSIR-CDRI) has come out with an oral pill to help fasten the process of healing after a fracture. The institution is currently working on two bone healing entities, namely

CDRI-1500 and CDRI-399. Necessary approvals from drug regulatory bodies have been received and the phase-1 clinical trials for CDRI-1500 will begin soon.

### **CSIR-IMTech Identified Promising Molecule for Parkinson's Cure**

CSIR-Institute of Microbial Technology (CSIR-IMTech) has discovered a molecule which could lead to developing a cure for Parkinson's, a neurodegenerative disease. The study, till now only carried out on mice, has shown promising results for one molecule. The researchers have filed an international patent for four molecules that have potential to provide cure for the disease.

### **CSIR-NAL transferred the final set of Engine Bay Door (EBD) parts for Tejas Mk1A to HAL**

CSIR-NAL handed over the third and final set of engine bay door (EBD) parts for the Tejas Mk1A, to Hindustan Aeronautics Limited (HAL). HAL had entered a Transfer of Technology (ToT) agreement with CSIR-NAL in November 2023, to manufacture Bismaleimide (BMI) EBD for the series production of Light Combat Aircraft Tejas Mk1A.

## **CSIR-CCMB develops new rice variety immune to Yellow Stem Borer**

CSIR-Centre for Cellular & Molecular Biology (CSIR-CCMB) and ICAR-Indian Institute of Rice Research (IIRR) in collaboration have developed a rice variety resistant to Yellow Stem Borer (YSB), a major pest in India that can cause up to 60% loss in rice production. The new research addresses these gaps by identifying key biomolecules involved in YSB resistance. This breakthrough is expected to significantly reduce the dependency on chemical pesticides, enhance rice yields, and provide a persistent solution to the YSB threat throughout the rice growing season.

## **CSIR-CMERI Unveils Electric Tiller for Sustainable Farming**

Electric Tiller designed and developed by CSIR-Central Mechanical Engineering Research Institute (CSIR-CMERI) was introduced. Tailored for small to marginal farmers, constituting over 80% of India's farming community, the tiller promises reduced operational costs and promotes sustainable farming practices. The Electric Tiller prioritizes user comfort and environmental sustainability, boasting enhanced torque, reduced vibration, and zero exhaust emissions. Equipped with electronic controls and ergonomic handling, the Electric Tiller marks a significant milestone in agricultural machinery, aiming for a more sustainable and efficient farming future.

## **CSIR-NAL Advances Towards High-Altitude Platform (HAP) Development**

CSIR-NAL successfully test-flew a subscale High-Altitude Platform (HAP) to 25,000 feet on 7 May 2024. HAPs, operating at 18-20 km above Earth, offer capabilities like surveillance, earth imaging, and telecommunications at a fraction of satellite costs, complementing satellite technology. Extensive ground tests and an additional sub-scale flight are planned over the next 18 months to refine the full-scale HAP prototype, aiming for unprecedented endurance and performance in high-altitude platforms.

## **CSIR-CIMFR's Controlled Blasting Process used in the construction of Tunnel-2, the longest tunnel in Mumbai Suburban Railway Network**

CSIR-Central Institute of Mining and Fuel Research (CSIR-CIMFR) guided the Mumbai Railway Vikas Corporation (MRVC) with the rock blasting process during the construction of Tunnel-2 (Wavarle Tunnel), the longest tunnel in the Mumbai Suburban Railway Network, as part of the Panvel-Karjat railway project under the Mumbai Urban Transport Project 3 (MUTP-3).

## **CSIR-IICT Develops new process to Manufacture High-Energy Rocket Propellant**

CSIR-Indian Institute of Chemical Technology (CSIR-IICT) in collaboration with Premier Explosives Ltd., has successfully developed an indigenous process to produce the key material used in CL-20, a high-energy propellant. CL-20 offers superior performance over traditional propellants like RDX and HMX, boasting a higher energy release and better oxidiser-to-fuel ratio, crucial for rockets and missiles. The breakthrough enables India to achieve self-sufficiency in propellant development for defence and space applications, marking a significant stride towards technological independence.

## **CSIR-CCMB Develops Non-Invasive Blood Test for Early Breast Cancer Detection**

CSIR-CCMB and Regional Cancer Centre (RCC), Thiruvananthapuram have identified a cost-effective, non-invasive method to detect breast cancer using a drop of blood. MicroRNA (miRNA) signatures have been analysed in hundreds of cancer samples, identifying 439 miRNAs linked to invasive breast cancer, with 107 as potential biomarkers for different types and stages of the disease.

## **CSIR-IGIB and LVPEI Develop Enhanced CRISPR-Cas9 System for Precision Genome Editing**

CSIR-Institute of Genomics and Integrative Biology (CSIR-IGIB) and LVPEI, along with collaborators, have developed an enhanced CRISPR-Cas9 based genome editing system, which is more precise and efficient than existing technologies. The edited and validated Cas9 protein from *Francisella novicida* (FnCas9), creating enFnCas9, showed normal protein expression and no detectable off-target alterations, proving the efficacy and safety of the enFnCas9-based CRISPR tool for precise genome editing. This development is a significant step towards therapeutic applications for genetic disorders in the Indian population, highlighting the importance of advancing gene correction tools for clinical use and market authorization.

## **CSIR Launches National Mission on Sustainable Packaging Solutions**

The CSIR has launched a National Mission on Sustainable Packaging Solutions. The mission, coordinated by CSIR-NIIST, Thiruvananthapuram, involves a consortium of eight partnering CSIR labs and industry partners. The mission aims to address sustainable packaging demands by developing advanced packaging materials, smart recycling, and reuse methods. It seeks to transform the packaging industry to be smart, affordable, and reliable, incorporating advanced testing and monitoring facilities.

## **Tata International and CSIR-CLRI Launch Eco-Friendly Phoenix Leather**

Phoenix Leather, developed in collaboration with CSIR-Central Leather Research Institute (CSIR-CLRI) and Tata International, has been introduced as an eco-friendly product in the Earth care Leather range of Tata International. The patented "GENOCORIUM" process converts leather trim waste into high-quality reconstituted leather sheets, reducing water pollution and greenhouse gas emissions.

## **CSIR-IMTECH Develops Promising SARS-CoV-2 Vaccine**

CSIR-IMTech, Chandigarh, in collaboration with Centre for Infectious Disease Research (CIDR), IISc, Bengaluru and National Institute of Immunology (NII), New Delhi developed a protein subunit-based vaccine candidate, IMT-CVAX, showing "near-complete protection" in preclinical studies. IMT-CVAX is an engineered trimeric spike protein antigen designed to combat SARS-CoV-2 variants, generating robust immune responses in preclinical tests on mice and hamsters. The vaccine's large-scale production is feasible, with efficient storage in standard refrigerators, making it ideal for mass immunization. IMT-CVAX has been internationally patented, and the study shows its potential to provide long-lasting immunity against future SARS-CoV-2 infections.

## **CSIR-NAL Unveils Indigenous Kamikaze Drones for India's Defence**

CSIR-NAL has unveiled the development of swadeshi Kamikaze Drones, capable of flying up to 1,000 kilometers with home-built engines, enhancing India's defense capabilities. The Indian kamikaze drone, measuring 2.8 meters in length and carrying a 25 kg explosive charge, can hover for up to nine hours before striking its target. Powered by a 30-horsepower Wankel Engine developed by CSIR-NAL, the drone can operate in GPS-denied environments and navigate using India's NAViC system.

## **CSIR Floriculture Mission Empowers Women in Ramban, J&K with Marigold Farming**

Women in Ramban district, J&K, are increasingly adopting marigold farming under CSIR's Floriculture Mission. The initiative, led by CSIR, provides training, guidance, and free seeds and helps women shift from traditional maize farming to more lucrative, convenient, and environmentally friendly marigold cultivation.

## **CSIR-IHBT Empowers Farmers in Meghalaya with Aromatic Crop Training**

A team from the CSIR-Institute of Himalayan Bioresource Technology (IHBT), Palampur, in collaboration with the Institute of Natural Resources (INR), Shillong, conducted training-cum-awareness

program on agro and processing technologies of aromatic crops from 3-4 September 2024. The farmers were provided practical training on agronomic practices and post-harvest processing of aromatic crops suitable for Meghalaya's climate, which have significant potential to improve livelihoods in the region. The team also visited the farm fields and provided hands-on demonstrations and assessed the current state of aromatic grass cultivation.

### **CSIR-SERC Conducts Load Deflection Test on Pamban Rail Bridge Centre Span**

Load deflection test on the New Pamban Bridge was carried out by Rail Vikas Nigam Limited (RVNL) in collaboration with CSIR-Structural Engineering Research Center (CSIR-SERC), Chennai. The trial was conducted using twin GOC WDG4D locomotives from the Golden Rock Shed. The purpose of the test was to assess the structural integrity and performance of the bridge under load conditions. The health monitoring using the state of the art sensing technologies, monitoring systems and control stations along with health assessment tools have been established by CSIR-SERC on the navigational vertical lift span of the bridge.

## **CSIR-NCL and CeNS Develop New Piezoelectric Nanocomposite for Energy Harvesting**

CSIR-National Chemical Laboratory (CSIR-NCL), Pune in collaboration with Centre for Nano and Soft Matter Sciences (CeNS), Bengaluru, have developed a new piezoelectric polymer nanocomposite for security alert system, enhancing energy harvesting in flexible electronics. This development was based on the finding that metal oxide nanomaterials with appropriate crystal structure and surface properties when used as fillers in a polymer composite lead to a significant enhancement in the piezoelectric response.

## **CSIR-CFTRI Collaborates with McDonald's to Launch Multi-Millet Buns**

CSIR-Central Food Technological Research Institute (CSIR-CFTRI) launched a multi-millet bun in collaboration with McDonald, as part of the National Nutrition Week program, taking a step towards enhancing the health and nutrition profile. The nutritional buns are made of five nutrient-rich millets like bajra, ragi, jowar, proso and kodo. The millets are sourced locally, from various regions including Gujarat, Maharashtra, Karnataka, Rajasthan, Tamil Nadu, Madhya Pradesh and Chhattisgarh. The CSIR-CFTRI's multi-millet bun was launched by McDonalds in Mumbai, with a focus on the customer base in South and West India, initially. Wheat flour has been replaced by 22 per cent millets. The millets have been sourced from more than 5,000

farmers across India, the initiative has potential to uplift and empower the farmers of the country.

### **CSIR-CCMB Develops Rapid Test for Sickle Cell Anaemia**

CSIR-CCMB, Hyderabad has developed an accurate, rapid, and affordable molecular test for screening sickle cell anaemia (SCA). This test uses indigenously developed reagents and is designed to better detect the prevalence of this genetic disease, which affects a significant portion of both the tribal and mainland populations

### **CSIR-CBRI to Address the Structural Stability of Airports**

In response to a series of structural failures at various airports, including the partial collapse of a canopy at Terminal 1 (T1) of Delhi's Indira Gandhi International Airport in June, the Ministry of Civil Aviation has assigned CSIR-CBRI for advising airport operators across the country on structural safety and integrity. The decision to engage CSIR-CBRI follows several concerning incidents, including canopy collapses at Jabalpur and Rajkot airports in June. CSIR-CBRI will guide the structural aspects of airport infrastructure, ensuring operators take necessary precautions to prevent such occurrences in the future. The Ministry of Civil Aviation also plans to organize a technical workshop for airport operators with the involvement of CSIR-CBRI, where

experts from the institute will provide specialized training on structural safety and resilience.

### **CSIR-CSIO develops AI-powered Drone for Automatic Target Identification**

CSIR-Central Scientific Instruments Organisation (CSIR-CSIO) has developed a drone-mounted software framework to enable automatic detection of objects like humans, bunkers and tanks from optical images and pinpoint their exact location. The framework is meant to enhance UAV capabilities in surveillance and automation. Unlike the video or still feed from an airborne drone, which is viewed and analysed by controllers to locate objects or targets, in the current technology the system itself identifies the desired objects based on the task at hand.

### **CSIR-NAL and HAL to support India's Aircraft Design and Manufacturing**

CSIR-NAL and HAL will collaborate with industry leaders to drive the development of domestic aircraft design and manufacturing, an initiative of Ministry of Civil Aviation supporting *Aatmanirbhar Bharat*.

## **CSIR-NCL's Enhanced Oxygen Systems for MiG-29 Fighter Jets**

CSIR-NCL has upgraded the On-Board Oxygen Generation System (OBOGS) for MiG-29 jets, boosting oxygen supply during high-altitude missions. The project for the Indian Navy aimed to improve pilot safety. Zeolite-based technology in OBOGS has an enhanced 85% pure oxygen, up from 30%, due to a specialized rejuvenation process developed by CSIR-NCL. Tests in Goa confirmed the upgrade, with about 54 kg of zeolite material rejuvenated for multiple MiG-29 jets. Indigenous zeolite production ensures system longevity, supporting Navy operations with locally sourced, enhanced oxygen solutions.

## **CSIR's first-of-its-kind initiative for development of Indian Breast Cancer Genomic Atlas (IBCGA) for India-Specific Cancer Resources**

CSIR-CCMB is developing the Indian Breast Cancer Genomic Atlas (IBCGA) by mapping nearly 1,000 breast cancer tumor genomes across India. This first-of-its-kind initiative aims to identify molecular features specific to Indian breast cancer cases, which could enhance clinical management and treatment options.

## **CSIR-4PI Tracks India-Tibet Tectonic Movements with Precision GPS Stations**

India's tectonic plate is subducting under the Tibetan plate, causing gradual land loss and elevation gain in the Himalayas. CSIR-Fourth

Paradigm Institute (CSIR-4PI) has set up GPS reference stations at Hanle (Ladakh) and Bengaluru to monitor these movements precisely. Data from these stations helps scientists understand strain build-up and earthquake potential in the Himalayan region.

### **CSIR-CEERI, C-DOT Collaborate for Development of Multiport Switch for Future Telecom Systems**

CSIR-Central Electronics Engineering Research Institute (CSIR-CEERI) has partnered with C-DOT to develop a "Multiport Switch with Tuneable Impedance Matching Network," aiming to cover 2G, 3G, 4G, and 5G bands with a single broadband antenna. Funded by the Telecom Technology Development Fund (TTDF), the project supports Indian startups and R&D institutions in creating advanced telecom solutions.

### **CSIR-NML Transfers Advanced PCB Recycling Technology to Novasensa Pvt. Ltd.**

CSIR-NML has transferred its advanced PCB recycling technology to Novasensa Pvt. Ltd., New Delhi, with the aim to tackle the e-waste crisis. The process adheres to zero-waste principles, reducing pollution and conserving natural resources by recovering critical materials from e-waste.

## **CSIR-NIIST Launches 'Jaivam', an Eco-friendly and High-speed Composting of Organic Waste**

The CSIR-NIIST, Thiruvananthapuram has developed a microbial consortium, named 'Jaivam,' for facilitating a clean and speedy composting process and producing good quality compost for agricultural use. The development of Jaivam and similar R&D initiatives by CSIR-NIIST will help address challenges such as greenhouse gas emission (methane and nitrous oxide) from bulk composting facilities and improve the compost quality through bio-augmentation.

## **CSIR-NGRI Discovers Potential Geothermal Reservoir in Eastern Ladakh**

CSIR-National Geophysical Research Institute (CSIR-NGRI) has uncovered a potential new geothermal reservoir in eastern Ladakh, opening opportunities for sustainable energy development in the region. The research was conducted along the Ukdungle-Hanle-Koyul-Fukche profile, where NGRI scientists used magneto telluric surveys to map the crustal structure over a 40 km stretch.

## Asia's First Highway with Bio-Bitumen Surface Inaugurated

The Union Minister for Road Transport and Highways, Shri Nitin Gadkari, inaugurated a 1km stretch of Asia's first highway with a bio-bitumen blended surface developed using CSIR-CRRI technology. The trial patch begins near the 'Kamptee 22Km' milestone on Jabalpur-Nagpur route. The project will help cut pollution from stubble burning as the source of bio-bitumen comes from easily available crop stubble, which farmers can sell instead of torching the residue.

### Reference

Press Information Bureau: [Council of Scientific and Industrial Research \(CSIR\) Year End Review 2024](#)

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*GREAT MINDS HAVE PURPOSES; OTHERS HAVE WISHES.*

Washington Irving

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### 138. Impact Assessment Studies on Smart Cities Mission

The Indian Institute of Management, Bangalore, has conducted a study that unequivocally demonstrates the significant improvements in the quality of education brought about by the Smart Cities Mission, particularly through the introduction of Smart Classrooms.

#### Smart Cities Mission

The Smart Cities Mission has made a substantial impact on education, with 71 smart cities developing a staggering 9,433 smart classrooms in 2,398 government schools, as reported by the Indian Institute of Management, Bangalore. The Smart Cities Mission has not only focused on technological advancements but also on cultural revival. From Srinagar to Chennai, Aurangabad to Aizawl, the Mission has upgraded public education facilities, breathing new life into public reading spaces. Indian Smart Cities Mission uses technology to bridge gaps in public education, IIM Bangalore Impact assessment study

- *Nagpur reported a 14% decline in overall crime rates post-implementation of surveillance measures, says IIM Bangalore.*
- *According to the IIM Bangalore report, Chennai's Edge Analytics for Crime Prevention is a technological leap in women's urban safety.*

- *The study highlights how smart lighting and panic buttons are reducing crime and building safer urban spaces for women.*



The Indian Institute of Management, Bangalore conducted two significant studies under the SAAR—Sameeksha Series. These studies concluded improvements in the Quality of Education through Smart Classrooms and real-time tracking of incidences of criminal activities in Indian Smart Cities.

The two studies included the following questions:

### **Improvement in Quality of Education**

**Has there been improvement in Indian Smart Cities towards Quality of Education through Smart Classrooms?**

Under SAAR - Sameeksha Series of Smart Cities Mission (SCM) launched in Nov 2023, 50 national-level impact assessment studies were carried out on various themes in Indian smart cities by twenty-nine (29) premier institutions of India. In this series, a study titled 'Has there been improvement in Indian Smart Cities towards Quality of Education through Smart Classrooms for Children especially Poor Children, like the decline in the dropout rate, etc. if any' was undertaken by the Indian Institute of Management Bangalore.

The national-level study concluded that 71 cities have developed 9,433 smart classrooms in 2,398 government schools. The introduction of smart classrooms by SCM has led to a 22% increase in overall enrolment, per the data reported by 19 cities between 2015-16 and 2023-24. The concerned authorities in Ajmer (Rajasthan), New Delhi Municipal Council (NDMC),

and Tumakuru (Karnataka) undertook detailed city-level analysis. Another key outcome of the report includes the following:

1. 41 cities have developed Digital Libraries with a total of 7,809 seating capacity.
2. The study highlights the significant impact of Digital Libraries in cities like Raipur and Tumakuru. These libraries provide essential educational resources and support students' preparation for competitive exams.
3. Training for teachers improved their comfort and preference for using smart classroom facilities, with senior secondary teachers showing the highest comfort levels compared to others.
4. Teachers generally agree that the smart classroom initiative is improving learning experiences and student attendance across select smart cities in the country.
5. The introduction of smart solutions at government schools and public libraries (in the form of smart classrooms and digital libraries) has facilitated inclusive access to smart education for economically weaker sections.

Note: You can download the report from the weblink: [Has there been improvement in the Indian Smart Cities towards Quality of Education through Smart Classrooms for children especially Poor Children, like decline in dropout rate, etc. if any? | IIM Bangalore.](#)

## The Impact on Criminal Activities

What has been the impact of real-time tracking on the incidences of criminal activities in Indian Smart Cities, especially crime against women?

Under SAAR - The government launched the Sameeksha series of Smart Cities Mission (SCM) in November 2023; 50 national-level impact assessment studies were carried out on various themes in Indian smart cities by twenty-nine (29) premier institutions of India. In this series, a survey on 'What has been the impact of real-time tracking in incidences of criminal activities in Indian Smart Cities, especially crime against women?' was undertaken by IIM Bangalore. The study assesses the effects of security and surveillance measures, including real-time incident tracking, CCTV cameras, IoT-enabled devices, and their integration with Integrated Command and Control Centers (ICCCs) in ensuring the urban safety of women and girls. The national-level study has focused on the smart cities of Chennai (Tamil Nadu), Nagpur (Maharashtra), and Tumakuru (Karnataka) for a detailed primary impact assessment. Other key outcomes of the report include the following:

1. Across 93 smart cities, over 59,802 CCTV cameras and emergency call boxes have been installed, and real-time monitoring systems through ICS have contributed to a safer urban environment for women. Integration of surveillance systems with police operations has enhanced evidence-based policing nationwide.

2. Chennai and Tumakuru leveraged advanced monitoring systems, integrating safety cameras with ICCCs to assist law enforcement in gathering critical evidence for resolving crimes efficiently.
3. Nagpur reported a 14% decline in overall crime rates post-implementation of surveillance measures.
4. Implementing smart surveillance systems has reduced harassment, assault, and other crimes in areas with robust safety measures. Women in these three cities reported increased confidence in assessing public spaces.

Note: You can download this report from the weblink: [What has been the impact of real time tracking in incidences of criminal activities in Indian Smart Cities especially crime against women? | IIM Bangalore.](#)

### **SAAR – Sameeksha Series**

The Mission launched a platform in 2022, named 'SAAR' (Smart Cities & Academia towards Action & Research), to bridge academia and government and document and research new urban initiatives.

Under the SAAR initiative, the Smart Cities Mission has initiated 50 Impact assessment research studies as the "Sameeksha Series." Twenty-nine premier institutions of India have undertaken these 50 Impact Assessment studies, which include - 6 IIMs, 8 IITs, 3 SPAs, and 12 specialized research institutes. The Mission offered data and facilitated on-ground site visits to

these institutions to document the learnings that could be bedrock for future urban development policies.

### **Brief - Smart Cities Mission**

The Ministry of Housing & Urban Affairs (MoHUA), Govt of India, launched the Smart Cities Mission (SCM) on 25 June 2015. This Mission, with its focus on promoting cities that provide core infrastructure and give their citizens a decent quality of life, a clean and sustainable environment, and the application of 'Smart' Solutions, stands as a unique and powerful urban experiment in modern India.

As of November 2024, 91% of the projects under SCM have been completed. The cities under SCM have brought forward several unique, innovative, and replicable projects/ models to cater to the local needs of residents. With the Mission nearing completion, it is imperative that impact assessment and documentation of these unique solutions be undertaken.

#### *Reference*

Press Information Bureau: [Impact Assessment Studies on Smart Cities Mission](#)

## 139. India-Australia Economic Cooperation and Trade Agreement

### A Success Story

#### INDIA-AUSTRALIA ECONOMIC COOPERATION AND TRADE: A SUCCESS STORY

Fostering mutual growth, enhancing trade ties



##### SUCCESS METRICS

###### Bilateral merchandise trade

- 2020-21: USD 12.2 billion
- 2022-23: USD 26 billion
- 2023-24 Forecast: USD 24 billion

14% growth in India's exports to Australia



##### UTILIZATION RATES

Export (79%)



Import (84%)



##### SECTOR GROWTH

Textiles



Chemicals



Agriculture



**Notable exports:** Gold studded with diamonds and turbojets

##### RAW MATERIALS

**Imports benefiting India's industries:**  
Metalliferous ores, Cotton, Wood

##### FUTURE OUTLOOK

**Negotiation Process:** 10 completed formal rounds of negotiations for the CECA; **Future Goal:** AUD 100 billion trade by 2030



**Commitment of both nations to achieve deeper economic integration and mutual prosperity**

theknowledgeandlearningenterprise.com

The India-Australia Economic Cooperation and Trade Agreement (Ind-Aus ECTA) has achieved remarkable success in just two years. This agreement fosters mutual growth and emphasizes the complementary nature of both

economies. It strengthens trade ties, creates opportunities for MSMEs and businesses, and generates employment in both nations, solidifying their economic partnership.

Since signing, bilateral merchandise trade has more than doubled, skyrocketing from USD 12.2 billion in 2020-21 to USD 26 billion in 2022-23. Although total trade moderated to USD 24 billion in 2023-24, India's exports to Australia grew by 14%, showcasing sustained growth. From April to November 2024, total merchandise trade reached USD 16.3 billion, demonstrating strong momentum in the current fiscal year.

The introduction of preferential import data in 2023 confirms the agreement's effective implementation. This data shows an export utilization rate of 79% and an import utilization rate of 84%, indicating robust participation.

Key sectors like textiles, chemicals, and agriculture experienced significant growth. Notably, exports of gold studded with diamonds and turbojets highlight the diversification driven by this agreement. India's industries have benefited from importing essential raw materials such as metalliferous ores, cotton, and wood products. Sectors like electronics and engineering also show substantial growth potential.

Building on the success of ECTA, negotiations for the India-Australia Comprehensive Economic Cooperation Agreement (CECA) are progressing. So far, negotiators have completed 10 formal rounds and held

additional inter-sessional discussions. CECA aims to enhance the bilateral trade agenda with greater ambition, building on the strong foundation established by ECTA.

Both nations remain committed to leveraging the momentum from ECTA. They pursue deeper economic integration with an ambitious goal of AUD 100 billion in bilateral trade by 2030. Together, India and Australia are poised to elevate their economic partnership, fostering mutual prosperity and contributing to a more resilient global economy.

*Reference*

*Press Information Bureau: [India-Australia Economic Cooperation and Trade Agreement marks two years of success](#)*

## 140. India's Green Recovery: Forest Growth and Reduced Fire Incidents

### Introduction

Forests are crucial for combating climate change. They absorb carbon, preserve biodiversity, and provide clean air and water. However, environmental pressures threaten these essential ecosystems. Fortunately, India is experiencing a positive shift. The India State of Forest Report (ISFR) 2023 reveals that India's forest and tree cover now spans 827,357 square kilometers, accounting for 25.17% of the nation's total land area. This includes 715,343 square kilometers of forest cover and 112,014 square kilometers of tree cover. This progress reflects India's commitment to balancing development and environmental conservation.

### ISFR 2023: A Snapshot of India's Forests

The India State of Forest Report (ISFR) 2023, published by the Forest Survey of India (FSI), assesses the country's forest resources using satellite data and field information. This biennial report marks its 18th edition since the first publication in 1987.

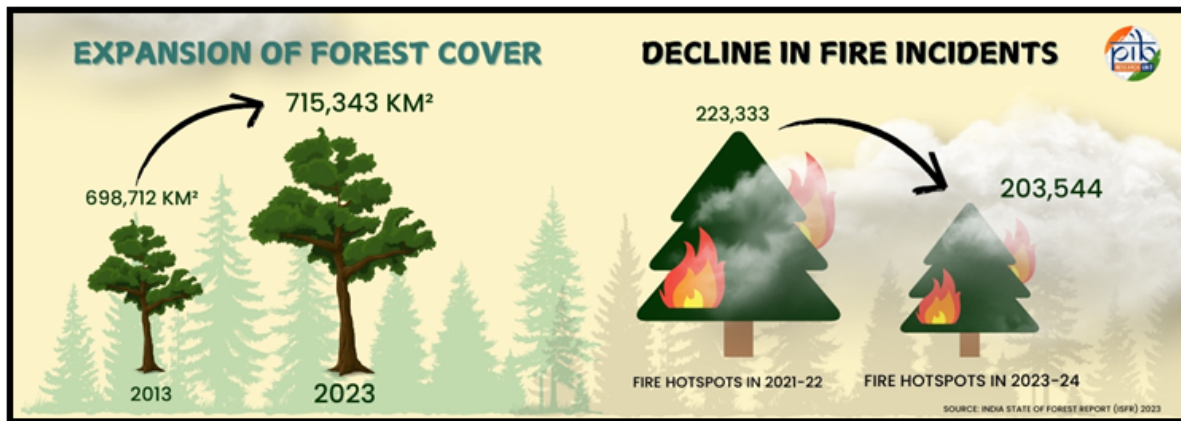
- Volume I: National assessment, covering forest and mangrove cover, forest fires, carbon stocks, and decadal changes.

- Volume II: Detailed information on forest cover and field inventory data for each State and Union Territory (UT).

## Growth in Forest Cover

The ISFR 2023 shows positive growth in India's forest cover, increasing from 698,712 km<sup>2</sup> in 2013 to 715,343 km<sup>2</sup> in 2023. Fire incidents have also declined significantly, with 203,544 fire hotspots recorded in 2023-24, down from 223,333 in 2021-22. In line with India's Nationally Determined Contributions (NDC), the country achieved a carbon sink of 30.43 billion tonnes of CO<sub>2</sub> equivalent, nearing its target of 2.5 to 3.0 billion tonnes by 2030.





## Government Schemes and Initiatives to Increase Forest Cover

The Forest Survey of India (FSI) plays a pivotal role in improving forest monitoring. It enhances mapping, upgrades the Forest Fire Alert System, and completes the National Forest Inventory cycle to provide vital data on forest growth and carbon stocks. Digitization of forest boundaries across 25 States and UTs has further improved assessments.

Below are key government schemes promoting forest cover:

- National Mission for a Green India (GIM): Launched in February 2014, this mission aims to enhance India's forest cover through protection, restoration, and expansion. It has released ₹944.48 crore to 17 States and 1 UT for plantation and eco-restoration.

- Nagar Van Yojana (NVY): Established in 2020, this scheme focuses on developing green spaces in urban areas. The Ministry has approved 546 projects across 31 States/UTs with ₹431.77 crore allocated.
- School Nursery Yojana (SNY): This initiative raises awareness about plants and encourages tree planting in schools. With an allocation of ₹4.80 crore, it has sanctioned 743 projects across 19 States/UTs.
- Mangrove Initiative for Shoreline Habitats & Tangible Incomes (MISHTI): Launched for 2023-2028, this initiative restores and promotes coastal mangroves. ₹17.96 crore is allocated to states like Andhra Pradesh and Gujarat.

Through various initiatives, the Ministry extends financial support for mangrove protection in 9 coastal states and 1 UT. These efforts contribute to significant ecosystem conservation.

### **Legal Framework for Forest and Wildlife Protection**

India's strong legal framework ensures the protection and sustainable management of forest and wildlife resources. Key laws include:

- The Indian Forest Act, 1927
- The Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980
- The Wildlife (Protection) Act, 1972, which focuses on protecting wildlife habitats and establishing national parks.

State Forest Acts cater to specific forest management needs, while Tree Preservation Acts protect trees in urban and rural areas. State Governments and Union Territories are responsible for enforcing these laws to ensure sustainable practices.

### **People's Connection with Nature**

Legal provisions alone cannot drive the change we need; dedicated individuals make a real difference. Padma Shri Tulsi Gowda, known as the "Mother of Trees," dedicated over 60 years to planting and nurturing countless trees in Karnataka. Her work transformed barren land into lush forests and serves as a lasting legacy in environmental conservation.

Tulsi's legacy reminds us of the need for individuals committed to nurturing the environment, ensuring a greener future for generations to come.

### **Conclusion**

India is making remarkable strides in its journey towards environmental sustainability. The 2023 India State of Forest Report showcases impressive growth in both forest and tree cover, a significant decline in fire incidents, and the flourishing of agroforestry. These achievements reflect the country's dedication to balancing development with conservation. Through innovative government initiatives and the involvement of local communities, India is not just protecting its natural resources but actively

restoring them. With continued commitment and collective action, India is paving the way for a greener, healthier future for all.

*References*

*Forest-Report 2023*

X.com: [India Forest Report](#)

Press Information Bureau: [Press Release](#)

Press Information Bureau: [Forest Conservation](#)

Press Information Bureau: [Conservation of Forest](#)

Press Information Bureau: [Forest and Tree Cover Grows, Fire Incidents Fall](#)

## 141. Key Developments Related to the Ministry of Corporate Affairs in 2024



In 2024, the government launched the Prime Minister's Internship Scheme to provide 1 crore internships in top 500 companies over five years. The scheme offers:

- Financial assistance of ₹5,000 per month, with ₹4,500 from the Union Government and ₹500 from CSR funds.

- A one-time grant of ₹6,000 for incidentals per intern.
- Internships lasting 12 months.

The pilot project, launched on October 3, 2024, aims to provide 1.25 lakh internships during FY 2024-25. Partner companies have already posted 1.27 lakh opportunities, receiving 6.21 lakh applications.

### **Migration to MCA V3: Simplifying Compliance**

The Ministry successfully migrated MCA 21 from Version 2 to Version 3, streamlining compliance:

- Reduced compliance forms from five to three.
- Fully online fund transfer processes through a Straight Through Process (STP).
- A dedicated dashboard for Nodal Officers to manage verification reports.

### **Jan Vishwas Initiatives: Simplifying Share and Security Processes**

#### **1. Legal Heirship Certificate for Share Transmission**

- Legal heirship certificates now validate share transmission, eliminating the need for succession certificates or probate.

- This reform saves time and costs for beneficiaries navigating inheritance complexities.

## 2. Streamlined Lost Share Certificate Process

- Filing an FIR for lost certificates valued up to ₹5 lakh is no longer required.

## 3. No Surety Required for Duplicate Physical Certificates

- The elimination of surety requirements simplifies replacing lost or damaged certificates.

## Enhanced Grievance Redressal by IEPFA

The IEPFA revamped its grievance redressal mechanism with:

- A multilingual IVRS system available in six languages via a five-digit short code (14453).
- Initiatives like Niveshak Sunwai, Niveshak Panchayat, and Niveshak Saarthi, promoting inclusivity and financial literacy.

## Integrated Technology Platform Under IBC

The government proposed an Integrated Technology Platform under the Insolvency and Bankruptcy Code (IBC) to:

- Automate processes, file applications, and deliver notices.

- Improve transparency, minimize delays, and enhance stakeholder participation.

### **Insolvency and Bankruptcy Code Achievements**

The IBC facilitated:

- Resolution of ₹10.22 lakh crore default cases pre-admission by March 2024.
- Completion of 1,068 CIRPs with an average realization of 86.13% of the corporate debtor's fair value.
- Over 3,409 corporate debtors navigating insolvency processes, achieving a 161% realization rate against liquidation value.

### **Competition Commission of India (CCI) Milestones**

The CCI achieved:

- Disposal of 99% of combination cases by September 2024.
- Approval of significant mergers in financial, pharmaceutical, and digital sectors.
- Initiation of a study on competition issues in renewable energy across BRICS nations.

## Improved Filing Rates and Advisory Initiatives

- Compliance with Section 148 of the Companies Act rose, with a 35% increase in CRA-2 filings and a 36% rise in CRA-4 filings in FY 2023-24.
- Timely submission of Cost Audit Reports improved by 14% due to proactive advisories.

## Examination of Existing Framework of Cost Audit and its Rules:

- To review the existing framework of Cost Records and Cost Audit and to improve the usefulness of the Cost Audit Reports in various sectors of the economy, a Committee was constituted in October, 2023 by MCA.
- The Committee's report has been placed on the website of MCA inviting comments from the stakeholders.
- Based on the stakeholders comments, recommendations of the Committee will be examined and the framework governing Cost Record and Audit will be amended.

## Central Processing Centre (CPC)

The CPC, launched in 2024, manages e-form processing and statutory compliance under the Companies Act.

## **CPACE for Accelerated Corporate Exit**

CPACE reduced corporate exit processing time from two years to 90 days by FY 2023-24. It also handles LLP closure applications, ensuring swift processing.

## **Amendments in Companies Act and L.L.P. Act**

The Ministry decriminalized 63 provisions, introducing an electronic, faceless adjudication mechanism, eliminating the need for in-person hearings.

## **Updates to Indian Accounting Standards**

1. Ind AS 116: Amendments addressed leaseback transactions and introduced paragraph 102A.
2. Ind AS 117: A new standard for insurance contracts was introduced.

## **Empowering Regional Directors**

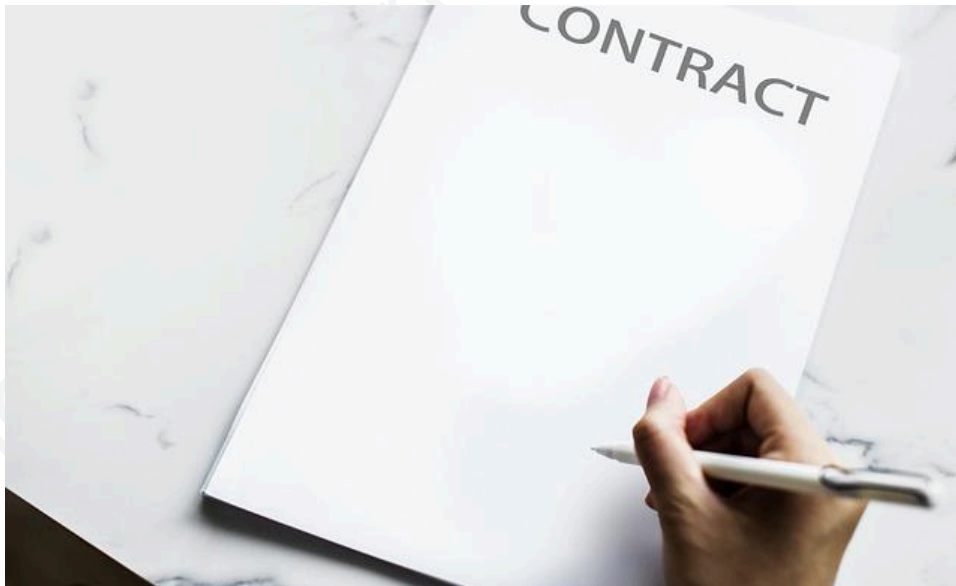
Amendments to CAA Rules empower Regional Directors to approve holding-subsidary mergers in India, expediting the process.

## **Center for Processing Accelerated Corporate Exit (C-PACE)**

- The Center for Processing Accelerated Corporate Exit (C-PACE), introduced in the 2022-23 budget, accelerates the voluntary closure

process for companies. It has cut the closure time from about two years to under six months.

- Since its launch on May 1, 2021, C-PACE has streamlined and centralized the application process, reducing the average closure time to roughly 90 days in FY 2023-24. Additionally, it now processes Limited Liability Partnership (LLP) closure applications to enhance efficiency.
- The notification for C-PACE to manage LLP closure applications was issued on August 5, 2024, and became effective on August 27, 2024. By December 7, 2024, C-PACE had processed 4,640 LLP closure applications, demonstrating its commitment to fast processing.



## Amendments to the Companies Act, 2013, and LLP Act, 2008

- Amendments to the Companies Act, 2013, and LLP Act, 2008, decriminalized 63 provisions, shifting defaults to an in-house adjudication system. The Registrar of Companies (RoC) currently handles default cases, requiring corporate representatives to attend hearings in person.
- To improve efficiency and reduce face-to-face interactions, the adjudication process has moved to an electronic, faceless system. This change removes in-person requirements at the RoC level, making the process smoother and more accessible for corporate entities.

Reference: Press Information Bureau [Year End Review-2024 : Ministry of Corporate Affairs](#)

Images: [Pixabay](#)

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*May the joy of simple things color the canvases of your soul.*

MARY DAVIS

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## 142. New Initiatives of the Ministry of Commerce in 2024

### **InCENT Lab Grown Diamond (LGD) Project**

The InCENT Lab Grown Diamond (LGD) Project promotes local production of Lab-Grown Diamonds (LGD) seeds and machines, reducing India's import dependency. This vital 'Make in India' initiative boosts indigenous LGD manufacturing, fosters local job creation, and enhances the Indian economy's export potential.

### **Bharat Mart in Dubai**

Bharat Mart is a transformative trade hub located in the Jebel Ali Free Zone, Dubai. It serves Indian exporters by establishing a wholesale and retail marketplace. This hub connects India's growing manufacturing sector with international markets, aligning with Indian government initiatives like Make in India and promoting MSMEs.

Bharat Mart will feature 1,400 units, including showrooms, warehouses, and office spaces. It offers multimodal connectivity with Jebel Ali Port, Al Maktoum International Airport, and Etihad Rail. Focus sectors include machinery, electrical and electronics, auto components, medical equipment, furniture, apparel, processed food, pharma, cosmetics, rubber products, and handicrafts. Commercial operations are set to begin in Q1 2026.

## **Pradhan Mantri Cha Shramik Protsahan Yojana (PMCSFY)**

Through the PMCSFY initiative, over 1 million families of workers in 1210 tea gardens across Assam and West Bengal will gain access to improved education, health services, and working conditions.

## **Strengthening Organic Regulatory Ecosystem**

The revamped National Programme of Organic Production (NPOP) will benefit 2 million farmers from 5,000 certified grower groups by enhancing export opportunities. The initiative aims to increase organic exports beyond USD 1 billion by 2025-26.

## **Enhanced Insurance Cover for MSME Exporters**

The ECGC has expanded its Whole Turnover Export Credit Insurance for Banks (WT-ECIB) scheme to increase export working capital limits to ₹80 crore, effective July 1, 2024. This scheme enables banks to offer affordable export credit. ECGC aims to benefit around 1,000 new exporters and assist 8,000 existing exporters by facilitating better access to financing.

Starting May 1, 2024, ECGC will provide up to 100% insurance cover for exporters who purchase policies directly from the company, reducing collateral requirements for MSME export credit.

## **E-Commerce Export Hubs**

In the 2024-25 Union Budget, the government proposed establishing E-Commerce Export Hubs (ECEHs) to empower MSMEs and artisans to reach international markets. These hubs will operate under a seamless framework, offering warehousing, packaging, certification, and logistics services.

The pilot launch, approved in partnership with various government departments, includes five ECEH pilots in the NCR region, Bengaluru, and Mumbai.

## **Launch of Aabhar Collection**

On July 11, 2024, GeM launched the AABHAR COLLECTION under the #VocalForLocal initiative to showcase curated products like One District One Product (ODOP) items, Geographical Indication (GI) goods, and gift hampers from select organizations. The collection features five categories:

- Handloom products
- Handicraft products
- Artisanal food items
- Personal care products
- Sustainable products

## **Digital Transformation**

The department has implemented significant digital transformations to streamline trade facilitation. These initiatives aim to improve business efficiency, reduce delays, and enhance transparency in trade processes.

The Trade Connect e-Platform, launched on September 11, 2024, serves as a single-window system for Indian exporters, particularly MSMEs. Developed with partners like the Ministry of MSME and EXIM Bank, the platform provides real-time trade information and connects exporters with government bodies.

The JanSunwai Facility, launched on September 13, 2024, allows for on-demand video conferencing with trade officers, improving communication and enhancing transparency in processes.

## **Reducing Compliance Burden**

The Self-Certified Electronic Bank Realisation Certificate (e-BRC) system eliminates costs for 2.5 million e-BRCs annually, promoting a paperless process. This efficiency particularly benefits small exporters dealing in e-commerce by streamlining high-volume, low-cost transactions.

## **24x7 Auto-Generation of e-IEC**

The department now offers 24x7 auto-generation of the Import Export Code (IEC), allowing users to obtain their codes without delays. The

system validates IEC details against various databases, enhancing efficiency.

### **Trade Facilitation Mobile App**

The Trade Facilitation Mobile App provides real-time updates on foreign trade policies, import/export statistics, application statuses, and virtual assistance. This app is a vital resource for anyone involved in trade and export activities.

*Reference: Press Information Bureau [2024 Year End Review for Department of Commerce](#)*

## 143. Breakthroughs in Science: A 2024 Review

The year 2024 marked groundbreaking achievements in medicine, space exploration, and ancient genetics, leading to remarkable discoveries.



### Neanderthal Museum and Genetic Research

The newly opened Neanderthal Museum features an exhibit portraying the life of a Neanderthal family in a cave. Recent genetic studies have refined the timeline of interbreeding between humans and Neanderthals, deepening our understanding of shared history.

### Best Inventions and Discoveries of 2024

- HIV Prevention Drug Lenacapavir: Initially approved in 2022, Lenacapavir demonstrated exceptional results in 2024 trials, with a

96% success rate in one and 100% in another. Delivered as a semi-annual injection, it is a groundbreaking PrEP (pre-exposure prophylaxis) solution for HIV, according to *Discover Magazine*.

- **Fruit Fly Brain Mapping:** In October 2024, scientists published a detailed map of 140,000 neurons in a fruit fly's brain, providing insights into human cognition and memory. This milestone was the result of a decade-long study.
- **New Super-Earth Discovery:** NASA identified TOI-715 b, a super-Earth 137 light-years away, located in a habitable zone that could support liquid water. An Earth-like planet, TIC 271971130.02, may also exist within its orbit.
- **Neanderthal and Human Interbreeding:** Genetic research of 59 ancient and 275 modern human genomes determined that humans and Neanderthals coexisted in Eurasia for about 7,000 years, from 50,500 to 43,500 years ago.
- **Advancements in CRISPR Technology:** CRISPR technology continues to evolve. Researchers at Profluent are developing OpenCRISPR-1, an open-source gene editing platform powered by large language models like ChatGPT, enhancing accuracy, safety, and ethical applications.

- **Oldest Known Reptile Skin:** Scientists discovered 20-million-year-old fossilized reptile skin, possibly belonging to *Captorhinus agouti*, a semi-aquatic species.
- **New Moons of Neptune and Uranus:** Three new moons were identified around Neptune and Uranus in 2024, raising their combined total to 30.
- **Cave Art Discovery in Patagonia:** In Cueva Huenul 1, Patagonia, researchers uncovered 900 pigmented cave paintings, some over 8,200 years old, depicting faces, geometric shapes, and llama-like creatures. These artworks likely served as tools for cultural learning and historical reflection for over 100 generations.
- **DermaSensor for Skin Cancer Detection:** The DermaSensor, a noninvasive device from Boston University, uses light technology to differentiate malignant from benign skin lesions. FDA-approved in January 2024, it was named one of *Time's* "Inventions of the Year" and promises to reduce missed diagnoses by half.
- **AI Model Predicts Alzheimer's Progression:** A machine learning model developed by Boston University predicts the progression of mild cognitive impairment to Alzheimer's disease with 78.5% accuracy, offering a breakthrough in early diagnosis.

- **Deep-Sea Rocks Generating Oxygen:** Researchers discovered that polymetallic nodules in the Pacific Ocean produce oxygen via seawater electrolysis, a process previously attributed only to sunlight-dependent organisms. This groundbreaking finding involved Boston University biologist Jeffery Marlow.
- **Space Cloud's Climate Impact on Earth:** Boston University researchers revealed that two million years ago, Earth encountered a dense interstellar cloud. This event compressed the sun's heliosphere, exposed Earth to radioactive particles, and likely caused a temperature drop, marking the first evidence of an external solar system encounter impacting Earth's climate.

*Reference: Hindustan Times, 2024 a breakthrough year for science: A look at some intriguing discoveries*

**144. Which Place in the World Celebrates New Year First?**



The first place to usher in 2025 will be Christmas Island (Kiritimati) in the Republic of Kiribati. A small island in the Pacific Ocean, it will be the first to see the new year at 5 am EST (3.30 pm IST). The anticipation will be high as shortly afterward, the Chatham Islands of New Zealand will follow suit at 5.15 am EST (3.45 pm IST), followed by New Zealand's major cities of Auckland and Wellington, who will mark the occasion at 6 am EST (4.30 pm IST).

Source: *Hindustan Times*: [World News](#)

### **Additional Information**

Christmas Island (Kiritimati): Pronounced "Ki-ris-mas," Kiritimati Island has a large infilled lagoon that gives it the largest land area (125 square miles, 321 square km) of any atoll in the world. Captain Cook named the atoll Christmas Island when he arrived on Christmas Eve in 1777. Used for nuclear testing in the 1950s and 1960s, the island is now valued for its marine and wildlife resources. It is particularly important as a seabird nesting site, with an estimated 6 million birds using or breeding on the island, including several million Sooty Terns. Rainfall on Kiritimati is linked to El Nino patterns, with long droughts experienced between the wetter El Nino years.

## 145. TRIVIA Treasure

1. Imagine that you have ventured far beyond the familiar planets of our Solar System—past the gas giants, beyond the icy realms of Neptune. Now, picture a vast, mysterious region filled with icy bodies, dwarf planets, and remnants from the early days of our cosmic neighborhood. It's a place that holds clues to the formation of the Solar System and perhaps even the origins of water on Earth. Here's the question: *Where do you expect to find the Kuiper Belt?* Is it closer than you think, or farther away than you'd imagine?
2. *Though I climb with a twisty vine,  
In cooler climates, I thrive just fine.  
Guess my name, and you'll know,  
Which veggie in your garden can grow!*  
Phaseolus coccineus is better known as which vegetable?
3. What is common to the Dutch marathon runner Sifan Hassan and Botswana sprinter Letsile Tebogo?
4. What is a Deepfake ?
5. What is TFR? What does a 2.1 TFR mean?
6. What is a River basin?
7. Svalbard in Norway is known for what?
8. What is the Karman Line?
9. Which Indian State has announced the Snow Leopard named KUZU as its official mascot for its Statehood celebration?

10. What is The Thucydides Trap ?
11. Which Indian has got the recently announced ' Champion of the Earth ' award by UNEP ?
12. The capital of which country in Europe is Vaduz but its largest city is Schaan?.
13. Which City has been ranked as the top Science City of India by the renowned Science journal NATURE?
14. Willows, also called sallows and osiers, of the genus Salix, comprise around 350 species(plus numerous hybrids) of typically deciduous trees and shrubs, found primarily on moist soils in cold and temperate regions. What else is a Willow?
15. Paithani, Kotpad, Kota doria, Tangail, Pochampally, Kancheepuram, Thirubuvanam, Jamdani, Santipuri, Chanderi, Maheshwari, Patola, Moirangphee, Tanchoi, Bawan Buti, are examples of?
16. How many squares are there on a chess board?
17. Why is the island of Galapagos famous?
18. Mount Everest is the highest peak in the world. Which is the second highest peak?
19. What is Orthorexia?
20. Which language is spoken by the majority of the population in Argentina and Brazil?
21. What is the Richter scale?
22. Where do you expect to find the Sargasso Sea?
23. Name the space craft which has come closest to the Sun, ever ?

24. What is the Tibetan name of the river Brahmaputra?
25. Which part of North America was sold by Russia & France to the USA, respectively?
26. Which is the largest ice shelf in Antarctica, at almost 500,000 square kilometres?
27. What is meant by the Cambrian explosion?

### ANSWERS

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1. The Kuiper belt is a doughnut-shaped region of icy objects in the outer solar system, beyond Neptune's orbit. It's made up of leftovers from the formation of our solar system and is similar to the asteroid belt.
2. Runner bean
3. Sifan Hassan and Letsile Tebogo are both Olympic gold medalists and were named World Athletes of the Year in 2024. Hassan is a Dutch marathon runner, and Tebogo is a Botswana sprinter.
4. Deepfake is a video of a person in which their face or body has been digitally altered so that they appear to be someone else, typically

used maliciously or to spread false information: the committee hearing on worldwide threats cited deepfakes as a growing concern | [as modifier]: he has been the one talking all along, putting words in his opponent's mouth thanks to deepfake technology.

5. The total fertility rate ( TFR ) in a specific year is defined as the total number of children that would be born to each woman if she were to live to the end of her child-bearing years and give birth to children in alignment with the prevailing age-specific ; If, on average, women give birth to 2.1 children and these children survive to the age of 15, any given woman will have replaced herself and her partner upon death. A TFR of 2.1 is known as the replacement rate.
6. A river basin is an area of land where all flowing surface water converges to a single point, such as a river mouth, or flows into another body of water, such as a lake or ocean. The Amazon Basin located in northern South America, is the largest river basin in the world. The Amazon River and all of its tributaries drain an area of more than 7 million square kilometres. The Congo River is the world's second-largest river system after the Amazon. Ganga river basin is the largest river basin in India. The length of the Ganga river basin is more than 2500 km. It is a whopping 1,086,000 square kilometers covering countries like Tibet, Nepal, India, and Bangladesh.
7. For the Svalbard Global Seed Vault , it is a secure backup facility for the world's crop diversity on the Norwegian island of Spitsbergen in

the remote Arctic Svalbard archipelago. The Seed Vault provides long-term storage for duplicates of seeds from around the world, conserved in gene banks. This provides security of the world's food supply against the loss of seeds in gene banks due to mismanagement, accidents, equipment failures, funding cuts, war, sabotage, disease, and natural disasters. The Seed Vault is managed under terms spelled out in a tripartite agreement among the Norwegian government, the Crop Trust, and the Nordic Genetic Resource Center (NordGen). The Crop Trust, officially known as the Global Crop Diversity Trust, is an international nonprofit organization with a secretariat in Bonn, Germany. Its mission is to conserve and make available the world's crop diversity for food security.

8. The Kármán line is a conventional definition of the edge of space. The international record-keeping body FAI (Fédération aéronautique internationale) defines the Kármán line at an altitude of 100 kilometres (54 nautical miles; 62 miles; 330,000 feet) above mean sea level.



While named after Theodore von Kármán, who calculated a theoretical limit of altitude for airplane flight at 83.8 km (52.1 mi), he was a Hungarian-American mathematician, aerospace engineer, and physicist who worked in aeronautics and astronautics.

The Kármán line is mainly used for legal and regulatory purposes of differentiating between aircraft and spacecraft, which are then subject to different jurisdictions and legislations. While international law does not define the edge of space, or the limit of national airspace, most international

organizations and regulatory agencies (including the United Nations) accept the FAI's Kármán line definition or something close to it.

9. To mark the 50th anniversary of Sikkim's statehood, the State Government has announced "KUZU," a Snow Leopard as the official mascot for the grand celebration.

10. The Thucydides Trap is a term popularized by American political scientist Graham T. Allison to describe an apparent tendency towards war when an emerging power threatens to displace an existing great power as a regional or international hegemon. Thucydides, the ancient Greek historian of the Peloponnesian War between Sparta and Athens, has long been considered the father of both scientific history and political realism.
11. Veteran ecologist Madhav Gadgil has been named one of the six 'Champions of the Earth' for 2024 by the United Nations Environment Programme (UNEP). The annual award, the UN's highest environmental honour, recognizes trailblazers at the forefront of efforts to protect people and the planet. Since 2005, the award has recognized 122 laureates for outstanding and inspirational environmental leadership. Gadgil, 82, has been honoured in the "lifetime achievement" category. "He has spent decades protecting people and the planet through research and community engagement. From landmark environmental impact assessments of state and national policies to grassroots environmental engagement, Gadgil's work has greatly influenced public opinion and official policies on the protection of natural resources. He is renowned for his seminal work in the ecologically fragile Western Ghats region of India, which is a unique global biodiversity hotspot," a statement from UNEP stated.
12. Liechtenstein. This is among six smallest European nations -

Andorra, Malta, Monaco, San Marino, and Vatican City.

13. The World renowned British science journal NATURE has ranked Kolkata (global rank 84) ahead of Bengaluru (85), Mumbai (98), and New Delhi (124), based on research papers generated in 2023.
14. Google has developed a new quantum chip called Willow, which significantly reduces errors as it scales up, a major breakthrough in quantum error correction. Willow also performed a computation in under five minutes that would take a supercomputer 10 septillion years, demonstrating its potential for solving complex problems beyond the reach of classical computers. This achievement marks a significant step towards building commercially relevant quantum computers that can revolutionize fields like medicine, energy, and AI.
15. These are examples of traditional handloom saris of India with exclusive art, weaves, designs and traditional motifs, which attracts sari lovers from across the globe.
16. 64
17. Galapagos is 966 km off the coast of Ecuador and are volcanic islands. It is famous for a wealth of unique plants and animals found nowhere else in the world. The Galápagos Islands were the source of Darwin's theory of evolution and remain a priceless living laboratory for scientists today.
18. K2 (also known as Chhogori/Qogir, Ketu/Kechu, and Mount Godwin-Austen) is the second-highest mountain on Earth, after Mount Everest. K2 is the highest point of the Karakoram Range. It's a

- part of India but currently under the illegal occupation of Pakistan.
19. Orthorexia nervosa is perhaps best summarized as an obsession with healthy eating with associated restrictive behaviors. However, the attempt to attain optimum health through attention to diet may lead to malnourishment, loss of relationships, and poor quality of life.
  20. Spanish is spoken by the majority of the population in Argentina and Portuguese by the majority of the population in Brazil.
  21. The Richter scale also called the Richter magnitude scale, Richter's magnitude scale, and the Gutenberg–Richter scale, is a measure of the strength of earthquakes, developed by Charles Richter in collaboration with Beno Gutenberg, and presented in Richter's landmark 1935 paper, where he called it the "magnitude scale".
  22. The Sargasso Sea is a large, open ocean area in the Atlantic Ocean that is defined by ocean currents and is unique in several ways unlike other seas, the Sargasso Sea has no land boundaries. The Sargasso Sea is named after the genus of free-floating seaweed called Sargassum that gives the sea its characteristic brown colour.
  23. NASA's Parker Solar Probe. On Christmas Eve, the car-sized spacecraft came within 3.8 million miles of the sun's surface marking humanity's closest approach ever.
  24. Yarlung Zangbo
  25. Alaska and Louisiana
  26. The Ross Ice Shelf is the largest ice shelf in Antarctica, covering about 487,000 square kilometers. It's about the size of France and is several

hundred meters thick.

27. The Cambrian explosion was a period of rapid evolution that occurred around 540 million years ago, when most major animal groups first appeared in the fossil record. The Cambrian explosion was a time when a wide variety of complex life forms suddenly appeared, including arthropods with legs and compound eyes, worms with feathery gills, and predators with tooth-rimmed jaws. The Cambrian explosion lasted for about 13 to 25 million years. The exact cause of the Cambrian explosion is still debated, but some scientists believe it was triggered by a small increase in oxygen levels in the atmosphere and ocean. Others believe it was the result of a key evolutionary innovation, such as the development of vision. Before the Cambrian explosion, most organisms were simple, made up of individual cells or small multicellular organisms. The increase in variety of life stabilized during the Cambrian and into the following period, and there have been very few new animal classes added since then.

## 146. Answers to Crossword

### Crossword Craze #03



#### Across

3. If Kimono is to Japan, \_\_\_\_\_ is to Korea [6]
5. Chogyal was the title of the traditional ruler of this part / state of India [6]
6. This company has placed an order for six or seven new small nuclear reactors in a bid to source low-carbon energy to power its AI technologies [6]

#### Down

1. One of the first scales to estimate wind speeds and the effects, developed in 1805 [8,5]
2. It is the national capital of the pacific island New Caledonia [5]
4. The famed temple of Angkor Vat is located in this country [8]

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