



GST 2.0 WITH NEXT-GENERATION REFORMS

The 56th [GST Council](#) introduced **GST 2.0 with next-generation reforms**; changes in GST rates on services will apply from **22nd Sept 2025**.

Tax Reforms Under GST 2.0	Details
Simplified GST Structure	Replaces 4 GST slabs (5%, 12%, 18%, 28%) with 2 slabs: 5% (merit rate) for essential items and 18% (standard rate) for others; a 40% demerit rate for luxury, sin & demerit goods (tobacco, etc.).
Tax Relief for Essential Goods	Full GST exemption on individual life & health insurance policies ; Nil GST on essential goods like UHT milk, paneer & Indian breads.
Consumer Goods	GST reduced from 28% to 18% on small cars, TVs, air conditioners, cement, and auto parts; GST on renewable energy devices reduced from 12% to 5%.
Medical and Health Devices	GST on 33 lifesaving drugs reduced from 12% to nil . GST on 3 critical drugs for cancer & rare diseases reduced from 5% to nil.
Support for Agriculture and Rural Sectors	GST reduced from 12% to 5% on machinery like tractors, harvesters, composters & labor-intensive goods like handicrafts, marble, and leather. GST on fertilizer inputs reduced from 18% to 5%.
Trade Facilitation and Dispute Resolution	Goods and Services Tax Appellate Tribunal (GSTAT) to be operational by December 2025.

- ⌘ The **101st Amendment Act, 2016**, introduced a unified indirect tax system across India by subsuming **multiple central & state taxes under GST**.
- ⌘ It is a **value-added tax** levied on the supply of all goods and services.
- ⌘ Includes **Central GST (CGST)** and **State GST (SGST)**; **Integrated GST (IGST)** is applicable for inter-state transactions.
- ⌘ **GST Council (Article 279A)**– the primary body for GST policymaking & rate decisions.

GIG WORKERS: THE INVISIBLE WORKFORCE

India's **gig and platform economy** is projected to grow from **1 cr workers in 2024–25 to 2.35 cr by 2029–30**.

Growth Drivers of Gig Economy	
Expanding Digital Access	Internet connections grew from 25.15 cr in 2014 to 96.96 cr in 2024 , with 85.5% of households owning a smartphone.
E-Commerce and Startup Boom	Online businesses and startups create demand for gig workers in logistics, delivery, etc.
Urban Demand for Convenience	Consumers expect fast services , ridesharing & customer support.
Availability of Low-Cost Labor	Rising unemployment & surplus semi-skilled workers push many to accept gig work.
Changing Work Preferences	Younger generations value flexibility, remote work & project-based engagements .



Challenges Related to Gig Economy	Measures to Strengthen India's Gig Economy
Low Wages and Income Instability	Define gig workers' rights with minimum wages, regulated hours & provisions for collective bargaining.
Algorithmic Control and Surveillance	Regulate platform algorithms, mandate grievance redressal & human oversight.
Lack of Social Security and Benefits	Provide gig workers with digital identities (e-shram portal) and access to welfare schemes, including social security.
Gender-Specific Vulnerabilities	Ensure maternity benefits (under Code on Social Security, 2020) and introduce safety measures like panic buttons & helplines for women workers

- **RAISE Framework** (NITI Aayog)– **R**ecognise work diversity, **A**ugment financing, **I**ncorporate platform and worker interests, **S**upport awareness, and **E**nsure benefit access.
- **Rajasthan's Platform-Based Gig Workers Act (2023)** requires employers to deposit a welfare cess.

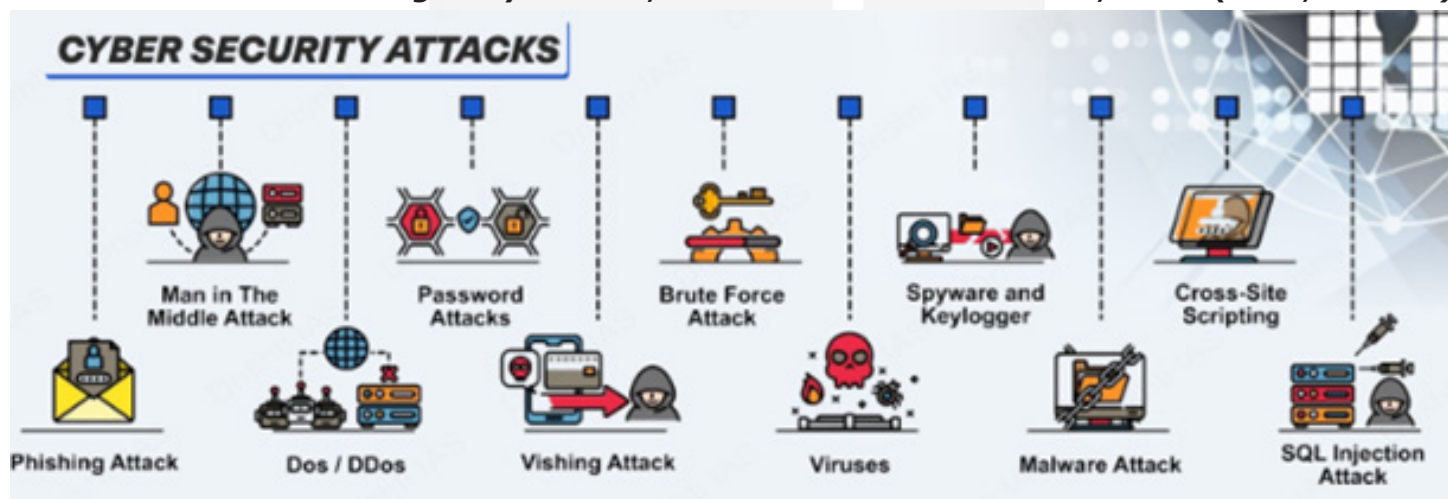
INDIA'S SUSPECT REGISTRY AND CYBERSECURITY INITIATIVES

India's online [suspect registry](#) has saved ~Rs 5,100 crore by blocking 13 lakh fraudulent transactions.

Suspect Registry

- ⌘ Launched in 2024, based on [NCRP](#) & developed by [I4C](#); contains data on **1.4 million cybercriminals**.
- ⌘ **Helps financial institutions verify customer credentials** & monitor transactions.
- ❖ Using NCRP data, it **strengthens fraud risk management** & flags potential cybercriminals.

India witnessed a massive surge in cyber fraud, with total losses of around ₹33,165 cr. (NCRP, 2021-24).



India's Cybersecurity Initiatives	
Constitutional Context	<ul style="list-style-type: none"> Police & public order are state subjects; states/UTs handle crimes, including cybercrime; Centre provides guidance, coordination & funding.
Policy Mechanisms	<ul style="list-style-type: none"> IT Act, 2000– Covers cybercrime offences; vishing with fines & imprisonment. BNSS, 2023, BNS, 2023, & BSA, 2023, address modern cyber threats. National Cyber Security Policy, 2013– Protecting cyberspace, enhancing defense & strengthening digital security.
Institutional Mechanisms	<ul style="list-style-type: none"> Indian Cyber Crime Coordination Centre (I4C) CERT-In
International Cooperation	<ul style="list-style-type: none"> CBI participates in Interpol-led cybercrime cooperation initiatives.
Digital Mechanisms	<ul style="list-style-type: none"> '.bank.in' Domain for Banks e-Zero FIR MuleHunter.AI AI and Facial Recognition powered Solution for Telecom SIM Subscriber Verification (ASTR)

REVISED NORMS OF GREEN CREDIT PROGRAMME

MoEFCC has revised its GCP methodology for awarding green credits.

- ⌘ Green credits are granted after 5 years if restored land has >40% canopy cover, with 1 credit per surviving tree.
- ⌘ Credits are non-tradable except within a company & its subsidiaries; can be exchanged once for Compensatory Afforestation (CA), CSR, or project-linked obligations, and cannot be reused.

GCP

- **About: Green Credit Rules, 2023**, under the **Environment Protection Act, 1986**, provide for a **market-based mechanism** to promote voluntary plantation & create an inventory of degraded land for afforestation by **individuals, communities, industries & companies**.
- **Governance Structure: GCP** is overseen by the **Indian Council of Forestry Research and Education (ICFRE)**; executed by State Forest Departments.
 - ♦ A **Green Credit Registry tracks credits** & a domestic platform manages their exchange.

The eight avenues under the GREEN CREDIT PROGRAMME



Tree plantation—to promote activities for increasing the green cover across the country



Water management—to promote water conservation, water harvesting and water use efficiency or water savings, including treatment and reuse of wastewater



Sustainable agriculture—to promote natural and regenerative agricultural practices and land restoration to improve productivity, soil health and nutritional value of food produced



Waste management—to promote circularity, sustainable and improved practices for waste management, including collection, segregation, and environmentally sound management



Air pollution reduction—to promote measures for reducing air pollution and other pollution abatement activities



Mangrove conservation and restoration—to promote measures for conservation and restoration of mangroves



Ecomark label development—to encourage manufacturers to obtain ecomark label for their goods and services



Sustainable building and infrastructure—to encourage the construction of sustainable buildings and other infrastructure using environment friendly technologies and materials

Green Credit Vs Carbon Credit

Aspect	Green Credits	Carbon Credits
Focus	Incentive unit for activities that positively impact the environment <ul style="list-style-type: none"> • Governed by GCP 	Primarily reducing GHG emissions <ul style="list-style-type: none"> • Allow the holder to emit 1 ton of CO₂ (or equivalent GHGs) per credit • Governed by Energy Conservation Act, 2001
Eligibility	Open to individuals & communities	Typically for entities reducing emissions or investing in projects
Incentives	Monetary rewards for eco-friendly actions	Revenue from international credit trading

BHARATI INITIATIVE

APEDA launched the **BHARATI initiative** (Bharat's Hub for Agri-tech, Resilience, Advancement and Incubation for Export Enablement).

Objectives: To empower 100 agri-food startups & support APEDA's **\$50 Bn export goal by 2030**.

- ❖ Aims to address challenges in perishability, quality, logistics & sustainability.

⌘ Features:

- ❖ Targets **high-value agri-food products** (GI-tagged, superfoods, **AYUSH** products, etc.)
- ❖ Promote **AI, blockchain, IoT** & agri-fintech
- ❖ **Connects startups to export-ready solutions**, helping them meet international food safety & quality standards through **3-month acceleration program**.
- ❖ Aligns with **Atmanirbhar Bharat, Vocal for Local, Digital India** & **Start-Up India**.
- ❖ APEDA **partners with state boards, universities, IITs/NITs, etc.** to strengthen the ecosystem & drive scalability.

- APEDA estd. under the **Agricultural and Processed Food Products Export Development Authority Act, 1985**, under **Ministry of Commerce & Industry**.
- Deals with the development of industries relating to the **scheduled products for export**.
- **It monitors sugar imports** and serves as the **Secretariat for the National Programme for Organic Production (NPOP)**.
- Head Office— **New Delhi**

FIREFLIES AS ECOLOGICAL INDICATORS

TN Forest Department study in the [Anamalai Tiger Reserve \(ATR\)](#) identified 8 firefly species (*Lampyridae*).

- ⌘ **Habitat:** Found in tropical forests/temperate grasslands; thrive in undisturbed soils, high humidity & low artificial light. Active during/after rains, live for about 2 months.
- ⌘ **Light Production:** Occurs in abdominal organs via reaction of luciferin, luciferase, oxygen, and ATP - used for **mating signals** and **predator deterrence**.
- ⌘ **Synchronous flashing** - indicates pollution-free areas; population changes signaling environmental disruptions.

ATR

- ↪ Declared a Tiger Reserve (2007), surrounded by **Parambikulam Tiger Reserve, Chinnar Wildlife Sanctuary & Eravikulam National Park**.
- ↪ **Kariyan Shola, Grass Hills & Manjampatti** - recognized as [UNESCO World Heritage Site](#).
- ↪ Hosts **evergreen, deciduous, shola forests, montane & marshy grasslands**; fauna - **tiger, Asiatic elephant, leopard**, etc.

IgM: THE LARGEST HUMAN ANTIBODY

A study found that **IgM (Immunoglobulin M)** neutralizes bacterial toxins by stiffening them, not by killing bacteria. This could lead to the development of **next-generation therapies** for tough bacterial infections.

- ⌘ The study finds **Protein L** from *Finkegoldia magna* (bacteria) disrupts the immune system.
 - ❖ IgM binding to Protein L **makes the toxin more resistant to breaking apart into harmful shapes**.
- ⌘ **IgM's large size & multiple binding sites stabilize the toxin**, with higher IgM levels offering stronger protection.
- ⌘ IgM is the **first antibody produced** during infection, crucial for early defense.
 - ❖ **Pentameric in structure**, it has high binding capacity, **effective in neutralization, complement activation & agglutination**, despite limited tissue penetration.
 - ❖ **Immunoglobulins** are glycoproteins produced by **WBCs (B-lymphocytes)** & plasma cells.

