Global Cybersecurity Index (GCI) 2024
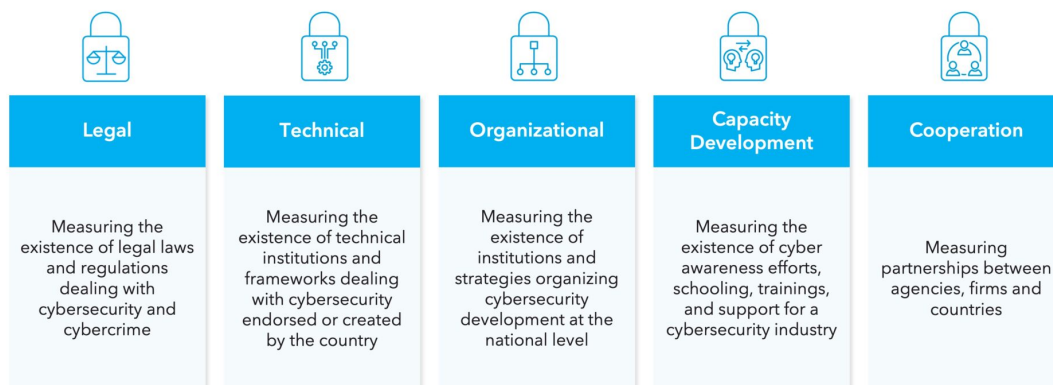
Source: PIB

Why in News?

Recently, India has achieved a major milestone in cybersecurity by securing **Tier 1 status** in the **5th edition of Global Cybersecurity Index (GCI) 2024**, published by the **International Telecommunication Union (ITU)**.

- The 4th edition of the GCI report was published in 2020.

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Global Cybersecurity Index 2024
5 pillars for measuring the commitment of countries to cybersecurity

| Legal	Technical	Organizational	Capacity Development	Cooperation
Measuring the existence of legal laws and regulations dealing with cybersecurity and cybercrime	Measuring the existence of technical institutions and frameworks dealing with cybersecurity endorsed or created by the country	Measuring the existence of institutions and strategies organizing cybersecurity development at the national level	Measuring the existence of cyber awareness efforts, schooling, trainings, and support for a cybersecurity industry	Measuring partnerships between agencies, firms and countries

What is the Global Cybersecurity Index (GCI)?

- **About:**
    - GCI, **launched in 2015** by ITU **measures the** comprehensive development and **commitment** to **cybersecurity at a global level.**
    - The GCI utilises a **multi-stakeholder approach** and leverages the capacity and expertise of **different organisations**.
- **Aim:**
    - It aims to **improve the quality of the survey,** foster international cooperation, promote knowledge exchange and **raise awareness** of the importance and different dimensions of **cybersecurity.**
- **Pillars of Assessment:**
    - The assessment is based on **5 pillars: Legal Measures, Technical Measures, Organisational Measures, Capacity Development**, and **Cooperation**.
    - The index aggregates the assessment into an **overall score** for each country.
- **5- Tier Analysis:** Countries are categorised into five tiers based on their cybersecurity efforts, with Tier 1 representing the highest level.

- Tier 1- Role-modelling (score of 95–100)
- Tier 2- Advancing (score of 85–95)
- Tier 3- Establishing (score of 55–85)
- Tier 4- Evolving (score of 20–55)
- Tier 5- Building (score of 0–20).

- **Key Highlights of GCI 2024:** The GCI 2024 evaluated 194 countries and highlighted threats such as **ransomware attacks, breaches in critical industries, system outages**, and **privacy violations.**
  - **Global:** Since 2021, countries have increasingly prioritised cybersecurity, raising the global average score to 65.7/100.
    - GCI 2024 placed **46 countries in Tier 1,** compared to 30 in the previous edition.
    - **Most countries (105) are ranked in Tiers 3 and 4**, reflecting progress in expanding digital services but also **highlighting the need for stronger cybersecurity measures** in their digital transformation strategies.
  - **India's Performance in GCI 2024**
    - **India ranks in Tier 1** with countries like the US, Japan and Australia.
    - India scored **98.49/100**, an improvement from 97.5 in the 2020 edition due to its **robust legal framework like the [Information Technology Act (2000)](#),** the [**Digital Personal Data Protection Act (2023)**](#).
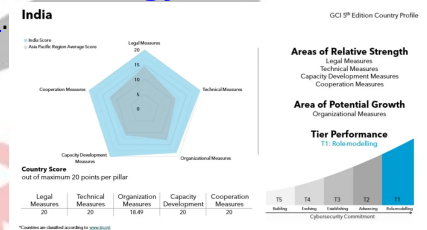
  - **Key Issues Highlighted in Report:**
    - **Worrisome Threats:** Increasing ransomware attacks, cyber breaches in critical industries, and costly system outages.
    - **Cyber Capacity Gap**: Persistent limitations in skills, staffing, equipment, and funding for cybersecurity.
    - **Implementation Challenges:** Difficulty in operationalising cybersecurity agreements effectively.
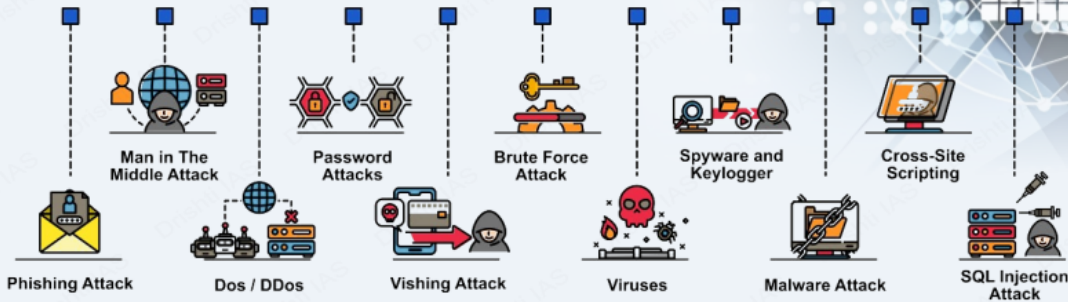 - **Key Recommendations:**
    - **National Cybersecurity Strategy:** Develop and regularly update a comprehensive national cybersecurity framework.
    - **Capacity Building:** Enhance training for cybersecurity professionals, youth, and vulnerable groups.
    - **Cooperation:** Strengthen both domestic and international collaboration on information sharing, training, and cybersecurity initiatives.

CYBER SECURITY

Cybersecurity refers to any technology, measure, or practice for preventing cyberattacks or mitigating their impact.

CYBER SECURITY ATTACKS

- Man in The Middle Attack
- Password Attacks
- Brute Force Attack
- Spyware and Keylogger
- Cross-Site Scripting
- Phishing Attack
- Dos / DDos
- Vishing Attack
- Viruses
- Malware Attack
- SQL Injection Attack

'Crime in India' Report 2022 (NCRB) highlighted 24.4% surge in cybercrimes in India since 2021.

Common Cybersecurity Myths

- Strong passwords alone are adequate protection
- Major cybersecurity risks are well-known
- All cyberattack vectors are contained
- Cybercriminals don't attack small businesses

Cyber Warfare

- Digital attacks to disrupt vital computer systems, to inflict damage, death, and destruction.

CYBER THREAT ACTORS

CYBER THREAT ACTOR	MOTIVATION
NATION-STATES	GEOPOLITICAL
CYBERCRIMINALS	PROFIT
HACKTIVISTS	IDEOLOGICAL
TERRORIST GROUPS	IDEOLOGICAL VIOLENCE
THRILL-SEEKERS	SATISFACTION
INSIDER THREATS	DISCONTENT

Types of Cybersecurity

- Critical infrastructure security (Robust access controls)
- Network security (Deploying firewalls)
- Application security (Code reviews)
- Cloud Security (Tokenization)
- Information security (Data masking)

Recent Major Cyber Attacks

- WannaCry Ransomware Attack (2017)
- Cambridge Analytica Data Breach (2018)
- Financial data of 9M+ cardholders, including SBI, leaked (2022)

Regulations & Initiatives

- International:
  - UN Group of Governmental Experts (GGE) on Advancing Responsible State Behaviour in Cyberspace
  - NATO's Cooperative Cyber Defense Centre of Excellence (CCDCOE)
  - Budapest Convention on Cybercrime, 2001 **(India not a signatory)**
- India:
  - IT Act, 2000 (Sections 43, 66, 66B, 66C, 66D)
  - National Cyber Security Policy, 2013
  - National Cyber Security Strategy 2020
  - Cyber Surakshit Bharat Initiative
  - Indian Cyber Crime Coordination Centre (I4C)
  - Computer Emergency Response Team-India (CERT-In)

Steps Needed for Cyber Security

- Network Security
- Malware Protection
- Incident Management
- User Education and Awareness
- Secure Configuration
- Managing User Privileges
- Information Risk Management Regime

Drishti IAS

What is ITU?

- It is the **United Nations (UN)** specialised agency for **Information and Communication Technologies (ICT)s**.
- It was **founded in 1865 t**o **facilitate international connectivity in**

- **communications** networks.
  - It is headquartered in **Geneva, Switzerland.**
  - It allocates **global radio spectrum and satellite orbits**, develops the **technical standards** that ensure networks and technologies seamlessly interconnect, and strives to improve access to ICTs to underserved communities worldwide.
  - ITU currently has a membership of **193 countries** and over 900 private-sector entities and academic institutions.
    - India has been a member of ITU since 1869 and has been a member of the **ITU Governing Council** since its inception in 1952.

UPSC Civil Services Examination Previous Year Question (PYQ)

Prelims

Q. In India, which of the following review the Independent regulators in sectors like telecommunications, insurance, electricity, etc.? (2019)

1. Ad Hoc Committees set up by the Parliament
2. Parliamentary Department Related Standing Committees
3. Finance Commission
4. Financial Sector Legislative Reforms Commission
5. NITI Aayog

Select the correct answer using the code given below:

(a) 1 and 2
(b) 1, 3 and 4
(c) 3, 4 and 5
(d) 2 and 5

Ans: (a)

Q. In India, the term "Public Key Infrastructure" is used in the context of (2020)

(a) Digital security infrastructure
(b) Food security infrastructure
(c) Health care and education infrastructure
(d) Telecommunication and transportation infrastructure

Ans: (a)

Q. Which of the following is/are the aims/aims of the "Digital India" Plan of the Government of India? (2018)

1. Formation of India's own Internet companies like China did.
2. Establish a policy framework to encourage overseas multinational corporations that collect Big Data to build their large data centres within our national geographical boundaries.
3. Connect many of our villages to the Internet and bring Wi-Fi to many of our schools, public places and major tourist centres.

Select the correct answer using the code given below:

(a) 1 and 2 only
(b) 3 only
(c) 2 and 3 only

(d) 1, 2 and 3

Ans: (b)

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