



BTR and BUR under Paris Agreement

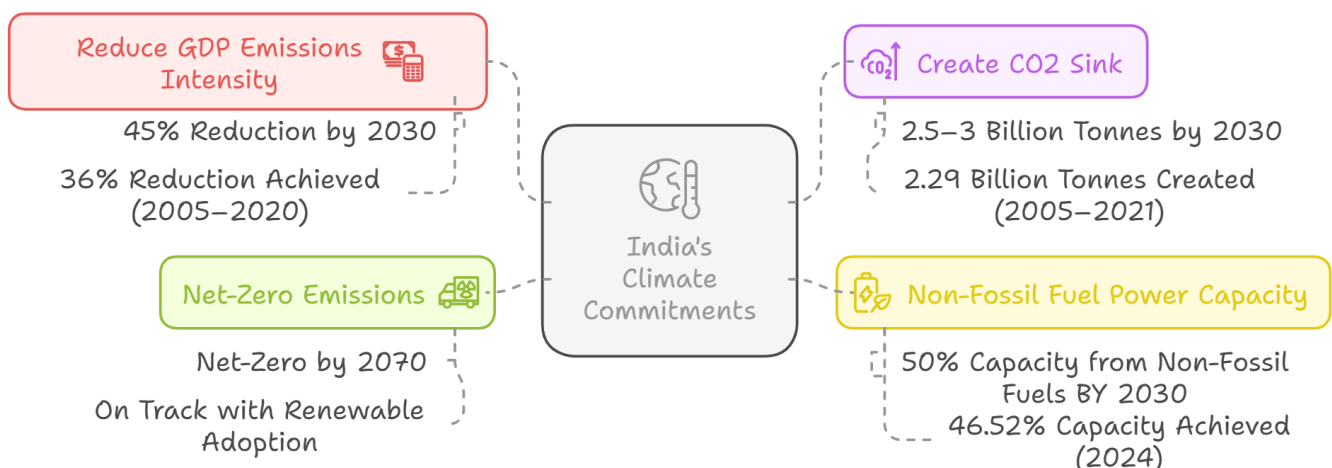
[Source: TH](#)

India is set to submit its **first-ever Biannual Transparency Report (BTR)** under the **Paris Agreement**, which will be subject to an **independent expert review** by the [United Nations Framework Convention on Climate Change \(UNFCCC\)](#).

- **BTR:** Under the [Paris Agreement, 2015](#), countries must submit **BTRs every two years** to enhance transparency in climate action. **Small Islands Developing States (SIDS)** and **Least Developed Countries (LDCs)** can submit at their discretion.
 - These reports track progress on **national greenhouse gas (GHG) inventories**, [Nationally Determined Contributions \(NDCs\)](#), and **climate adaptation measures**.
- **BUR:** India has previously submitted **Biannual Update Reports (BUR)**, with the last one in **2024 (BUR- 4)**, covering data till **2020**.
- **Key Highlights of BUR 4:**
 - **India's Emissions by Gas:** Carbon dioxide (80.53%), Methane (13.32%), Nitrous oxide (5.13%), and others 1.02%.
 - **Emissions by sector:** Energy (75.66%), Agriculture(13.72%), Industrial Process and Product Use (IPPU) (8.06%), and Waste(2.56%).
 - **Forests & Tree Cover:** Sequestered 522 million tonnes (mt) of CO₂, equivalent to reducing 22% of the country's total carbon dioxide emissions in 2020.
 - **Emission Intensity Reduction:** 36% decrease in emissions intensity (2005–2020), with India on track to achieve its target of a 45% reduction by 2030.
 - As of 2020, India's emissions, excluding **land use, land-use change and forestry (LULUCF)**, stood at 2,959 mt of CO₂e. Including LULUCF, net emissions were at 2,437 mt of CO₂e.

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India's Climate Commitments and Progress

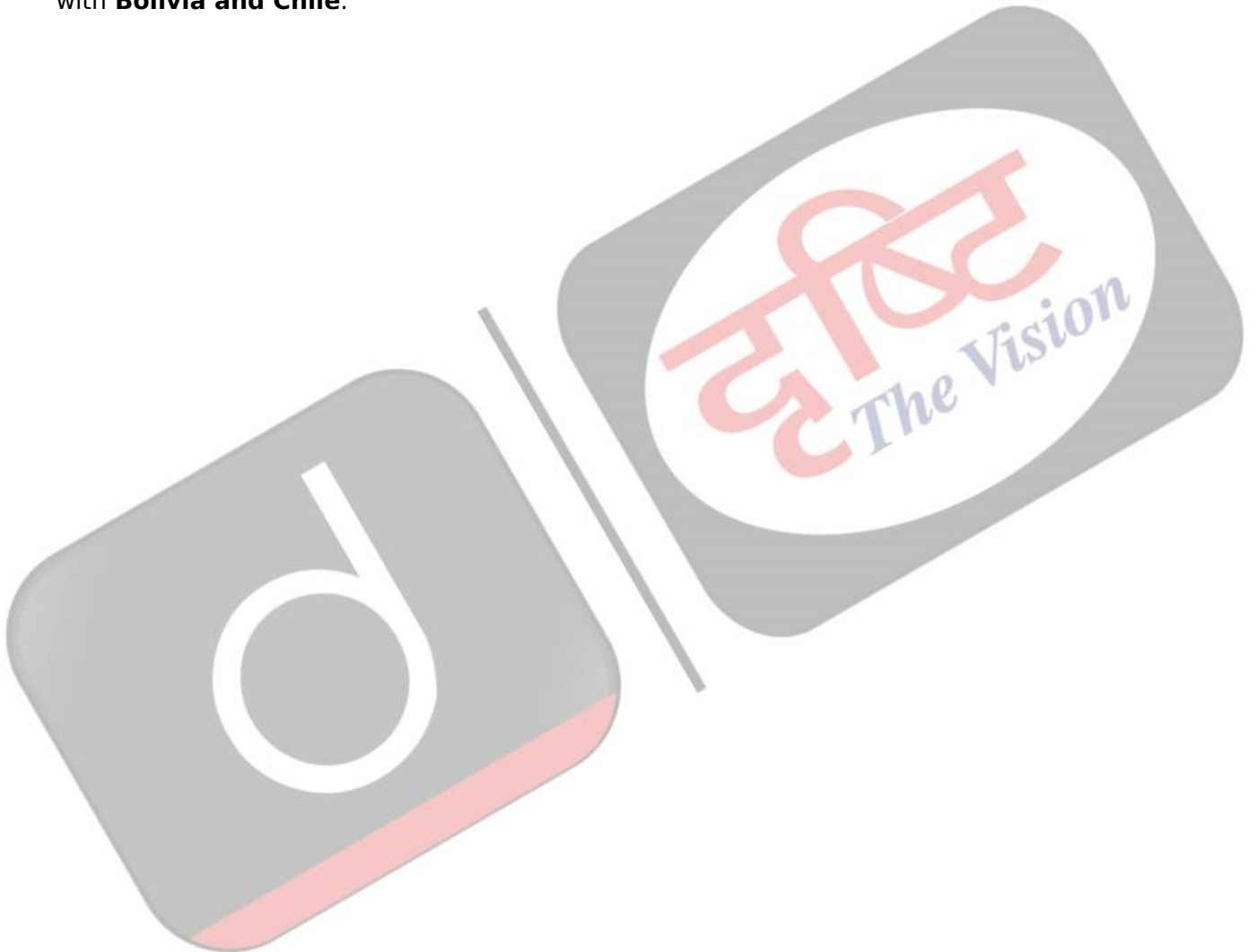


India-Argentina Lithium Partnership

[Source: PIB](#)

India and Argentina signed an MoU for [lithium](#) exploration and investment opportunities in **Argentina**.

- Argentina is known for its **vast lithium reserves** and is part of the '[Lithium Triangle](#)' along with **Bolivia and Chile**.





- **About Lithium:** It is a **soft, silvery-white alkali metal** and is also known as **white gold**.
 - It is the **lightest metal and solid element**, and classified as both an **alkali and a rare**

metal.

- It is mined from **ores of petalite, lepidolite, spodumene** and also subsurface brines.
- It is **highly reactive and flammable** and must be stored in **mineral oil**.
- It is an essential mineral required for [electric vehicle batteries](#) and [renewable energy storage](#).
- **Chile (1st), China (2nd) and Australia (3rd)** have the **largest reserves** of lithium.
- In India, **Salal-Haimna areas (Reasi district of J&K), Koderma and Giridih (Jharkhand), and Mandya (Karnataka)** have lithium reserves.

Read More: [Lithium-Deal with Argentina](#)

22nd Foundation Day of NCST

For Prelims: [National Commission for Scheduled Tribes](#), [Scheduled Tribes](#), [Scheduled Castes](#), [Provisions Related to STs](#)

For Mains: Significance of NCST in tribal welfare, Safeguarding Scheduled Tribes' rights

[Source: PIB](#)

Why in News?

The [National Commission for Scheduled Tribes \(NCST\)](#) celebrated its **22nd Foundation Day** (19th February), highlighting the Commission's role in protecting [Scheduled Tribes\(ST\)](#) rights.

What are the Key Facts About the National Commission for Scheduled Tribes?

- **Origin and Evolution:** In 1992, a statutory National Commission for Scheduled Castes (SCs) and STs was established. Later, to address the **distinct needs of STs**, the NCST was **established** on 19th February 2004, through the **89th Constitutional Amendment Act, amending Article 338 and adding Article 338A** to the Constitution.
- **Composition and Tenure:**
 - **Structure:** NCST comprises a **Chairperson** (Cabinet Minister rank), a **Vice-Chairperson** (Minister of State rank), and **three Members** (Secretary rank), all appointed by the **President**.
 - At least one other Member shall be appointed from amongst **women**.
 - **Tenure & Reappointments:** The **term of office** for all members is **three years**. A member can be reappointed for a **maximum of two terms**.
- **Key Functions:** Under **Article 338A(5)**, the NCST monitors **constitutional safeguards for STs**, addresses tribal rights issues, advises on socio-economic development.
 - Reports to the **President on tribal welfare**, suggests policy measures, and oversees ST welfare programs.
 - Additionally, under the **NCST (Specification of Other Functions) Rules, 2005**, the commission recommends land ownership rights for tribals ([Forest Rights Act, 2006](#)), and suggests alternative livelihood strategies.
 - Advocates for full implementation of the [Panchayat \(Extension to Scheduled Areas\) Act, 1996 \(PESA\)](#), and seeks solutions to reduce and eliminate shifting

cultivation.

Who are the Provisions Related to Scheduled Tribes in India?

Click here to Read: [Provisions Related to STs in India](#)

What are the Challenges Regarding the NCST?

- **Administrative and Financial Constraints:** The NCST functions under the **Ministry of Tribal Affairs**, lacking **financial and operational autonomy**, affecting its independence in budgeting, and operations.
 - **Article 338A(9)** of the Constitution mandates that the **Union and State Governments consult the NCST on all major policy matters** affecting STs.
 - However, many states and departments **fail to seek its advice**, leading to **tribal welfare policies being designed without the Commission's input**.
- **Manpower Shortages:** The NCST reviews tribal welfare schemes, but its effectiveness is hindered by **limited staff and poor coordination**.
 - Historically, the NCST has faced **prolonged vacancies** in key positions like Chairperson and Members.
 - Manpower shortages and bureaucratic delays result in prolonged resolution times, leaving many cases pending for years and weakening public trust.
- **Weak Enforcement Powers:** The **recommendations of NCST are not binding**, limiting its ability to enforce protective measures for STs.
 - Despite receiving numerous petitions on **atrocities against tribals, land alienation, and denial of reservation benefits**, the NCST **lacks the power to enforce its directives**.
 - This weakens its authority and **reduces accountability among government agencies**.
- **Lack of Awareness and Outreach:** Many **tribals are unaware** of their rights and the existence of NCST, the **Commission lacks a strong grassroots presence**.

Way Forward

- **Strengthening Legal Mandate:** The NCST should be empowered to award penalties on the lines of the powers given to the [Central Information Commission](#) in the context of the implementation of the various provisions of the [Rights to Information Act, 2005](#).
- **Capacity Building:** A separate cadre for **NCST personnel** should be created to ensure staffing shortages do not affect its operations.
- **Mandatory Consultation on Policies:** The government should **ensure compliance** with Article 338A(9), making it compulsory for ministries and states to consult NCST on all tribal welfare policies.
- **Grievances:** NCST should have a **dedicated grievance redressal cell** to follow up on cases of violence, displacement, and human rights violations.

Drishti Mains Question:

What is the mandate of the National Commission for Scheduled Tribes? Analyze its effectiveness in protecting tribal rights.

UPSC Civil Services Examination Previous Year Question (PYQ)

Prelims

Q. If a particular area is brought under the Fifth Schedule of the Constitution of India, which one of the following statements best reflects the consequence of it? (2022)

- (a)** This would prevent the transfer of land of tribal people to non-tribal people.
- (b)** This would create a local self-governing body in that area.

(c) This would convert that area into a Union Territory.

(d) The State having such areas would be declared a Special Category State.

Ans: (a)

Mains

What are the two major legal initiatives by the State since Independence addressing discrimination against Scheduled Tribes (STs)? (2017)

Colour Revolutions

[Source: TH](#)

Georgia's 2024 elections have reignited discussions on colour revolutions, with allegations of Western interference in ongoing political protests, as the former President refused to vacate office, citing electoral malpractices, while the elected President assumed power.

▪ Colour Revolutions:

- **About:** It refers to **peaceful, mass protest uprisings in post-Soviet states**, characterized by symbolic colours, **aiming to replace pro-Moscow regimes with peaceful and democratic governments.**
 - Though initially successful in creating **pro-Western** governments, these revolutions often resulted in **instability, corruption, and disillusionment.**
- **Examples:**
 - **Georgia's Rose Revolution (2003)**
 - **Ukraine's Orange Revolution (2004)**
 - **Kyrgyzstan's Tulip Revolution (2005)**
- **Russia** sees these movements as **Western interference** threatening its regional influence.

▪ **Georgia:** It is a country located in **Eastern Europe and West Asia**, bordered by **Russia, Azerbaijan, Armenia and Turkey**. It has a sea boundary with **Black Sea**.



DDoS Cyber-Attack

[Source: TH](#)

Karnataka's Kaveri 2.0 portal that deals with property registration faced severe disruptions due to a **Distributed Denial of Service (DDoS) attack**.

- This overloaded the system with **fake accounts and automated requests**, causing **downtime**.
- **Distributed Denial of Service (DDoS) Attack:**
 - **About: DDoS attack** is a **cyberattack** that **floods** a website or **network with malicious traffic** making it inaccessible.
 - **DDoS attacks** are **large-scale versions of Denial of Service (DoS) attacks** that use **multiple compromised systems (botnets)** instead of a single source to **overload the target**.
 - **Types:**

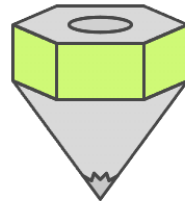
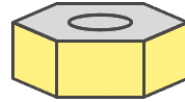
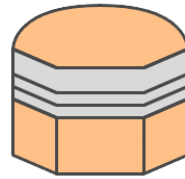
Types of DDoS Attacks

Volume-Based Attacks

Attacks that consume bandwidth by flooding the target with traffic.
(Eg: ICMP floods)

Application Layer Attacks

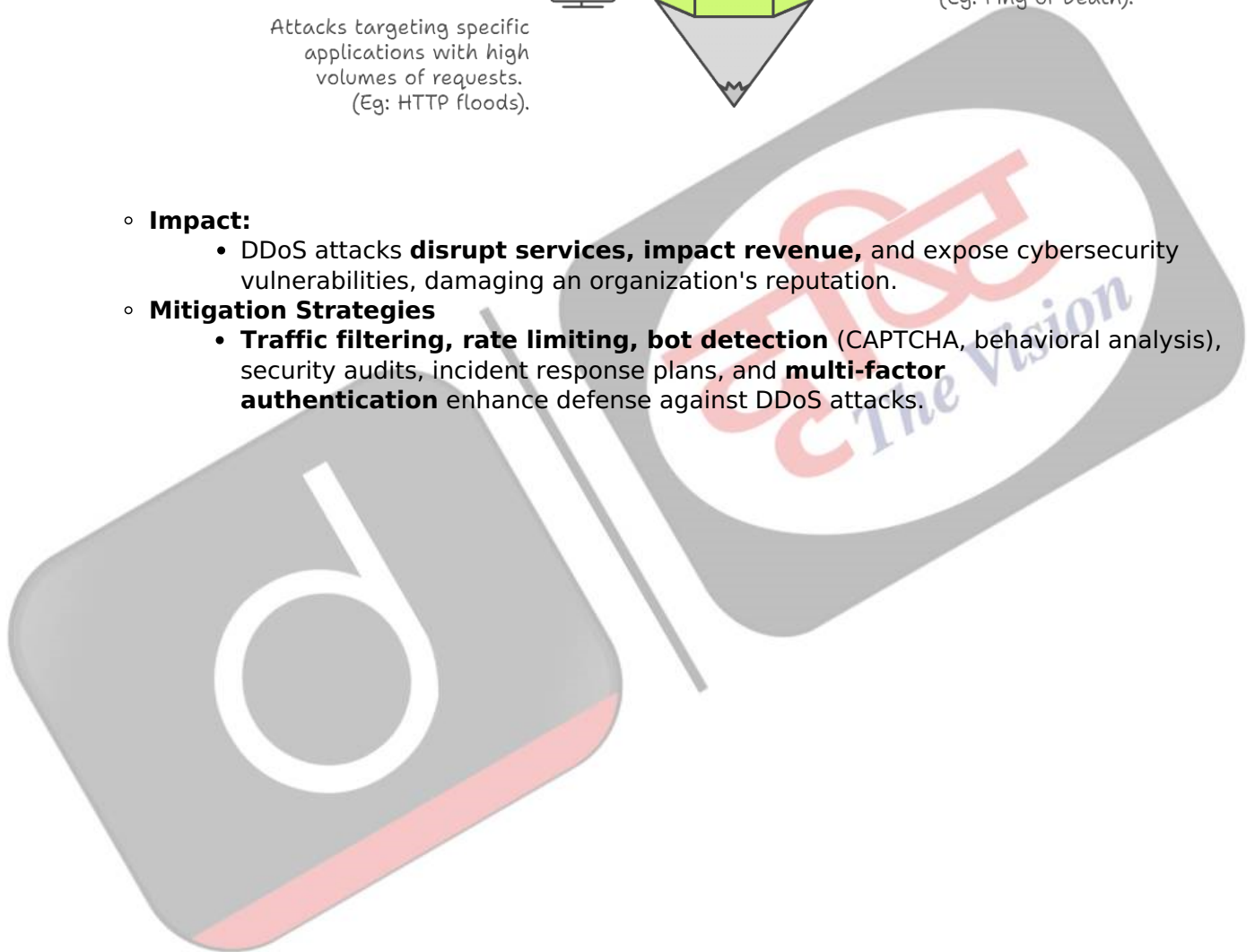
Attacks targeting specific applications with high volumes of requests.
(Eg: HTTP floods).



Protocol Attacks

Attacks that exploit protocol vulnerabilities to exhaust server resources.
(Eg: Ping of Death).

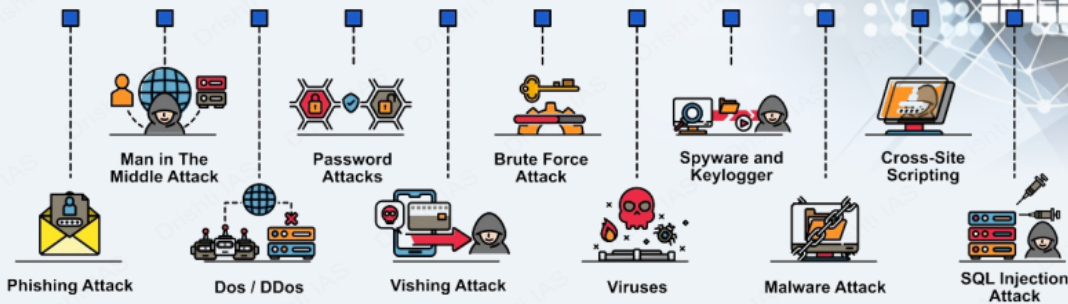
- **Impact:**
 - DDoS attacks **disrupt services, impact revenue**, and expose cybersecurity vulnerabilities, damaging an organization's reputation.
- **Mitigation Strategies**
 - **Traffic filtering, rate limiting, bot detection** (CAPTCHA, behavioral analysis), security audits, incident response plans, and **multi-factor authentication** enhance defense against DDoS attacks.



CYBER SECURITY

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

CYBER SECURITY ATTACKS



'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



Read More: [Denial of Service \(DoS\) Attack](#)

India - US COMPACT Initiative

For Prelims: India - US COMPACT Initiative, [Tiger Triumph](#), [International Energy Agency](#), Mission 500' initiative, TRUST, [India-Middle East-Europe Corridor](#).

For Mains: India-US Relations, Multilateral and Regional Cooperation, Challenges and way forward

[Source: IE](#)

Why in News?

The **US-India COMPACT (Catalyzing Opportunities for Military Partnership, Accelerated Commerce & Technology)** for the 21st Century was launched by President Donald Trump and Prime Minister Narendra Modi.

What are the Highlights of the India - US COMPACT Initiative?

- **Defence Collaboration:** A new **10-year Framework for the US - India Major Defence Partnership (2025-2035)** will be signed, expanding Defence sales and co-production of [Javelin Anti-Tank Guided Missiles](#), and enhancing joint exercises like [Tiger Triumph](#).
 - The initiative includes the **Reciprocal Defence Procurement (RDP) Agreement** for seamless Defence trade and **Autonomous Systems Industry Alliance (ASIA)** to boost AI-driven autonomous Defence cooperation.
- **Trade and Investment Expansion:** Under the COMPACT Initiative, the '**Mission 500' initiative** was launched to increase bilateral trade to USD 500 billion by 2030, supported by negotiations for a **Bilateral Trade Agreement (BTA)**.
 - Efforts include reducing trade barriers, such as tariff cuts on beverages, vehicles, and Information and communication technology (ICT) products, while increasing market access for agricultural goods and industrial exports.
- **Energy Security:** Strengthens energy ties, boosting oil, gas, and nuclear cooperation, with the US supporting India's [International Energy Agency \(IEA\)](#) membership.
- **Technology Advancement:** The [Initiative on Critical and Emerging Technologies \(iCET\)](#) was rebranded as **TRUST (Transforming the Relationship Utilizing Strategic Technology)**, focusing on [semiconductors](#), [quantum computing](#), and [Artificial Intelligence \(AI\)](#).
 - Efforts will expand **critical mineral supply chains**, including **lithium and rare earth recovery projects**.
 - Civil space cooperation will advance through **NASA-ISRO initiatives**, including an Indian astronaut's mission to the [International Space Station \(ISS\)](#) and the [NISAR](#) launch.
- **Multilateral and Regional Cooperation:** Strengthen [Quad partnerships](#), enhance counterterrorism efforts, [Indo-Pacific](#) security and advance connectivity projects like the [India-Middle East-Europe Corridor](#).
- **People-to-People Engagement:** The COMPACT initiative boosts academic and workforce mobility, eases legal migration, and strengthens law enforcement cooperation against trafficking and transnational crime.

India - US Relations

- **Trade and Investment:** India-US ties have evolved into a "**global strategic partnership**".
 - In 2024, India's total goods trade with the U.S. reached **USD 129.2 billion**. India's exports to the U.S. stood at **USD 87.4 billion**, while imports from the US were **USD 41.8 billion**. India has a **USD 45.7 billion** trade surplus with the US in 2024.

- USA is the **3rd largest investor in India** with cumulative **Foreign Direct Investment (FDI)** inflows of USD 65.19 billion from 2000- 2024.
- **International Cooperations: India and the US collaborate in multilateral forums like the [United Nations](#), [G-20](#), [Association of Southeast Asian Nations](#), [World Trade Organization](#), [I2U2 group](#) and [Indo-Pacific Economic Framework for Prosperity \(IPEF\)](#).**
- **Defence Cooperation:** India-US defense ties strengthened with the 2005 Defense Framework, renewed in 2015.
 - India is a **Major Defense Partner of the US** with **Strategic Trade Authorization-1 (STA-1)** status (allowing easier access to US defense technologies).
 - **Joint exercises: [Ex VAJRA PRAHAR](#)** (Army), [SALVEX](#) (Indian Navy), [Cope India](#) (Air Force) and [Malabar Exercise](#) (Quadrilateral naval exercise of India, USA, Japan and Australia).
- **People to people Ties:** The 3.5 million Indian American community plays a key role in US society, strengthening India-US ties.

What are the Key Challenges in India-US Relations?

- **Tariff Disputes:** President Trump criticized India's "**onerous tariffs**" (burdensome and excessively high import duties) and reinforced his policy of "**reciprocal tariffs**" (tariffs imposed in response to similar tariffs by another country), which could increase **costs for Indian exporters**. Further, the absence of a [Free Trade Agreement](#) increases tariffs, and restricts trade.
 - India's current trade surplus with the **US may shrink as it increases imports** to reach the USD 500 billion trade target, potentially requiring selective **tariff reductions that favor US** interests over broader India's economic efficiency.
- **Immigration Policies:** India agreed to facilitate the return of 2,20,000–7,00,000 undocumented Indians immigrants, a move seen as aligning with **Trump's stricter immigration stance**.
 - Despite India's reliance on [H-1B visas](#) for IT professionals, no clear commitments were made, reflecting **ongoing tensions between Silicon Valley and Trump's nationalist policies**.
- **Technology Transfer:** Despite growing Defence ties, US restrictions on AI, drones, and missile technology hinder India's access to advanced Defence systems.
- **Data Localization:** The US opposes **India's data sovereignty laws**, arguing they hurt **American tech firms**, while India insists on national security and user privacy protections.
- **Geopolitical and Multilateral Differences:** Despite US support for **India's permanent UNSC membership**, differences in global governance persist, with the US urging India to leverage its ties with Russia to end the war, while India maintains neutrality.
 - India's historical Defence and energy ties with Russia conflict with US efforts to isolate Moscow.

Way Forward

- **BTA:** Finalize the **BTA to ease trade tensions**, improve supply chain integration in semiconductors and pharmaceuticals, and **harmonize regulatory standards** with US norms to attract investments.
- **Workforce Mobility:** India should push for **higher H-1B quotas**, and faster visa processing to support professionals and tech talent and mutual recognition of qualifications is essential to enhance workforce integration.
- **Data Governance:** India should selectively **ease data localization norms**, facilitate US tech investments in India, and develop **joint cybersecurity frameworks** to enhance trust in digital governance.
- **Diplomatic Engagement:** Strengthening US-India engagement in multilateral forums like **Quad**, **IPEF** while leveraging India's strategic role in the [Global South](#) to address global governance differences and enhance economic and security influence.

Drishti Mains Question:

Discuss the significance of the India-US COMPACT Initiative in strengthening bilateral relations.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims

Q. Consider the following countries: (2018)

1. Australia
2. Canada
3. China
4. India
5. Japan
6. deer

Which of the above are among the 'free-trade partners' of ASEAN?

- (a) 1, 2, 4 and 5
- (b) 3, 4, 5 and 6
- (c) 1, 3, 4 and 5
- (d) 2, 3, 4 and 6

Ans: (c)

Mains

'What introduces friction into the ties between India and the United States is that Washington is still unable to find for India a position in its global strategy, which would satisfy India's National self-esteem and ambitions'. Explain with suitable examples. **(2019)**