



## China's Export Controls on Gallium and Germanium

**For Prelims:** Gallium, Germanium, [semiconductor](#), [Initiative on Critical and Emerging Technology \(ICET\)](#)

**For Mains:** Impact of China's export controls, Significance of semiconductors in the global market

[Source: TH](#)

### Why in News?

China has recently announced that it will **impose export controls on gallium and germanium, which are essential for semiconductor manufacturing, starting from August 1, 2023.**

- This action is seen as a response **to export controls implemented by the United States, Japan, and the Netherlands**, who express national security concerns and accuse China of military use and human rights violations.
- China denies these allegations, asserting that its export **controls aim to safeguard global industrial and supply chain stability**, without singling out any country.

### What are Gallium and Germanium?

- **Gallium:**
  - It is a **soft, silvery-white metal** that is liquid near room temperature.
  - It is not found as a free element and is only present in small quantities in certain minerals, such as [zinc ores and bauxite](#).
  - Gallium is used to make **gallium arsenide**, which is a **core substrate for semiconductors**.
  - It is utilized in the production of **semiconductor wafers, integrated circuits, mobile and satellite communications (in chipsets), and LEDs (in displays)**.
  - Gallium also finds applications in automotive and lighting industries, as well as in **sensors for avionic, space, and defense systems**.

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▪ **Germanium:**

- It is a **lustrous, hard, silvery-white semi-metal with a crystal structure similar to a diamond.**
- Germanium is used in **various electronic and optical applications.**
- It is commonly used in [fiber-optic cables](#) and **infrared imaging devices.**
- Germanium enhances the ability to **operate weapon systems in harsh conditions.**
- It is also used in **solar cells due to its heat resistance and higher energy conversion efficiency.**



▪ **Note:**

- Gallium and germanium, both listed on **India's recently released [critical mineral list](#) by the Ministry of Mines**, are also included in the [European Union's list of critical raw materials](#), which are recognized as crucial to Europe's economy.

- Additionally, these elements are considered strategic resources by the United States and Japan.

## How does China Dominate the Global Supply of these Raw Materials?

- China is the **world's largest producer and exporter of gallium and germanium.**
- According to the European industry body, Critical Raw Materials Alliance (CRMA), China accounted for **80% of global gallium production** and **60% of global germanium production.**
- Abundant reserves of gallium and germanium in China contribute to its dominant position in the market.
- China imports gallium and germanium from countries like **Kazakhstan, Russia, and Canada to supplement its domestic supply.**
- China has a strong **industrial base for processing and refining** gallium and germanium into high-purity products.
- The country benefits from low **labor costs, favorable policies, and a large domestic market,** giving it a competitive advantage in the global supply chain.

## How will China's Export Controls Affect the Market?

- **India:**
  - The Chinese export controls on gallium and germanium are expected to have a short-term impact on India and its industries.
  - India currently imports all chips, and the market is estimated to touch USD100 billion by 2025 from USD 24 billion now. Disruption in immediate supply chains may result in **increased prices and limited availability of these raw materials** in India.
  - India's chip-making plans could be affected due to the dependence on imports of gallium and germanium.
  - Long-term consequences for [India's semiconductor industry](#) depend on alternative supply sources and domestic production capabilities.
  - Strategic partnerships like the [India-U.S. Initiative on Critical and Emerging Technology \(iCET\)](#) may play a role in ensuring a reliable supply chain.
  - Deloitte India suggests **exploring waste recovery from zinc and alumina production as a potential source of gallium and germanium.**
  - India has an opportunity to develop domestic capabilities and diversify its supply chain by focusing on **substitutes such as indium and silicon.**
- **Global:**
  - The restrictions may lead to an increase in **prices of gallium and germanium in the global market** as supply becomes limited.
  - Countries and companies heavily dependent on Chinese supply may seek to **diversify their sources** of gallium and germanium to **reduce their vulnerability** to such export controls.
  - Export controls by China could **present opportunities for other countries or regions to increase their production** and supply of gallium and germanium, potentially creating a more diversified market.

## UPSC Civil Services Examination, Previous Year Questions (PYQs)

**Q. Recently, there has been a concern over the short supply of a group of elements called 'rare earth metals'. Why? (2012)**

1. China, which is the largest producer of these elements, has imposed some restrictions on their export.
2. Other than China, Australia, Canada and Chile, these elements are not found in any country.
3. Rare earth metals are essential for the manufacture of various kinds of electronic items and there is a growing demand for these elements.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Ans: (c)

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## OTT Communication Services

**For Prelims:** [Telecom Regulatory Authority of India](#), [Over-the-top Services](#), [Covid-19 pandemic](#), [Universal Service Obligation Fund](#), [Draft Telecommunication Bill, 2022](#), [Telecom service providers](#).

**For Mains:** Current Regulatory Status of OTT Communication Services in India, Telecom Regulatory Authority of India

**Source:** [IE](#)

### Why in News?

The [Telecom Regulatory Authority of India \(TRAI\)](#) is revisiting its stance on regulating [over-the-top \(OTT\) communication services](#), such as **WhatsApp, Zoom, and Google Meet**.

### What are OTT Services?

- An **“over-the-top”** media service is **online content provider that offers streaming media as a standalone product**.
  - The term is commonly applied to **video-on-demand platforms**, but also refers to **audio streaming, messaging services, or internet-based voice calling solutions**.
- These services that rely in data usage have become increasingly popular and widely used in India, especially during the [Covid-19 pandemic](#).
  - Monthly wireless data usage in India grew approximately **156 times from 2014 to 2022**. Revenue generation has **shifted from traditional voice and SMS services to data usage**.

### What is the Current Regulatory Status of OTT Communication Services in India?

- As of now, there is **no specific regulatory framework for OTT communication services in India**. TRAI has issued several consultation papers on this issue since 2015, but has **not made any final recommendations or regulations**.
- In September 2020, **TRAI recommended against regulatory intervention for OTT platforms, saying that it should be left to market forces**.
  - However, it also said that the sector should be monitored and intervention should be done at an **“appropriate time”**.
- In 2022, the [Department of Telecommunication \(DoT\)](#), which is the **nodal ministry for telecom policy and licensing**, suggested TRAI to bring a suitable regulatory mechanism and **“selective banning of OTT services”**.

## Why is Regulation of OTT Communication Services Important?

- **Leveling the Playing Field Between TSPs and OTT Platforms:** It is important to create a **fair competition between [telecom service providers \(TSPs\)](#) and OTT platforms.**
  - TSP in India are regulated by several laws, including the **Indian Telegraph Act, 1885, the Wireless Telegraphy Act, 1933 and the Telecom Regulatory Authority of India Act, 1997.**
  - TSPs have to follow certain rules and pay fees to the government for **providing voice and SMS services.**
    - They also need to **meet quality standards, ensure security, and protect consumers.**
  - However, **OTT platforms offer similar services without facing these requirements,** which gives them an advantage.
    - Also, they do not contribute to the **[Universal Service Obligation Fund \(USOF\).](#)**
  - This unfair competition **affects the revenue and profitability of TSPs and also impacts the government's revenue** from the telecom sector.
- **Lawful Interception and National Security:** Regulating OTT communication services is essential for national security and public order.
  - OTT platforms should be **subject to lawful interception and monitoring by security agencies** to prevent the **spread of misinformation, incitement of violence, or facilitation of criminal activities.**
  - Making OTT platforms responsible for any illegal content or activity on their platforms helps maintain a safe and secure online environment.

## What does the Draft Telecommunications Bill, 2022 Focus on Regarding OTT Services?

- The **[Draft Telecommunication Bill, 2022](#)** is a proposed legislation that aims to replace three existing laws governing the telecom sector in India: the **Indian Telegraph Act, 1885, the Indian Wireless Telegraphy Act, 1933, and the Telegraph Wires (Unlawful Possession) Act, 1950.**
- The draft law proposes including OTT communication services, such as WhatsApp, Signal, and Telegram, **within the definition of telecommunication services.**
  - It **proposes that OTT communication services** in India should acquire a license and comply with the same set of rules governing telecom players.
  - These rules encompass various aspects such as **quality of service and security measures.**

## What is Telecom Regulatory Authority of India?

- **Legal Backing:**
  - The **TRAI** was established on **20<sup>th</sup> February 1997** by the **Telecom Regulatory Authority of India Act, 1997.**
- **Objectives of TRAI:**
  - TRAI's mission is to create and nurture conditions for growth of telecommunications in the country.
  - TRAI regulates **telecom services including fixation/revision of tariffs** for telecom services which were earlier vested in the Central Government.
  - It also aims to provide a fair and transparent policy environment which promotes a level playing field and facilitates fair competition.
- **Headquarters:**
  - The head office of the TRAI is located at **New Delhi.**
- **Composition of TRAI:**
  - **Members:** The TRAI consists of a **Chairperson, two whole-time members and two part-time members,** all of which are appointed by the Government of India.
  - The recommendations of the TRAI are **not binding** upon the Central Government.
  - **Tenure of Members:** The Chairperson and other members shall hold their office for a term of **three years or till the age of 65 years,** whichever is earlier.

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## Global South

**For Prelims:** [Global South](#), [NATO](#), [Russia-Ukraine](#), [BRICS](#), [Imperialism](#), [BRI](#), **Developing Nations**, **Global North**.

**For Mains:** Global South, its significance and Challenges.

[Source: TH](#)

### Why in News?

The reluctance of many nations in **Africa, Asia, and Latin America** to support [NATO \(North Atlantic Treaty Organization\)](#) in the [Ukraine conflict](#) has brought the term ["Global South" into focus](#).

### What is Global South?

#### ▪ About:

- The Global South refers to countries often characterized as **developing, less developed, or underdeveloped**, primarily located in **Africa, Asia, and Latin America**.
- These nations typically experience **higher levels of poverty, income inequality, and challenging living conditions** compared to the wealthier nations of the Global North.
- The "Global North" is richer nations that are located mostly in North America and Europe, with some additions in Oceania and elsewhere.



#### ▪ From "Third World" to "Global South":

- The term Global South was first coined in 1969 by political activist Carl Oglesby.
- It gained momentum after the **dissolution of the Soviet Union in 1991**, which marked the end of the **"Second World."**
- Previously, developing nations were **commonly referred to as the "Third World,"** a term coined by **Alfred Sauvy in 1952**.
- However, this term became associated with **poverty, instability, and negative**

**stereotypes** propagated by **Western media**.

- As a result, the term "**Global South**" emerged as a more neutral alternative.

▪ **Geopolitical and Economic Commonalities:**

- The term Global South does not have a **strict geographical definition**. It signifies a **combination of political, geopolitical, and economic similarities** among nations.
- Many countries in the Global South have a **history of [Imperialism](#) and [Colonial Rule](#)**, particularly evident in African countries.
- This history has shaped their perspectives on the relationship between the global **center (Global North) and periphery (Global South)** within the world political economy.

## What is the Significance of Global South Today?

▪ **Shifting Economic and Political Power:**

- The Global South has experienced a significant shift in wealth and political visibility in recent decades. The [World Bank \(WB\)](#) has acknowledged a "**shift in wealth**" from the **North Atlantic to the Asia-Pacific** region, challenging conventional notions of economic power distribution.
- Projections indicate that by 2030, **three of the four largest economies will belong to Global South** countries, with China and India leading the way.
  - The combined [GDP \(Gross Domestic Product\)](#) of the [BRICS nations \(Brazil, Russia, India, China, and South Africa\)](#) already **surpasses that of the G-7 nations**. Moreover, political actors from the Global South, such as **China, Saudi Arabia, and Brazil, are increasingly playing influential roles** in global affairs.

▪ **Impact on Geopolitics:**

- The growing economic and political power of the Global South has important implications for global geopolitics.
- Asian nations are **predicted to play a significant role in what experts call the "Asian Century."**
- Additionally, there is talk of a "**post-Western world**" as the influence of the Global South challenges the **historical dominance of the Global North**.
- These shifts signify the **increasing assertiveness and influence of the Global South** on the world stage.

## What are the Challenges to the Development of the Global South?

▪ **Issue of Green Energy Fund:**

- Despite Global North countries' higher contribution towards global emissions, they are neglecting to pay for [funding green energy](#), for which the ultimate sufferers are the least emitters - the lesser developed countries.

▪ **Impact of Russia-Ukraine War:**

- The [Russia-Ukraine war](#) severely affected the **least developed countries (LDCs)** aggravating the concerns related to food, energy and finance, thereby, threatening the development prospects of LDCs.

▪ **China's Interference:**

- China is increasingly making inroads in the **Global South through the [Belt and Road Initiative \(BRI\)](#)** for developing infrastructure.
- However, it is still questionable whether BRI will be a win-win situation for both parties or **it will focus only on China's Profit**.

▪ **US Hegemony:**

- The world is now **considered to be multipolar by many but still**, it is the US alone who dominates international affairs.
  - The US possesses the **largest economy in the world**, with substantial **influence over global financial markets**. The U.S. dollar remains the dominant currency for international trade and is **used as a reserve currency by many countries**.

▪ **Inadequate Access to Resources:**

- Global North-South divergences have been **historically characterised by major gaps** in the access to resources required for crucial developmental outcomes.
- Industrialisation, for example, has been skewed in the favour of advanced economies since the early 1960s, and no major evidence of global convergence was found in this regard.

### ▪ **Impact of Covid-19:**

- Covid-19 pandemic has **exacerbated the already existing divides**.
- Not only have the countries faced different challenges in dealing with the initial phases of the pandemic, but the social and macroeconomic implications being faced today have been far worse for the global South.
- The vulnerability of the domestic economies is far more apparent now in countries ranging from Argentina and Egypt to Pakistan and Sri Lanka.

## **What are the Initiatives of India for Global South?**

- Indian Prime Minister announced five initiatives to support the development of other developing countries in **"Voice of Global South Summit"** hosted by India in January 2023.
  - The **"Global South Centre of Excellence"** will research development solutions and best practices which can be implemented in other developing countries.
  - The **"Global South Science and Technology Initiative"** aims to share Indian expertise in areas such as space technology and nuclear energy.
  - The **"Aarogya Maitri"** project will provide essential medical supplies to any developing country affected by natural disasters or humanitarian crises.
  - The **"Global South Young Diplomats Forum"** will connect young officers of foreign ministries,
  - The **"Global South Scholarships"** will provide higher education opportunities in India for students from developing countries.

## **Conclusion**

- The rise of the Global South as an economic and political force has challenged traditional power dynamics and brought **attention to the changing global order**.
- As the Global South continues to assert itself, it **reshapes geopolitics, heralding a new era** where nations from Africa, Asia, and Latin America play increasingly significant roles in shaping the future of international relations.

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## **Concerns About National Exit Test**

**For Prelims:** Concerns About National Exit Test, [IMA](#), [National Exit Test \(NeXT\)](#), [National Medical Commission](#).

**For Mains:** Concerns About National Exit Test.

**Source:** [TH](#)

### **Why in News?**

The [Indian Medical Association \(IMA\)](#) has urged the [National Medical Commission \(NMC\)](#) to reconsider its proposed [National Exit Test \(NeXT\)](#) for all **MBBS students in India**, which will now be the licentiate exam and post graduate selection exam.

### **What is the National Exit Test?**

- The NeXT is a medical licensing exam that is **designed to assess the competency of medical graduates**.



- Students who received their **medical degrees (who have completed the final MBBS course) from NMC approved medical institutions** and overseas students also will have to qualify for the National Exit Test.
  - To register for medical practice in India, they must pass the NExT test.
- This centralized common **exam will be conducted by a body formed by the commission for this purpose.**
  - **National Medical Commission (Amendment) Bill, 2022**, proposes an autonomous board, 'Board of Examinations in Medical Sciences', which, when comes to effect, will be responsible for holding the NExT exam.
- NExT will take the place of **tests like FMGE and NEET PG.**
- The NExT will comprise two separate exams called 'Steps'.
- There is no restriction in the number of attempts provided that the candidate passes both the steps within 10 years of joining MBBS.

## What are the IMA's Concerns?

- Nearly 50% of India's medical colleges have been established in the last 10-15 years and may not have the same level of well-trained teachers and systems as older institutions. Therefore, comparing the standards of these newer colleges with more established ones may not be appropriate.
- The IMA asserts that conducting the **NExT** through the All-India Institute of Medical Sciences (AIIMS) could disadvantage **students from recently established medical colleges.**
- They advocate for a minimum passing mark of no more than 30% and suggest that **the focus of the licensing exam should be on assessing the minimum standard** rather than including challenging questions.
- Additionally, the IMA emphasizes that the **post-graduate medical entrance exam should be separate from the NExT to evaluate the most meritorious students.**

## What is the Standard of Medical Education India?

- **Admission Process:**
  - In India, admission to undergraduate medical courses, including MBBS, in all medical institutions **goes forward only after the student has cleared the NEET** conducted by the National Testing Agency.
  - The National Board of Examinations in Medical Sciences (NBEMS) is responsible for holding exams for Post Graduation (NEET PG).
- **Accreditation:**
  - The Medical Council of India (MCI), replaced by the **National Medical Commission (NMC)**, is responsible for accrediting and recognizing medical colleges in India.
    - Accreditation ensures that colleges meet the prescribed standards of infrastructure, faculty, facilities, and curriculum. However, there have been instances where colleges fail to meet these standards, leading to concerns about the quality of education.
- **Seats:**
  - In recent years, there has been a significant rise in the number of available medical seats (MBBS) in colleges, increasing from 60,000 to 1,04,333 as of 2023. Among these seats, 54,278 are allocated to Government Medical Colleges, while the remaining 50,315 are designated for Private Medical Colleges.

## What are the Problems Plaguing Medical Education in India?

- **Demand-Supply Mismatch:**
  - There is a serious **demand-supply mismatch** as well as inadequate seats in terms of population norms. In private colleges, these seats are priced between **Rs 15-30 lakh per year** (not including hostel expenses and study material).
  - This is way more than what most Indians can afford. It is difficult to comment on quality as nobody measures it. However, it is highly variable and poor in most medical colleges, irrespective of the private-public divide.

### ▪ **Issues of Skilled Faculty:**

- The government's initiative to open new medical colleges has run into a serious faculty crunch. Except at the lowest level, **where new entrants come, all that the new colleges have done is poach faculty** from a current medical college. Academic quality continues to be a serious concern.
- The MCI did try to address many of the earlier loopholes of ghost faculty and corruption. It introduced the **requirement of publications for promotions to improve the academic rigor** of faculty. But this has resulted in the mushrooming of journals of dubious quality.

### ▪ **Problems with Private Medical Colleges:**

- A change in the **law in the 1990s made it easy to open private schools** and so many such medical institutes cropped up in the country, funded by businessmen and politicians, who had **no experience of running medical schools**. It commercialized medical education to a great extent.

### ▪ **Corruption in Medical Education:**

- Fraudulent practices and rampant corruption such as fake degrees, bribes and donations, proxy faculties, etc. in the medical education system is a major problem.

## Way Forward

- Recent efforts by the NMC to **regulate college fees are being resisted by medical colleges**. The government should seriously consider subsidizing medical education, even in the private sector, or look at alternative ways of financing medical education for disadvantaged students.
- Quality assessments of medical colleges **should be regularly conducted**, and reports should be available in the public domain. The NMC is proposing a **common exit exam for all medical undergraduates** as a quality control measure.
- In addition to raising the standards of medical professionals, the system should innovate to meet the growing shortage of health professionals to serve aging populations with lifestyle and lifetime ailments.

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## Sarpanch-patism

**For Prelims:** [Supreme Court of India](#) , [panchayat system](#), [73rd Constitutional Amendment Act](#)

**For Mains:** sarpanch-patism and its implications in the panchayat system, Challenges involved in tackling sarpanch-patism

**Source:** [TH](#)

### Why in News?

Recently, the [Supreme Court of India](#) was approached by the Mundona Rural Development Foundation, an NGO, regarding the issue of "**sarpanch-patism**" in the [panchayat system](#).

- However, the Supreme Court clarified that it is **not within its jurisdiction to directly address the issue**. Instead, the court advised the NGO to **approach the Ministry of Panchayati Raj** and urged the **government to take appropriate action to empower women and implement reservation objectives**.

### What is Sarpanch-patism ?

- Sarpanch-patism is a term used to describe the **situation where men act as “sarpanch-pati, sarpanch-devar, pradhan-pati” etc.** while wielding the actual **political and decision-making power behind women** who are **elected as sarpanchs or pradhans** in the panchayat system.
- Sarpanch-patism **undermines the spirit and purpose of women’s reservation** in panchayats, which was introduced by the [73<sup>rd</sup> Constitutional Amendment Act, 1992](#) to **empower women** at the grassroots level and improve their socio-economic conditions through representative democracy.
- Sarpanch-patism also violates the constitutional rights and dignity of women, who are reduced to **“faceless wives and daughters-in-law” in grassroots politics.**
- It deprives them of their agency, autonomy, and voice in public affairs.
- Sarpanch-patism also affects the **quality and effectiveness of governance** and **service delivery at the local level**, as it creates a gap between the elected representatives and the people. It also leads to corruption, and misuse of funds.

## What are the Challenges in Tackling Sarpanch-patism?

- Overcoming [patriarchal norms, attitudes and practices](#) that hinder women’s participation and empowerment in public life.
- Resisting **political interference, pressure, and violence from dominant groups** or parties that seek to control or influence panchayats.
- Socio-economic barriers such as **poverty, illiteracy, lack of mobility, etc.**, that limit women’s access to resources and opportunities.
- Balancing **domestic responsibilities and public roles for women** without compromising their health or well-being.

## What are the Constitutional Provisions for Women Representation in PRIs?

- The **Article 243D of the Constitution of India**, inserted through the **73<sup>rd</sup> Constitutional Amendment Act in 1992**, mandates a **reservation of not less than one- third for women** in PRIs nationwide.
  - This has been increased to **50% reservation** in several states like Andhra Pradesh, Chattisgarh, Gujarat, Himachal Pradesh, Bihar etc in their respective State Panchayati Raj Acts.
- Article 243D also provides that **one-third of the total number of seats and offices of the Chairpersons in PRIs** at each level shall be reserved for women to be allotted by rotation to different constituencies in a Panchayat.
  - Such reservations of seats and offices of the chairpersons for women are also within the reservations for SCs and STs in all three tiers of PRIs.

## What are the Efforts by Government to Promote Women in PRIs?

- **Rashtriya Gram Swaraj Abhiyan (RGSA):**
  - [RGSA](#) launched in 2018 to enhance PRIs' capacities for responsive rural governance, leveraging technology and resources for sustainable solutions aligned with [SDGs](#). It also incentivized women's participation in PRIs.
- **Gram Panchayat Development Plan (GPDP):**
  - [GPDP guidelines that are relevant to Women Empowerment include](#) proactive participation of women in budgeting, planning, implementation and monitoring of GPDP and convening Mahila Sabhas prior to the general Gram Sabhas and their inclusion in Gram Sabhas and GPDP.

## Way Forward

- Providing **capacity building and leadership development programs** for women representatives.
- Strengthening the **role and functioning of gram sabhas (village assemblies)** to ensure participation and accountability of women representatives.
- Creating **awareness and sensitization campaigns among men and women** on gender

equality and democracy.

- Ensuring **adequate financial and administrative support for women representatives.**
- Enacting **laws and policies to prevent and punish sarpanch-patism** and other forms of proxy politics.

## UPSC Civil Services Examination, Previous Year Questions (PYQ)

**Q. Local self-government can be best explained as an exercise in (2017)**

- (a) Federalism
- (b) Democratic decentralisation
- (c) Administrative delegation
- (d) Direct democracy

**Ans: (b)**

**Q. The fundamental object of Panchayati Raj system is to ensure which among the following? (2015)**

1. People's participation in development
2. Political accountability
3. Democratic decentralization
4. Financial mobilization

**Select the correct answer using the code given below**

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

**Ans: (c)**

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## Cluster Munition

[Source: IE](#)

### Why in News?

**United States (US)** has made the decision to provide [cluster munitions](#) to **Ukraine** as part of a new military aid package worth up to USD 800 million.

- This move has raised concerns about civilian casualties, with calls from the [United Nations](#) to **avoid using such weapons.**

### What is a Cluster Munition?

- **About:**
  - A cluster munition is a form of **air-dropped or ground-launched explosive weapon** that releases or ejects smaller submunitions, commonly known as **bomblets**, over a wide area.
  - They are designed to **kill personnel and destroy vehicles**, runways, power lines, or

other targets.

- Some cluster munitions can also **disperse chemical or [biological agents](#), land mines, or leaflets.**

▪ **Challenges:**

- Cluster munitions **can indiscriminately harm civilians and civilian objects, violating international humanitarian law.**
  - They have a **high failure rate**, leaving behind unexploded ordnance that poses ongoing danger.
- Additionally, **they contaminate vast areas for extended periods**, rendering them unfit for human use and burdening healthcare and economies in affected nations.

▪ **Past Use:**

- During the **Afghanistan War in 2001**, the US considered cluster bombs significant.
  - US last used cluster bombs during the **battle with Iraq in 2003**
- In the Syrian civil war, Russian-supplied Syrian government troops frequently deployed cluster munitions.
- Israel utilized cluster bombs in civilian areas in south Lebanon, notably during the **2006 war with Hezbollah.**
- The Saudi-led coalition in Yemen faced criticism for employing cluster bombs in their conflict with the **Houthi rebels.**

▪ **Convention on Cluster Munitions:**

- **[Convention on Cluster Munitions](#) outlaws the use, production, transfer, and stockpiling of these weapons** due to their indiscriminate and long-lasting effects on civilian populations.
- It was adopted in **Dublin by 107 States on 30 May 2008** and signed in Oslo on 3 December 2008.
  - The Convention became binding international law when it entered into force on **1 August 2010.**
- To date, **a total of 123 States have joined the Convention: 111 States Parties and 12 Signatories.**
  - The convention remains unsigned by several nations, including **India, the United States, Russia, Ukraine, Pakistan and Israel.**

## Rapid Fire Current Affairs

### The Solomon Islands and China Strengthen Relations



The [Solomon Islands](#) and **China** have reinforced their ties through agreements on **police, economic, and technical cooperation**. This comes after the Solomon Islands switched diplomatic **ties from Taiwan to China in 2019**. China aims to further expand relations and trade through initiatives like the [Belt and Road Initiative](#), fostering economic and geopolitical interests in the **South Pacific**. The growing partnership between the Solomon Islands and China draws attention to regional dynamics and raises implications for international relations.

The Solomon Islands is a **Melanesian nation in Oceania, east of Papua New Guinea**, with over 990 islands. Its capital is Honiara on Guadalcanal, and it has a rich history of Melanesian habitation for 30,000 years.

**Read more:** [Solomon Islands](#)

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## Supreme Court Upholds Rights of Non-Notified Forest Inhabitants

The [Supreme Court of India](#), in a recent hearing, has acknowledged that **forest inhabitants beyond Adivasi or backward communities** have the **right to be heard before eviction from forest lands they occupy**. The court's decision, based on the [Forest Rights Act of 2006](#), recognizes that **non-notified forest dwellers are integral to forest communities, even if they lack official recognition** due to socio-political and economic factors.

The Forest Rights Act of 2006 **recognizes and grants legal rights to forest-dwelling tribal communities** and other traditional forest dwellers, enabling them to **access and manage forest resources**. It aims to protect the rights of these communities, **promote sustainable forest management, and ensure their socio-economic well-being**.

**Read more:** [Forest Rights Act of 2006](#)

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## Product Design Centre and Grain-Ex System

The [Ministry of Electronics and Information Technology \(MeitY\)](#), **Government of India** has inaugurated the **Product Design Centre (PDC) at the Centre for Development of Advanced Computing (C-DAC), Kolkata**, provides state-of-the-art facilities for system designing, prototyping, ideation, and fabrication. This center is poised to benefit **startups, entrepreneurs, and MSMEs** in the region by offering them access to cutting-edge software and printing technologies.

In addition to the PDC launch, a revolutionary **appearance-based detection system**, known as **Grain-Ex**, was also unveiled during the event. Developed in collaboration with **ICAR-IARI, New Delhi**, as part of the '**National programme on Electronics and ICT applications in Agriculture and Environment (AgriEnIcs)**,' Grain-Ex employs machine vision technology to detect the quality of pulses accurately. This system promises to bring about a transformative change in the **[e-NAM markets](#)**, enabling quality-based pricing and benefiting over **1,200 e-NAM connected markets**.

**Read more:** [Centre for Development of Advanced Computing](#), [e-NAM markets](#).

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## World Population Day

**[World Population Day](#) is observed on July 11<sup>th</sup> every year** to raise awareness about global population issues and the importance of reproductive health and rights. It was established by the **[United Nations](#) in 1989**.

The history of World Population Day dates back to **July 11, 1987**, when the global population reached a significant milestone of **five billion people**. This event served as a catalyst for recognising the need to address population-related concerns such as poverty, health, education, and sustainability.

Theme for World Population Day 2023 is "**Unleashing the power of gender equality: Uplifting the voices of women and girls to unlock our world's infinite possibilities.**"

**Read more:** [World Population Day](#), [United Nations](#).

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