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MINISTRY OF SCIENCE AND TECHNOLOGY



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PLFS

(Syllabus: GS Paper 2 – Social Issues)



How big is the gender gap in earnings?

What are the main findings regarding the earnings gap between men and women across different forms of employment in 2023? How might policies and interventions address the disparities in work hours and employment patterns between men and women in India?

ECONOMIC NOTES

Rahul Menon

THE GIST

Context: The **Periodic Labour Force Surveys (PLFS)** have recently been monitoring the **gender earnings gap across various forms** of employment from April to June 2019 to 2023.

Key Points

- **Men consistently earn more than women** in all forms of work, with the greatest gender gap observed among self-employed individuals.
- The **gender gap in earnings has increased** for self-employed workers but decreased for regular wage workers.
- The **rise in the gender gap in hours worked is attributed** to increasing **Labour force participation rates (LFPRs)** among rural women in self-employment, but with many of these jobs being parttime in nature.

Periodic Labour Force Surveys (PLFS)

- **Objective**: In urban areas, for a short three-month interval, focus on the 'Current Weekly Status' (CWS).
- Annually, for **both rural and urban areas, assess both** the **'Usual Status'** and CWS.
- **Key Indicators**
  - **Labor Force Participation Rate (LFPR)**: LFPR represents the proportion of individuals in the population who are part of the labor force, meaning they are either employed, actively seeking employment, or available for work.
  - **Worker Population Ratio (WPR)**: WPR denotes the percentage of the population that is employed.
  - **Unemployment Rate (UR)**: UR indicates the percentage of individuals within the labor force who are currently unemployed.

INDIAN EXPRESS Page 15

SEMICONDUCTOR

(Syllabus: GS Paper 3 – Sci and Tech)

Cabinet approves India-Japan chip supply chain partnership

ENS ECONOMIC BUREAU
NEW DELHI, OCTOBER 25



India is looking to establish itself as a reliable presence in the semiconductor supply chain. *File*

THE UNION Cabinet has approved a Memorandum of Cooperation (MoC) between India and Japan on developing a semiconductor supply chain partnership, which will focus on research and development (R&D), manufacturing, design, and talent development for the industry.

The MoC was initially signed in July this year between the IT Ministry and Japan's Ministry of Economy, Trade and Industry.

The MoC intends to strengthen cooperation between India and Japan towards enhancement of the semiconductor supply chain, recognising the importance of semiconductors for the advancement of industries and digital technologies, a statement released by the Union Cabinet said. India is looking to establish itself as a reliable presence in the semiconductor supply chain, especially at a time when companies are looking to diversify from China, which has been the hub of electronics manufacturing for several decades now. New Delhi has rolled out a $10 billion plan to boost local chip manufacturing. US memory maker Micron Technology is constructing an assembly and packaging plant in Gujarat under the plan.

India is also working with the United States on chip supply chains. As Prime Minister Narendra Modi and US President Joe Biden held a bilateral meeting last month ahead of the G20 Summit, they reiterated their stance on building resilient global semiconductor supply chains.

US chip company Microchip Technology had earlier announced an investment of $300 million for the next few years to expand its operations in India, which would include opening a new research and development (R&D) facility in Hyderabad. Advanced Micro Devices (AMD) will invest up to $400 million in India over the next five years and will set up its biggest design facility in Bengaluru.

Lam Research had announced a proposal to train 60,000 Indian engineers through its Semiverse Solution virtual fabrication platform. And Applied Materials announced a proposed investment of $400 million to establish a collaborative engineering centre in India.

Context: Recently, the **Union Cabinet approved a Memorandum of Cooperation** (MoC) between I**ndia and Japan to establish a semiconductor supply chain partnership**, with a strong emphasis on research and development (R&D), manufacturing, design, and talent development within the industry.

Semiconductor

- **About**: Semiconductors are manufactured using minute particles of various raw materials.
- **Raw materials**: Silicon, Germanium, and Gallium arsenide.
- Through a **process known as doping,** the properties of these materials are modified to make them exhibit both conductive and non-conductive behavior as needed.
- **Multiple semiconductor chips are produced** from a **single silicon disc** or wafer.

India's Status in Semiconductor Supply Chain

- **India's chip imports, which currently account** for all chips in the market, are expected to grow from the current USD 24 billion to reach USD 100 billion by 2025.
- This **signifies India's growing emphasis on internal semiconductor** production, as well as its desire to establish a formidable presence in the global semiconductor supply chains.
- **SEMICONINDIA 2023**: Organized by the India Semiconductor Mission in collaboration with industry and industry associations.
    - **Objective:** To transform India into a worldwide center for Semiconductor Design, Manufacturing, and Technology Development, aligning with the vision of the India Semiconductor Mission.

PIB Oct 25

NANO DAP (LIQUID) PLANT

(Syllabus: GS Paper 3 – Agriculture)

Context: Union Home Minister and Minister of Cooperation of India, recently inaugurated **IFFCO's Nano DAP (Liquid) Plant at Kalol** in Gandhinagar, Gujarat.

Nano DAP (Liquid) Plant

- **Establishment**: 2023.
- **Established by**: Indian Farmers Fertiliser Cooperative Limited (IFFCO)
- **Place**: Kalol in Gandhinagar, Gujarat.
- It is India's first liquid nano-ammonia phosphate (DAP) plant.
- Nano liquid DAP fertilizeris is a concentrated phosphate-based fertilizer.
- DAP is the second most consumed fertilizer in the country after urea.
- It provides phosphorus nutrition throughout the crop growth and development cycle.



Advantages

- Diammonium phosphate (DAP) is the **most globally utilized phosphorus fertilizer**, with a significant impact on India's fertilizer sector.
- The **introduction of Nano-DAP is poised to reduce India's expenditure** on fertiliser imports.
- It is **anticipated to play a role in reducing** the annual subsidies allocated to non-urea fertilisers.

Indian Farmers Fertiliser Cooperative Limited (IFFCO)

- **About**: IFFCO, registered as a Multistate Cooperative Society, is a significant fertilizer cooperative federation in India.
- It stands as one of the largest cooperative societies in India, and it is entirely owned by Indian Cooperatives.
- **Founded**: in 1967
- Headquarters: New Delhi

HINDUSTAN TIMES

Oct 25

BNS BILL 2023

(Syllabus: GS Paper 2 – Governance)

Make adultery, non-consensual gay sex crimes, says House panel

Context: Recently, a **Parliamentary Committee** has reviewed the **Bharatiya Nyaya Sanhita (BNS) 2023 Bill,** proposing significant **changes to India's Criminal Justice System**, recommendations including a gender-neutral provision criminalizing adultery.

Key Highlights of the Proposed Changes in BNS

- **Adultery and Gender-Neutral Provision**: A gender-neutral provision criminalizing Adultery has been recommended by the parliamentary committee.
  - This **recommendation follows the Supreme Court's 2018** declaration that Section 497 of the Indian Penal Code, which criminalized adultery, was unconstitutional.
  - The **committee's aim is to protect the institution of marriage** in a gender-neutral manner.
- **Non-Consensual Sex and Bestiality**: The committee is considering the inclusion of a clause that criminalizes non-consensual sex between individuals of all genders, along with acts of bestiality.
  - This **step reflects an effort to comprehensively** address various forms of sexual offenses.
- **Definition of Terms**: The committee has proposed improved definitions for terms such as "community service" and "life imprisonment" in the bill.
- **Positive Changes**: The new draft code has brought about several positive changes, including the **removal of Section 124A (Sedition) and provisions** for prosecuting offenses committed in foreign countries.

Bharatiya Nyaya Sanhita (BNS) 2023 Bill

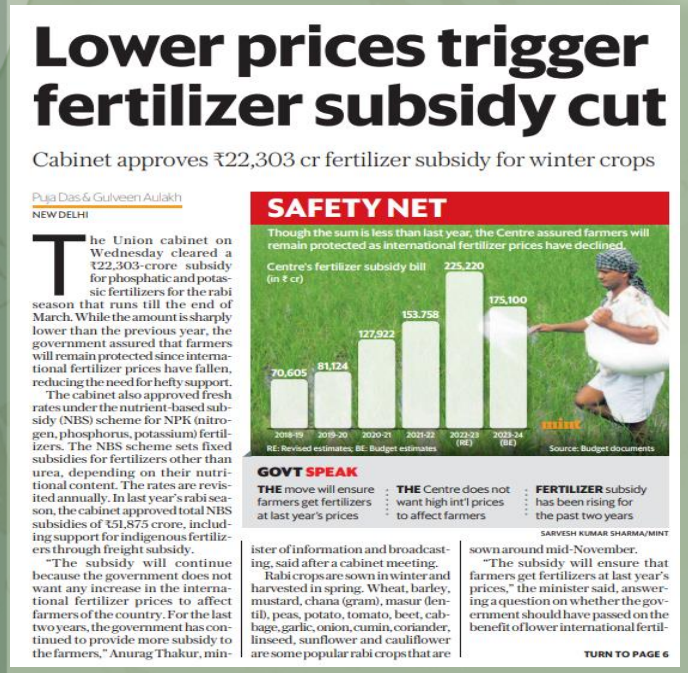
- **Origin of the Indian Penal Code (IPC)**: The Indian Penal Code (IPC) was initially composed in 1834.
- It was drafted **by the first Law Commission, led by Thomas Babington Macaulay**.
- The IPC officially **became effective in January 1**860.
- **Introduction of the BNS Bill**: In 2023, a new legislative proposal known as the BNS Bill was introduced.
  - The primary **objective of the BNS Bill** is to replace the IPC with a more contemporary and updated set of legal provisions.
- **Comparison of IPC and BNS Bill**: The IPC is an extensive legal framework, comprising 511 sections.
- In contrast, the BNS Bill encompasses a more concise set of laws with 356 provisions.

LIVEMINT

Page 1

NUTRIENT BASED SUBSIDY

(Syllabus: GS Paper 3 – Economy)



Lower prices trigger fertilizer subsidy cut

Cabinet approves ₹22,303 cr fertilizer subsidy for winter crops

Puja Das & Gulveen Aulakh
NEW DELHI

The Union cabinet on Wednesday cleared a ₹22,303-crore subsidy for phosphatic and potassic fertilizers for the rabi season that runs till the end of March. While the amount is sharply lower than the previous year, the government assured that farmers will remain protected since international fertilizer prices have fallen, reducing the need for hefty support.

The cabinet also approved fresh rates under the nutrient-based subsidy (NBS) scheme for NPK (nitrogen, phosphorus, potassium) fertilizers. The NBS scheme sets fixed subsidies for fertilizers other than urea, depending on their nutritional content. The rates are revisited annually. In last year's rabi season, the cabinet approved total NBS subsidies of ₹51,875 crore, including support for indigenous fertilizers through freight subsidy.

"The subsidy will continue because the government does not want any increase in the international fertilizer prices to affect farmers of the country. For the last two years, the government has continued to provide more subsidy to the farmers," Anurag Thakur, minister of information and broadcasting, said after a cabinet meeting.

Rabi crops are sown in winter and harvested in spring. Wheat, barley, mustard, chana (gram), masur (lentil), peas, potato, tomato, beet, cabbage, garlic, onion, cumin, coriander, linseed, sunflower and cauliflower are some popular rabi crops that are sown around mid-November.

"The subsidy will ensure that farmers get fertilizers at last year's prices," the minister said, answering a question on whether the government should have passed on the benefit of lower international fertil-

TURN TO PAGE 6

SAFETY NET

Though the sum is less than last year, the Centre assured farmers will remain protected as international fertilizer prices have declined.

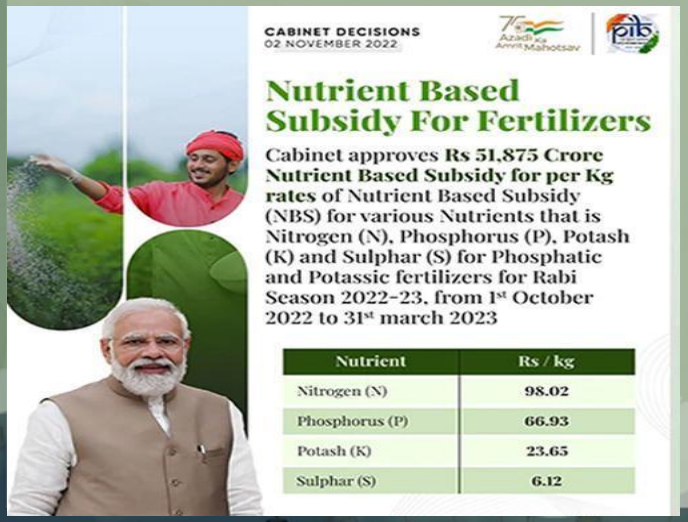
GOVT SPEAK

THE move will ensure farmers get fertilizers at last year's prices

THE Centre does not want high int'l prices to affect farmers

FERTILIZER subsidy has been rising for the past two years

SARVESH KUMAR SHARMA/MINT



CABINET DECISIONS
02 NOVEMBER 2022

Azadi Ka Amrit Mahotsav

pib

Nutrient Based Subsidy For Fertilizers

Cabinet approves Rs 51,875 Crore Nutrient Based Subsidy for per Kg rates of Nutrient Based Subsidy (NBS) for various Nutrients that is Nitrogen (N), Phosphorus (P), Potash (K) and Sulphar (S) for Phosphatic and Potassic fertilizers for Rabi Season 2022-23, from 1st October 2022 to 31st march 2023

Nutrient	Rs / kg
Nitrogen (N)	98.02
Phosphorus (P)	66.93
Potash (K)	23.65
Sulphar (S)	6.12

- **Context**: Recently, the **Union cabinet approved a subsidy of ₹22,303 crore** for **phosphatic and potassic fertilizers** to support the **ongoing rabi season**, which extends until the end of March.

Key highlights

- The cabinet also approved fresh rates **under the nutrient-based subsidy (NBS) scheme** for **NPK (nitrogen, phosphorus, potassium)** fertilizers.
- **Rabi crops are sown in winter** and harvested in spring. Wheat, barley, mustard, chana (gram), masur (lentil), peas, potato, tomato, beet, cabbage, garlic, onion, cumin, coriander, linseed, sunflower and cauliflower.

Nutrient Based Subsidy Scheme

- **About**: Under the NBS policy, **the government annually declares a fixed subsidy rate** for key nutrients, including Nitrogen (N), Phosphate (P), Potash (K), and Sulphur (S).
- **Implemented by**: Since 2010 by the Department of Fertilizers
- **Nodal Ministry**: Ministry of Chemicals & Fertilizers
  - Fertilizer manufacturers and importers provide farmers with subsidized prices for Urea and 25 P&K fertilizer grades as part of the government's initiative.
- **Aim**: The NBS policy strives **to enhance the utilization of P&K fertilizers** to attain the desired NPK fertilization equilibrium, with a ratio of 4:2:1 for Nitrogen (N), Phosphate (P), and Potash (K).

Benefits

- It helps farmers in **ensuring availability of essential nutrients** at subsidized prices.
- It rationalizes the **subsidy on P&K fertilizers**, ensuring effective and efficient utilization of government resources.

DST

Oct 25

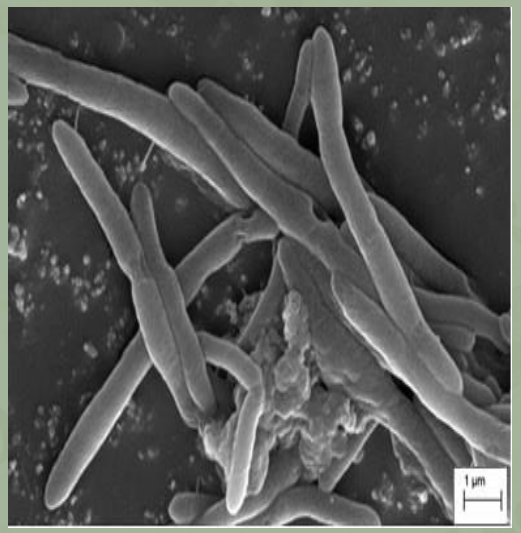
NEW GENUS OF BACTERIA
(Syllabus: GS Paper 3 – Env & Eco)

A new genus of anaerobic lignocellulose-degrading bacteria with hydrogen production capability found in a hot spring from Maharashtra

Sporanaerobium hydrogenoformans

- **Family**: Lachnospiraceae family
- **About**: This bacterium is renowned for its exceptional polysaccharide degradation capabilities.
- **Lignocellulosic Agricultural Wastes**: This bacterium possesses the capacity to break down the structural components of lignocellulosic agricultural residues, namely cellulose and xylan.
- **Optimal Growth Conditions**: Thriving under specific conditions, the bacterium exhibits optimal growth at elevated temperatures, ranging from 45–50°C, and an alkaline pH of 8.0.
- **Unique Sugar Utilization**: It's important to note that only a few bacteria have the capacity to simultaneously utilize hexose and pentose sugars. This characteristic **underscores the bacterium's significance in industrial biofuel** production.
- **Special Metabolic Pathway**: These newly discovered **bacteria possess a distinctive metabolic pathway** for converting various simple and complex substrates into hydrogen and ethanol, contributing to their potential in biofuel production.
- **Exploration of Hostile Habitats**: The discovery of **such unique and valuable bacteria** underscores the importance of exploring microbes in extreme environments like hot springs, where rare and significant species may be found.

Context: Recently, researchers found a **new genus of anaerobic lignocellulose**-degrading bacteria in the hot spring of Aravali, located in Ratnagiri district of Maharashtra.



PIB Oct 25

PM SHRI SCHEME
(Syllabus: GS Paper 2 – Government Scheme)

Shri Dharmendra Pradhan along with Shri Manohar Lal Khattar to inaugurate ICT labs and Smart Classrooms for PM Shri schools in Haryana tomorrow

Context: The Union Minister for Education will **inaugurate ICT labs for PM Shri schools** on 25th October 2023 **at Rohtak, Haryana**.

PM SHRI Scheme

- **Aim**: To transform existing **government schools into model schools** that offer high-quality education within an inclusive, equitable, catering to the diverse backgrounds, multilingual needs, and varying academic abilities of children.
- **Duration**: From 2022-23 to 2026-27
- **Funding**: The scheme is structured as a Centrally sponsored program.
- This funding will facilitate the **transformation of nearly 14,500 schools nationwide**, aligning them with the components **outlined in the National Education Policy of 2020**.
- These schools will also serve as role **models and provide mentorship** to neighbouring educational institutions.
- **Monitoring Progress**: A 'School Quality Assessment Framework' is currently under development to assess and monitor the progress and performance of these schools.

Key Features

- **Green Schools**: The schools under this initiative will be outfitted with green features, such as **solar panels, LED lighting, nutrition gardens**, and systems for waste management, water conservation, and harvesting.
- **Modern Facilities**: Schools will be equipped with **state-of-the-art facilities, including information and communication technologies** (ICT), smart classrooms, libraries, digital libraries, science labs, vocational labs, and the provision of science and math kits.
- **Promotion of Mother Tongue and Local Languages**: The scheme actively encourages the use of mother tongue and local languages to preserve and promote linguistic diversity.



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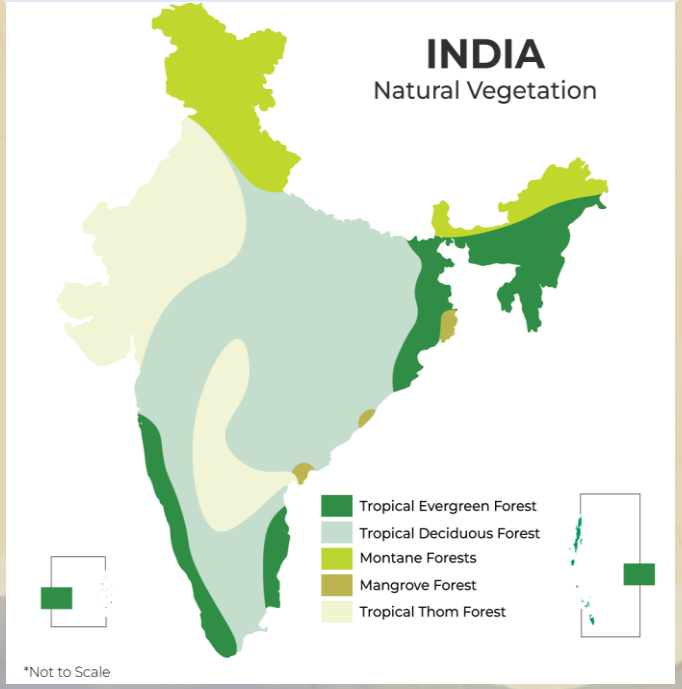
Oct 26

TROPICAL FORESTS UNDER THREAT

(Syllabus: GS Paper 3 – Environment)

Brazzaville Summit of the Three Basins needs to find ways to protect world's tropical forests

Context: Recently, at the **Summit of the Three Basins in Brazzaville** (capital of the Republic of the Congo), it was revealed that **tropical forests in these regions** are still threatened by fossil fuel and extractive industry expansion.



Key Points

- **These basins** are seeing extensive **forest loss and are moving towards a systemic ecosystem** breakdown that affects global climate stability, biodiversity and the livelihoods
- **In Indonesia, half of all nickel** concessions overlap with natural forests and a fivefold risk of deforestation / degradation is possible if nickel mining permits expand to cover the full deposit area.
- **In the Amazon basin,** nearly 13 percent of undisturbed tropical forests overlap with existing or planned oil and gas blocks and more than 33 per cent overlap with active and inactive mining concessions.

Tropical Forest

- **About**: Tropical forests are **dense, closed-canopy ecosystems** that thrive within approximately 28 degrees north or south of the equator.
- **Rainfall:** Exceeding 200 cm, either seasonally or year-round, creating consistently humid conditions.
- **Temperatures**: From 20°C to 35°C throughout the year.
- **Geographic Distribution**: Asia, Australia, Africa, South America, Central America, Mexico, and numerous Pacific Islands.
- **Distribution in India**: Eastern and western slopes of the Western Ghats.
  - Rainforests exhibit remarkable biodiversity and unique ecological characteristics.
- **Layers in Lowland**: A mature lowland tropical forest comprises various layers of vegetation.
- The **uppermost layer consists of scattered tall trees** that tower above the rest, creating an impressive and diverse canopy.

BUSINESS STANDARD Page 1

CBAM
(Syllabus: GS Paper 2 – IR)

India eyes UK carbon tax concessions in FTA deal

FTA talks in final stage, but some differences still remain

SHREYA NANDI
New Delhi, 25 October

With the United Kingdom (UK) preparing to roll out a carbon levy for goods entering the country, India is negotiating hard for the proposed free trade agreement (FTA) between the two nations to include provisions that may offer some relief to its exporters, people aware of the development said.

"We have been talking to the European Union (EU) as well as the UK government regarding the CBAM (Carbon Border Adjustment Mechanism). There have been a lot of conversations about that, even during FTA negotiations. We have asked for provisions that may give exporters some comfort," one of the persons told *Business Standard*, adding that the details were still being finalised.

The UK plans to implement the CBAM, commonly known as carbon tax, over the next two-three years as part of its efforts to combat climate change. This means that a country exporting goods to the UK will have to pay a carbon tax, which will be calculated on the basis of the carbon footprint of the product, leading to higher tariffs.

Turn to Page 6

CARBON CLOUD

- After EU, now UK plans to roll out CBAM to deal with 'carbon leakage'
- India believes such measures may result in market access-related challenges
- India is asking for provisions that may give exporters some comfort
- A New Delhi-based think tank recently said India needs to insert suitable text in FTA to deal with the impact



Context: With the **United Kingdom (UK) recently preparing to roll out a carbon** levy for goods entering the country, **India is negotiating ardently for the proposed free trade agreement (FTA)** between the two nations to include provisions that may offer some relief to its exporters.

- The UK intends to **implement the CBAM, commonly known as a carbon tax,** within the next two to three years as part of its climate change mitigation efforts.

Carbon Border Adjustment Mechanism (CBAM)

- **About:** It is a tariff on imports that is **calculated based on the carbon emissions** associated with the production of the imported product.
- CBAM is a **component of the "Fit for 55 in 2030 package,"** which is the European Union's initiative to reduce greenhouse gas emissions **by a minimum of 55% by 2030** in comparison to 1990 levels.
- **Dual Purpose:** it serves as a financial disincentive for carbon emissions and influences production and export activities.
- The **CBAM is scheduled to commence** its transitional phase on 1 October 2023, with the permanent system set to become effective on 1 January 2026.

Benefits of CBAM

- **Reduction in carbon leakage**: CBAM aims to prevent the relocation of industries to countries with weaker climate policies, thus reducing carbon leakage and maintaining global emission reduction efforts.
- **Encouraging global climate action**: By imposing carbon pricing on imported goods.
- **Revenue generation**: CBAM has the potential to generate revenue for the implementing country, which can be used for climate financing, supporting domestic industries, or investing in clean technologies.

THE HINDU

Page 9

WHITE PHOSPHORUS BOMB

(Syllabus: GS Paper 3 – Sci and Tech)

The legality of using white phosphorus



Nabeela Siddiqui

is Assistant Professor of Law, Vinayaka Mission's Law School, Chennai

Human Rights Watch recently accused Israel of using white phosphorus munitions in Gaza, and said that such weapons put civilians at risk of serious and long-term injury. In the 2008-2009 Gaza War too, there were allegations that the Israel Defense Forces (IDF) struck the Gaza Strip with sub-munitions containing white phosphorus. The Israeli government, which initially denied this, later acknowledged that it did use white phosphorus in 2009, but only in uninhabitable areas, for the purpose of signalling and marking.

A toxic substance

In the summary of the report of the United Nations Headquarters Board of Inquiry into certain incidents in the Gaza Strip between December 27, 2008 and January 19, 2009, the then UN Secretary General said that the IDF had targeted certain UN facilities and asserted that "any precautions that were taken by the IDF were clearly inadequate in view of the firing of high-explosive shells into the compound [of a UNRWA Field Office]."

Further, the UN Fact Finding Mission on the Gaza Conflict, also called the Goldstone Report (2009), condemned the IDF's use of white phosphorus in civilian areas. Due to the mounting outrage both at international and domestic levels in the case of *Yaav Hass and others v. Chief of Staff* (2013), the Israel military agreed to abandon the use of white phosphorus except in situations which they communicated to the Justices at the Israel High Court of Justice. The Court recommended the consideration of alternatives. The outrage over the use of the toxic substance led to calls for investigations into whether its use constituted a violation of international humanitarian law.

White phosphorus has a wide range of applications. It is useful in military operations. But it also poses environmental dangers. White phosphorus can be employed to create dense smoke screens in the context of combat, hindering visibility and providing cover for military manoeuvres. Additionally, it can be used in incendiary devices such as grenades and artillery shells, which can result in persistent and intense fires, effective against people, equipment, and structures. However, the ethical concerns surrounding its use in populated areas are significant due to its potential to cause severe burns and suffering. The Convention on Certain Conventional Weapons (CCW) imposes restrictions on the use of incendiary weapons, including white phosphorus, with the aim of safeguarding civilians.

In addition, white phosphorus use is subject to the rules and principles of international humanitarian law, which aims to minimise harm to both civilians and combatants in armed conflicts. This includes the principles of distinction, which require differentiation between combatants and civilians, and proportionality, ensuring that military actions do not cause excessive harm to civilians compared to the military advantage sought. International humanitarian law also prohibits indiscriminate attacks that may disproportionately harm civilians and civilian objects.

Parties involved in armed conflicts must rigorously adhere to international humanitarian law to ensure that their actions conform to legal standards

Incendiary weapon

Protocol III under the CCW specifically deals with incendiary weapons. Article 1 of this protocol defines an "incendiary weapon" as a weapon or munition primarily designed to set fire to objects or to cause burn injury to persons through the action of flame, heat, or combination thereof, produced by a chemical reaction of a substance delivered on the target. Article 1(b)(i) includes an exemption in this classification for munitions that may cause unintended incendiary effects, such as illuminants, tracers, smoke, or signalling systems. White phosphorus munitions are primarily intended to produce illuminating and smokescreen effects, with the incendiary aspects being secondary or unintentional. Consequently, incendiary munitions clearly fall within the exceptions outlined in Protocol III's definition of an "incendiary weapon."

The Chemical Weapons Convention (CWC) is a treaty that establishes a comprehensive ban on the use of chemical weapons. White phosphorus, although a chemical agent and toxic, is not covered by the CWC. When employed as an incendiary weapon and not for chemical warfare, white phosphorus falls under the regulations of Protocol III of the CCW. However, Protocol III does not effectively regulate multi-purpose munitions such as those containing white phosphorus, which can cause harm in the same way as the incendiary weapons it defines. Strengthening Protocol III would be a progressive step in terms of legal and procedural process. In this context, it is important to consider the Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons (International Court of Justice Report 226, 1996) and Additional Protocol I of the Geneva Conventions, which assess the effects of specific types of weapons to determine their legality.

The legal consequences of employing white phosphorus in warfare emphasise the utmost importance of upholding international law, treaties, and protocols to reduce harm to both civilians and the environment. Breaches of these legal principles can lead to global condemnation, investigations, and potential prosecution for war crimes. Strengthening Protocol III would create a binding agreement for states that prevents them from engaging in uses that exploit legal loopholes. Removing ambiguity in Protocol III would also facilitate enforcement because with clearer rules, violations will become more easily identifiable.

Context: Israel was recently **accused by Human Rights Watch of employing white phosphorus munitions** in Gaza, raising concerns about the potential for serious and long-term harm to civilians.

- The Convention on Certain Conventional Weapons (CCW) **imposes restrictions on the use of incendiary weapons,** including white phosphorus, with the aim of safeguarding civilians.
- The Chemical Weapons Convention (CWC) **is a treaty that establishes a comprehensive ban** on the use of chemical weapons. White phosphorus, although a chemical agent and toxic, is not covered by the CWC.

White Phosphorus Bomb

- **About:** White phosphorus bombs are **created by combining white phosphorus with rubber.**
- **Properties**: A **wax-like chemical, appears pale yellow or colorless** and emits a pungent odor resembling rotten garlic.
- **Temperature of bomb**: 800 °C and spontaneously ignites up to 1,300 °C when exposed to oxygen
- **Properties: Upon exposure to air, white phosphorus ignites rapidly** due to its highly flammable nature.
  - **Armies worldwide employ it in incendiary weapons** for various purposes, such as illuminating targets at night and causing harm to adversaries.
  - Once ignited, **this substance is challenging to extinguish** because it adheres to numerous surfaces, including skin and clothing.
  - **Due to its wax-like properties, it proves difficult to remove** and often reignites upon bandage removal.
  - While white **phosphorus munitions aren't prohibited by international** law, their use is subject to strict regulation due to their incendiary effects.

Chemical Weapons Convention (CWC): Effective from 1997, it prohibits the use of chemical weapons, and also prohibits large-scale development, production, stockpiling, or transfer of chemical weapons or their precursors, except for very limited purposes (research, medical, pharmaceutical or protective).

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