Prelim Bits 19-10-2023 | UPSC Daily Current Affairs

White Phosphorus

Amnesty International and Human Rights Watch have accused the Israel Defense Forces of using white phosphorus munitions in Gaza and Lebanon.

- White phosphorus is a ***pyrophoric*** substance that ignites when exposed to ***oxygen***.
- It is one among the ***most unstable*** of pyrophoric substances.
- **Properties** - It emits a distinct garlic-like odour and produces thick, light smoke with intense 815^{0} Celsius heat.
- **Usage** - It is dispersed in *artillery shells, bombs, rockets* and via felt (textile) wedges soaked in the chemical.
- **Military applications**
  - As *smokescreen*, it hides ground troop movement
  - As an *incendiary weapon* to start fire
  - Interacts and confuses the *infrared optics* and weapons tracking systems and protects the forces from *guided missiles*.
- **Impact on Humans**
  - Can cause *burns even up to bones.*
  - Particles of white phosphorus lodged in the body can reignite if in contact with air.
  - Inhalation causes *respiratory damage*, harm internal organs.
- **Impact on Environment** - It can devastate infrastructure and property, *damage crops and kill livestock* with raging fires.

Regulation

- **Ban** - White phosphorus is ***not explicitly banned*** by international conventions.
- But their use is regulated under the International Humanitarian Law (IHL).

IHL is established through treaties such as the Geneva Conventions that lays down the responsibilities of states and non-state groups in an armed conflict. It is also called 'the law of war' or 'the law of armed conflict'.

- **Chemical Weapon** - It is ***not*** considered a chemical weapon because its operational utility is primarily due to ***heat and smoke***, rather than *toxicity*.
- Protocol III of the 1980 Convention on Certain Conventional Weapons prohibits incendiaries or the use of other substances to attack civilian populations.
- Palestine and Lebanon have joined Protocol III, while Israel has not ratified the protocol.

Reference

1. The Indian Express | White Phosphorus

Dengue

As India continues fighting against dengue, a survey has found that 1in 4 families has fallen ill in the last 3 years due to mosquito-borne diseases.

- Dengue (break-bone fever) is a *viral infection* and is the world's fastest-growing vector borne disease.
- **Caused by** – Dengue virus *(DENV),* a RNA virus
- **Vector** - *Aedes aegypti* mosquito (which also spreads Chikungunya and Zika virus)
- **Transmission to humans** – Through the bite of infected mosquitoes and also possibly by maternal transmission.
- **Occurrence**– Tropical and sub-tropical climates
- **Symptoms** - While many are asymptomatic or produce only mild illness, it can occasionally cause more severe cases, and even death.
- **Treatment** - *No specific treatment* but early detection and access to proper medical care greatly lower fatality rates of severe dengue.
- Vector control is necessary.
    - Recently, States such as Andhra Pradesh, Chandigarh and Uttar Pradesh have released *Gambusia fish* in the waterbodies to control malaria and dengue.
- **Vaccines** – Dengvaxia and Qdenga
- **Dengvaxia** – It is a *live attenuated vaccine* which is recommended by WHO for children aged 9 to 16 years.
- However, only persons with evidence of past dengue infection can be protected by this vaccine.

Dengvaxia was the 1st vaccine for dengue to receive a nod in 2015. It has been licensed in 20 countries but not licensed in India.

References

1. WHO| Dengue Virus

Amrit Kaal Vision 2047 & Global Maritime India Summit 2023

In the 3rd edition of Global Maritime India Summit 2023, India laid the foundation stone for projects worth more than Rs 23,000 crores that are aligned with the 'Amrit Kaal Vision 2047'.

- **Amrit Kaal Vision 2047** – It is the long-term blueprint for the Indian maritime blue economy.

- **Vision** – '*Ports for Prosperity and Ports for Progress*' along with mantra of 'Ports for Productivity'.
- **Mantra** – Make in India, Make for the World.
- **Aim**
  - Make the major ports carbon-neutral via a net-zero strategy
  - Promote sustainable practices and reduce environmental degradation
  - Reduce the cost of doing business and facilitate international collaboration
- **Future activities** – Next generation mega ports, ship building and recycling centres, islands, inland waterways, multi-modal hubs and international container trans-shipment port

India ranks 2nd in the field of ship recycling.

Global Maritime India Summit 2023

- *3 day summit* to discuss and deliberate on matters related to maritime economy.
- **Held in** – *Mumbai*, Maharashtra
- **Previous summits**
  - 1st summit - Mumbai (2016)
  - 2nd summit - Held virtually (2021)
- **Participants** – Ministers from various countries, Global CEOs, Business leaders, Investors, Officials, and other stakeholders.
- **Key discussions**
  - Ports of the future and maritime clusters
  - Coastal shipping and inland water transportation
  - Shipbuilding, repair and recycling
  - Finance, insurance & arbitration
  - Innovation & technology and decarbonisation
  - Maritime safety and security
  - Maritime tourism and others

International cruise terminal in Mumbai and modern cruise terminals in Visakhapatnam and Chennai would help India become a global cruise hub.

National Maritime Heritage Complex is being built in 5000 year old Lothal Dockyard in India which is also called as the 'Cradle of Shipping'.

Tuna Tekra Deep Draft Terminal to come at Deendayal Port in Gujarat.

References

1. The Hindu| Blueprint for Blue Economy
2. PIB| Global Maritime India Summit 2023

Minimum Support Price (MSP)

Recently, government had increased the MSP for wheat by 7% (to Rs 2,275 per quintal for 2024-25), the highest in 9 years.

- **MSP** – It is the price at which the *government is obligated to purchase* the produce from farmers in the event that the market price falls below this threshold.
- The concept of MSPs was 1st proposed throughout the 1960s as a market intervention by the GOI to insure agricultural producers against any sharp fall in farm prices.
- **Coverage** – 22 crops (Kharif, Rabi and commercial crops)
- It includes cereals (7), pulses (5), oilseeds (7), raw cotton, raw jute and copra.

Government announces Fair and Remunerative Price (FRP) for sugarcane.

- **Announcement** – At the beginning of the sowing season.
- **Price value** – On the basis of the recommendations of the Commission for Agricultural Costs and Prices (CACP).
- **Approving authority** – Cabinet Committee on Economic Affairs (CCEA)
- **Factors considered before fixing the price**
  - Demand and supply of a commodity
  - Cost of production
  - Market price trends (both domestic and international)
  - Inter-crop price parity
  - Terms of trade between agriculture and non-agriculture (ratio of prices of farm inputs and farm outputs)
  - A minimum of 50% as the margin over the cost of production
  - Likely implications of an MSP on consumers
- **Cost provided** - The MS Swaminathan Commission had recommended *C2+50%* but the government is providing *A2+50%.*

Calculation of Cost of Production
• **A2** – Actual cost of farming including seeds, fertilisers and hired labour. • **A2+FL** – Includes value of unpaid labour of family workers in addition to A2 • **C2** – Includes the cost of land rentals or interest on invested capital in addition to A2+FL

References

1. Indian Express| Government fixes MSP prices

Lymphatic Filariasis

Lao PDR becomes 2nd country in 2023 after Bangladesh to eliminate lymphatic filariasis.

- Lymphatic filariasis, commonly known as *elephantiasis*, is a *neglected tropical disease (NTD).*

- **Caused by** – Parasites classified as nematodes (roundworms) of the family Filariodidea.
    - *Wuchereria bancrofti* (responsible for 90% of the cases)
    - *Brugia malayi*
    - *Brugia timori*
- **Transmission** - Through the bites of infected *Culex, Anopheles and Aedes* mosquitoes
- **Symptoms** –
    - Lymphoedema (swelling in arms or legs due to lymph fluid)
    - Hydrocele (swelling in scrotum)
    - Temporary or permanent disability
- **Spread** – Tropics and sub-tropics of Asia, Africa, the Western Pacific, and parts of the Caribbean and South America.
- **Elimination** – The WHO recommended *preventive chemotherapy strategy* for lymphatic filariasis elimination is *mass drug administration (MDA).*
- The elimination of NTDs including filariasis *by 2030* comes under "Health for All" (SDG 3).
- India gears up to eliminate filariasis *by 2027*, 3 years ahead of the global target.

Sarva Dawa Sevan or Mass Drug Administration (MDA) campaign was launched by Ministry of Health & Family Welfare for door-to-door to administration of anti-filaria medicine in 10 filaria affected States.

References

1. Down To Earth| Lao PDR eliminates filariasis
2. PIB| Eliminating Filariasis
3. WHO | Lymphatic filariasis

Other Important News
Future Targets of ISRO • Prime Minister Narendra Modi has directed the Indian Space Research Organisation (ISRO) to - Set up an India-crafted, indigenous space station ***Bharatiya Antariksha Station*** by 2035 - Land an Indian on the moon by 2040
RISC-V Chip Technology • Chip designer Qualcomm is partnering with Alphabet's Google to make wearable devices using chips based on RISC-V technology. • RISC-V stands for '*Reduced Instruction Set Computer*', and 'V' stands for the 5th generation. • It is an *open-source* instruction set architecture used to develop custom processors for a variety of applications, from embedded designs to supercomputers. • It was originally developed at the University of California, Berkeley and is now managed by RISC-V International.

Rafah Crossing

• It is a region located between Gaza Strip and Egypt and controlled by Egypt.
• It is the sole route for aid to enter Gaza directly from outside Israel and the only exit that does not lead to Israeli territory.
• There are only 2 other border crossings from and into the Gaza Strip.
  - **Erez** - a crossing for people with Israel in northern Gaza.
  - **Kerem Shalom** - a solely commercial goods junction with Israel in southern Gaza.

India-Vietnam Strategic Partnership

• In 2016, the bilateral relations were elevated to Comprehensive Strategic Partnership.
• Vietnam is the only nation to which India has gifted a fully operational missile corvette named ***INS Kirpan.***

Bilateral Relations

• The year 2023 marks the
  - **India-France** – 25th anniversary of Strategic Partnership
  - **India-South Korea** - 50 years of Diplomatic Ties
  - **India-Switzerland** - 75 years of Friendship

Patient Capital

• Patient capital is a term used to describe long-term investment, in the form of debt or equity, where sustainable growth is prioritised alongside financial returns.

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