



World Malaria Report

Context: The latest World Malaria Report reveals a sustained decrease in both the number of cases and deaths attributed to the mosquito-borne infection in India.

1. Global Malaria Trends:

- Global malaria cases increased by 5 million in 2022, totalling 249 million cases.
- Malaria deaths rose to 608,000 in 2022, exceeding pre-pandemic levels.

2. India's Success Story:

- India witnessed a 30% decline in malaria cases and a 34% decrease in deaths in 2022.
- Key factors: Primary healthcare focus, digital surveillance, effective tools, and management of extreme weather events.

3. Regional Variances:

- Pakistan contributed the highest, with 2.1 million additional malaria cases, linked to a 2022 flood.
- India accounted for 1.4% of global malaria cases.

4. Successful Strategies in India:

- Investment in insecticide mosquito nets, antimalarial drugs, and point-of-care tests.
- Urbanisation reducing breeding grounds for malaria-spreading mosquitoes.

5. State-Specific Preparedness:

- States like Odisha, prone to extreme weather events, are well-prepared, reducing malaria incidence.
- Effective handling of cyclones contributes to the overall success in malaria control.

6. Malaria and Climate Change Link:

- Malaria parasite and mosquitoes sensitive to temperature, humidity, and rainfall.
- Climate change can expand disease geographies and impact healthcare accessibility.

7. Global Response Trends:

- Global malaria cases decreased from 243 million to 233 million between 2000 and 2019.
- 11 million additional cases were reported in 2020, stabilizing in 2021 before a 5 million increase in 2022.

8. Focus on Pakistan:

- Pakistan, facing a flood in 2022, contributed the highest with 2.1 million additional malaria cases.
- Flood aftermath created ideal breeding grounds, leading to a five-fold increase in malaria cases.

9. Digital Data Importance:

- Real-time digital data crucial for finding and treating scattered cases in low-burden scenarios.
- A necessity for local administrations to plan interventions effectively.

10. Biological Threats and Resistance:

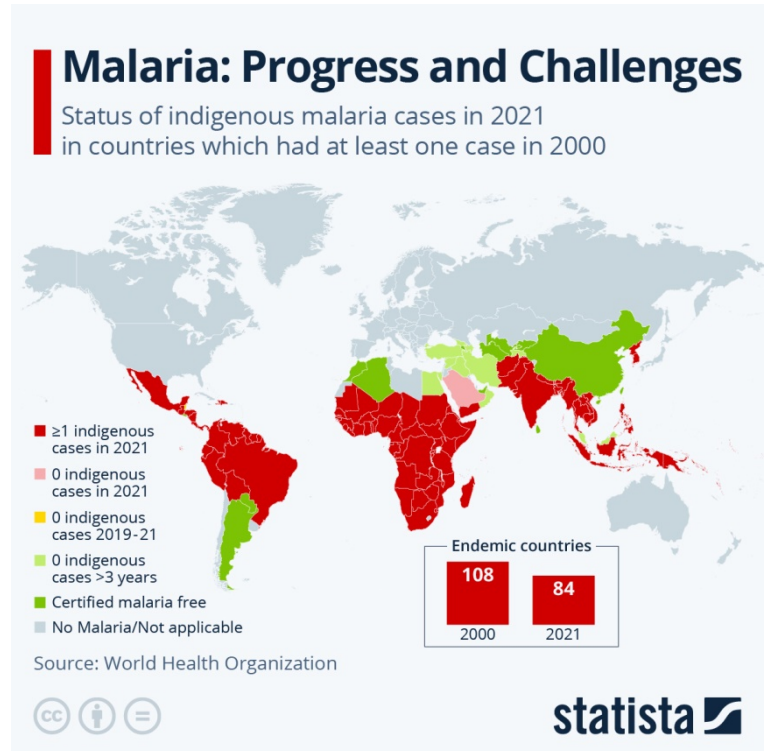
- Challenges include drug resistance, insecticide resistance, and gene deletions making diagnosis difficult.
- Emphasis on overcoming biological threats to achieve the 2030 elimination target.

11. Vivax Malaria Challenge:

- Vivax malaria, constituting over 40% of cases in India, requires a 14-day therapy course.
- Treatment completion is a challenge, with many discontinuing once they feel better.

12. Last Mile Challenges:

- Achieving the 2030 malaria elimination target requires emphasis on surveillance strengthening.
- Tailoring interventions at the sub-national level based on data and updating policies are critical steps.



Indian Navy Day

Context: Indian Navy Day is celebrated each year on 4th December to commemorate the Operation Trident of the 1971 war.

Indian Navy Day Overview:

1. Date and Purpose:

- Annual celebration on December 4th.
- Commemorates Indian Navy's role in Operation Trident during the 1971 Indo-Pakistan war.
- Educates citizens about India's triumphs and the Navy's significance.

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4 December, 2023

2. Indian Navy's Role:

- Integral part of India's armed forces, led by the President as Commander-in-Chief.
- Operates across and beneath the ocean, safeguarding national interests and providing humanitarian assistance.

3. Celebration Activities:

- Demonstrations include manoeuvres by ships, submarines, helicopters, and various aircraft.
- Tribute ceremony honours sailors who sacrificed their lives.
- Band performances and wreath-laying ceremonies at war memorials are integral to the commemorations.

4. Significance of Indian Navy Day:

- Acknowledges the Navy's historical achievements and ongoing dedication.
- Highlights India's maritime heritage and efforts to secure maritime interests.

History of Indian Navy Day:

1. Inception and Operation Trident:

- Traces back to December 4, 1971, and the launch of Operation Trident during the Indo-Pakistan War.
- Operation marked a crucial turning point, officially involving the Indian Navy in the conflict.

2. Achievements of Operation Trident:

- Successfully attacked Karachi port, a pivotal location for Pakistan.
- Introduction of anti-ship missiles showcased technological advancements.
- Played a vital role in the broader war effort.

3. Continuous Commemoration:

- Indian Navy Day annually celebrated on December 4th to honor bravery and strategic brilliance.
- Reminds of the Navy's role in safeguarding maritime interests and ensuring national security.

New Naval Insignia

- Prime Minister introduced the new Naval Ensign "Nishaan" during INS Vikrant's commissioning.
- Redesigned to modernize, shedding colonial influences, and honouring India's maritime tradition.
- Previous ensign had Saint George's Cross with Tricolour in the canton.
- Post-independence, Union Jack replaced by the Indian flag in the cross's corner.
- New ensign draws inspiration from Maratha Emperor Chhatrapati Shivaji Maharaj.

Types of Warships

1. Aircraft Carriers:

- **Examples:** INS Vikramaditya, INS Vikrant (undergoing sea trials).
- **Description:** Serve as mobile airbases, equipped with flight decks for aircraft operations. Key for global air power projection without relying on local bases.

2. Cruisers:

- Among the largest warships, often armed with guided missiles. Operated by the United States and Russia.

3. Destroyers:

- **Examples:** INS Kolkata, INS Kochi, INS Chennai, INS Delhi, INS Mysore, INS Mumbai, INS Rajput, INS Rana, INS Ranvir, INS Ranvijay.
- **Description:** Fast, maneuverable warships designed to escort larger vessels and defend against short-range attackers. Global standard for surface combatant ships.

4. Frigates:

- **Examples:** INS Shivalik, INS Satpura, INS Sahyadri, INS Talwar, INS Trishul, INS Tabar, INS Teg, INS Tarkash, INS Trikand.
- **Description:** Varied sizes, historically designed for speed and maneuverability. Used for protection, especially in anti-submarine warfare.

5. Corvettes:

- **Examples:** INS Kamorta, INS Kadmat, INS Kiltan, INS Kavaratti, INS Kora, INS Kirch, INS Kulish, INS Karmuk, INS Khukri, INS Kuthar, INS Kirpan, INS Khanjar.
- **Description:** Small warships, typically ranging from 500 to 2,000 tons. Used for coastal patrol, missile boats, and fast attack.

6. Submarines:

- **Examples:** INS Kalvari, INS Khanderi, INS Karanj, INS Sindhuvijay, INS Sindhughosh, INS Sindhudhvaj, INS Sindhuraj, INS Sindhuratna, INS Sindhukesari, INS Sindhukirti, INS Sindhuvijay, INS Sindhurashtra, INS Shishumar, INS Shankush, INS Shalki, INS Shankul.
- **Description:** Watercraft capable of independent underwater operation, referred to as "boats." Cylindrical body with sensing devices and periscopes.

7. Amphibious Assault Ships:

- **Description:** Employed for landing and supporting ground forces. Support amphibious landing craft and may function as aircraft carriers. Modern amphibious warfare ships.

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NEWS IN BETWEEN THE LINES

Nagarjuna Sagar Project



Recently, at the Nagarjuna Sagar Project, Andhra Pradesh paused water release as requested by the Union Ministry of Jal Sakti.

About Nagarjuna Sagar Project:

- The Nagarjuna Sagar Project is a dam built on the **Krishna River**.
- It is located on the border between the **Nalgonda** district of Telangana and the **Palnadu** district of **Andhra Pradesh**.
- The project's main objectives are to **generate hydroelectricity** and provide water for irrigation.
- Nagarjuna Sagar Reservoir is the **world's largest man-made Lake** with a concrete wall that measures **6 feet thick having 26 gates**.
- This reservoir has a total capacity of **408.24 Tmcft (9000000 acre-feet)**.
- This makes it the **second largest reservoir** in India, after the **Indirasagar Dam** in Madhya Pradesh.

The National Investigation Agency



Recently, the National Investigation Agency has conducted searches across four states, seizing counterfeit notes, currency printing material, printers and digital devices.

About the National Investigation Agency:

- The National Investigation Agency (NIA) is a **Central Counter Terrorism Law Enforcement Agency of India** that specializes in counter-terrorism.
- It is a **statutory body** that comes under the **Ministry of Home Affairs**.
- It's headquarter is in **New Delhi**, India.
- It was established in **2008** after the **26/11 Mumbai attacks** and started functioning in 2009.
- It is empowered to **investigate terror-related crimes** across states without special permission from the states.
- The NIA (Amendment) Bill, **2019** aims to empower the NIA to probe various crimes, including human trafficking, **counterfeit** currency offenses, **prohibited arms trade**, **cyber-terrorism** and violations under the Explosive Substances Act of **1908**.

The Global Stocktake



Recently at COP-28, the BASIC coalition (Brazil, India, South Africa, and China) insisted that the Global Stocktake should recognize the failures of developed nations in addressing climate issues.

About Global Stocktake:

- The Global Stocktake (GST) is a **review mechanism** that assesses the **world's progress** on climate action.
- It is mandated by the **2015 Paris Agreement** and takes place at every five years.
- Its aims to increase global response in **greenhouse gas emissions reduction, adaptation, finance and technology** availability.
- The first GST is scheduled to conclude at the UN Climate Change Conference (**COP28**) at the end of **2023**.
- It is intended to inform Parties to the Agreement on their progress against its goals, including limiting global temperature rise to **1.5°C**.

Endothelial Cells



Recently, the scientists have discovered a molecular mechanism that reins in the overgrowth of blood vessels by regulating endothelial cell size and the mTORC1 signaling pathway.

About Endothelial Cells:

- Endothelial cells are thin, **wafer-like cells** that line the inside of all blood vessels in the body.
- They form a **single cell-thick layer** called the endothelium.
- They are the primary cell type that comes into contact with blood.
- They also organize the growth and development of connective tissue cells that form the surrounding layers of the blood-vessel wall.

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	<ul style="list-style-type: none"> ➤ The four major types of endothelial cells are: Arterial, Venous, Capillary and Lymphatic. ➤ The endothelium produces substances called nitric oxide and prostacyclin. ➤ These keep blood fluid and prevent it from clotting.
<p>LHS 3154 Star</p> 	<p>Recently, a study has revealed a Neptune-sized exoplanet orbiting a small M dwarf star, LHS 3154.</p> <p>About LHS 3154 Star:</p> <ul style="list-style-type: none"> ➤ LHS 3154 is an ultra-cool dwarf star that's about 50 light years away from Earth. ➤ It is about a thousand times less luminous than our sun and nine times less massive. ➤ It is classified as an M dwarf, which is the least massive spectral type of star. ➤ In early 2020, astronomers observed a periodic shift in LHS 3154's spectrum every 3.7 days. ➤ This indicated that the star was being wobbled by the gravitational pull of a planet in a close orbit. ➤ LHS 3154 has a planet called LHS 3154 b that orbits it. ➤ The planet, LHS 3154b, is 13 times more massive than Earth and about the mass of Neptune.
<p>Place in News</p> <p>Myanmar</p>	<p>Recently, in the eastern city of Loikaw in Myanmar, pro-democracy fighters navigated through the streets in a worn-out pickup truck.</p> <p>Myanmar (Capital: Naypyidaw)</p> <p>Location: Myanmar (also known as Burma) is the north-westernmost country of mainland Southeast Asia located on the Indochinese peninsula.</p> <p>Boundaries: Myanmar shares its borders with China to the north and northeast, Laos and Thailand to the east and southeast, the Andaman Sea and Bay of Bengal to the south and Bangladesh and India to the west.</p> <p>Physical Features:</p> <ul style="list-style-type: none"> ➤ Myanmar's highest point is Mount Hkakabo in northern Myanmar on the border with China. ➤ The country slopes from north to south at Mount Hkakabo to sea level at the Ayeyarwady (Irrawaddy) and Sittang river deltas. ➤ The Irrawaddy, the main river of Burma, flows from north to south through the Central Burma Basin and ends in a wide delta. 

POINTS TO PONDER

- ❖ Ministry of Defence signed contract with which organisation for Upgraded Super Rapid Gun Mount and other equipment for around 3000 crores? - **BHEL**
- ❖ Mahe, Malvan and Mangrol are the names of which products recently launched? - **Anti-submarine Warships**
- ❖ Which institution constituted a taskforce to examine the impact of Digital Personal Data Protection Act on Insurance sector? - **IRDAI**
- ❖ Which state collaborated with Meta to raise awareness among students and educators about online safety and digital citizenship? - **Karnataka**
- ❖ Which state clinched the title of 13th Senior National men's hockey championship? - **Punjab**

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