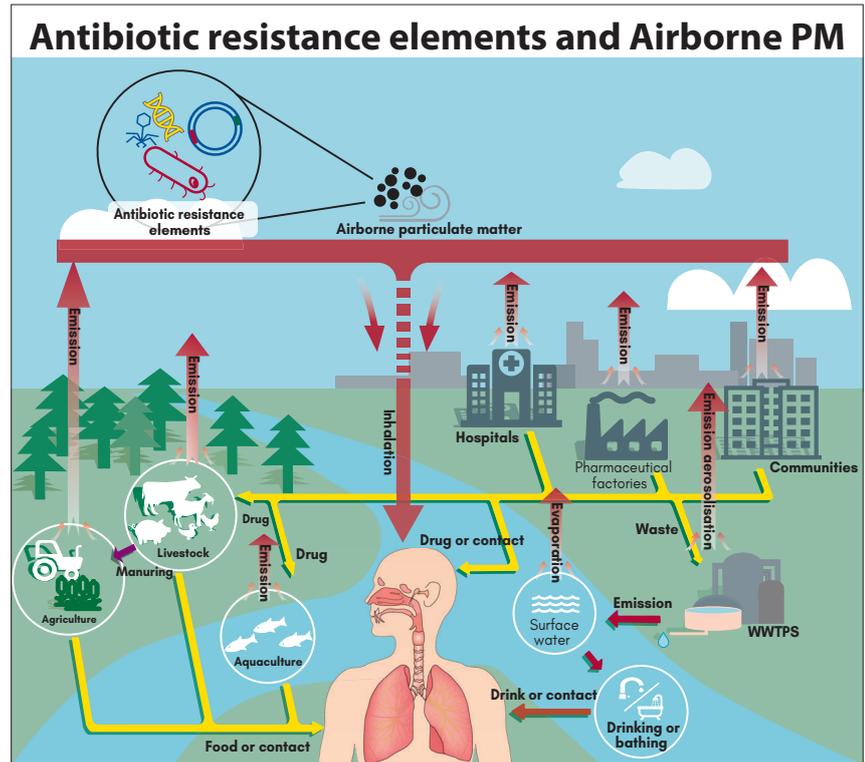


NEWS TODAY

INCREASE IN ANTIBIOTIC RESISTANCE LINKED TO RISING AIR POLLUTION, SAYS LANCET STUDY

- This is **first in-depth global analysis** which highlights that humans are exposed to **antibiotic-resistant elements** while inhaling **PM2.5** (refer image).
- Antibiotic resistance, also known as Antimicrobial resistance (AMR) occurs **when bacteria, viruses, fungi and parasites change over time and no longer respond to medicines** making infections harder to treat and increasing risk of disease spread, severe illness and death.
- **Key findings**
 - With **every one percent rise in PM 2.5 pollution**, there is an **increase in antibiotic resistance between 0.5 and 1.9 percent**, depending on pathogen.
 - In 2018, **PM 2.5 caused loss of 18.2 million years of life**, resulting in economic burden.
 - **China and India have greatest impact on premature death toll** due to changes in PM 2.5.
- **Steps taken to curb AMR:** National Action Plan on AMR 2017, Red line campaign on Antibiotics 2016, AMR Surveillance network 2013 etc.



PARLIAMENT STANDING COMMITTEE ON SOCIAL JUSTICE AND EMPOWERMENT SUBMITTED REPORT ON 'DRUG ABUSE AMONG YOUNG PERSONS - PROBLEMS AND SOLUTIONS'

- **Key Observations**
 - Around **37 crore people** are **using various drugs** and alcohol in **age group of 10-17 years (children) and 18-75 years (adults)** in states like Punjab, Haryana, Delhi, Uttar Pradesh, Odisha and Maharashtra.
 - Inadequate penetration of **District De-Addiction Centers (DDAC)**.
 - Decreasing financial allocations on **preventive education and awareness generation programme**.
 - **India is sandwiched between some of the largest drug producing countries** (Golden Crescent i.e. Pakistan, Afghanistan and Iran and Golden Triangle i.e. Thailand, Myanmar, Vietnam and Laos).
 - **Delay in providing training** of Master Trainers under **Navchetna Programme (Life Skills and Drug Education for School Children)**.
- **Recommendations**
 - Regular **meetings and reviews of Apex Committee of Narcotics Coordination Centre** (set up by Ministry of Home Affairs in 2016).
 - Establish **impact assessment mechanism for National Action Plan for Drug Demand Reduction (NAPDDR)**.
 - Awareness generation by including **chapters on drug addiction, its consequences, and de-addiction measures in education curriculum**.
 - **Inter-ministerial coordination** to address both supply side and demand side issues.
 - **Periodic surveys by National Drug Dependence Treatment Centres (NDDTC)** to stay updated on drug abuse situation.

Other Initiatives taken to control drug abuse

- NAPDDR was formulated for 2018-25.
- National Drugs & Psychotropic Substance (NDPS) Act, 1985 (Narcotics Control Bureau has been set up under it).
- National policy on Narcotic drugs and Psychotropic Substance 2012.

LOK SABHA PASSES COASTAL AQUACULTURE AUTHORITY OR CAA (AMENDMENT) BILL, 2023

● Bill amends **CAA Act 2005** that establishes a **CAA** for regulating the activities connected with **coastal aquaculture** in the coastal areas.

➤ **CAA Act 2005** exempted **Coastal Aquaculture** from the prohibition clause under Coastal Regulatory Zone (CRZ) **Notification 1991**.

■ In 2022, the **National Green Tribunal** ordered that **CAA Act 2005** does not exempt **coastal aquaculture from CRZ Notifications issued in 2011 and 2019**.

➤ **Coastal aquaculture** is farming shrimp, prawns, fish or **other aquatic life in saline or brackish water**.

● Key highlights

➤ **Coastal aquaculture and related activities are permitted under CRZ**. Thus, it shall continue to be **regulated by the CAA Act only**.

■ Allows nucleus **breeding in no development zones, and seaweed culture** in creeks/backwaters within CRZ.

➤ **Additional functions to CAA:**

■ **Fix standards for inputs and discharge of effluents** from aquaculture units.

■ **Prohibit pharmacologically active substances, antimicrobial agents or other materials** which may cause harm to human health, etc.

➤ **Member-Secretary of the Authority:** To be appointed by Central Government to function as the Chief Executive Officer of the CAA.

➤ **Decriminalises offences under act and reduces penalty upto 1 lakh.**

INDIAN SPACE RESEARCH ORGANISATION (ISRO) ROCKET DEBRIS FOUND ON AUSTRALIAN SHORE

● Space debris encompasses both **natural (meteoroid) and artificial (man-made) particles**. Meteoroids are in orbit about the sun, while **most artificial debris is in orbit about the Earth**.

➤ **Russia, followed by USA, China and France** are top contributor to space debris.

➤ In 2021, a large chunk of a 25-tonne Chinese rocket fell into Indian Ocean.

● Impact of Space debris

➤ **Threat to marine life, and a source of pollution.**

➤ **Thousands of discarded launch vehicles** float around in space, **risking collision** with satellites or space station.

● Regulations governing space debris

➤ **Convention on International Liability for Damage Caused by Space Objects 1972** (Liability Convention) deals with **damage caused by space objects to other space assets, and by falling objects on earth**.

■ **Convention provides for procedures** for settlement of claims for damages.

■ As of 1st January 2023, **98 States (including India) have ratified it**.

■ It was adopted to **reinforce the framework set by Outer Space Treaty (OST) 1967**.

➤ **OST** governs activities of states in peaceful **exploration of outer space, including moon and other celestial bodies**.

Initiatives taken to address space debris

● **ISRO System for Safe and Sustainable Space Operations Management (IS4OM)** for tracking and monitoring space objects.

● **Project NETRA** by ISRO provides first-hand information on debris status.

● **ClearSpace-1 mission** by European Space Agency.

About CRZ

● CRZ notification **issued by the central government** under the **Environment Protection Act, 1986** for regulation of activities in the coastal area,

● The **Ministry of Environment, Forest and Climate Change** is the nodal ministry.

400 PER CENT RISE IN BORDER INFRA BUDGET, 80 PER CENT SPENT ON INDIA-CHINA BORDER: EXTERNAL AFFAIRS MINISTERS

● Better border infrastructure can

➤ Quick deployment of security forces in times of need

➤ **reduce cross-border organised crimes**

➤ reduce **developmental deficits** in border areas, and

➤ **improve people-to-people connectivity** with neighbouring countries.

● Challenges in Border infrastructure development

➤ Lack of properly **demarkated borders**.

➤ **Rugged terrain and disaster-prone** (landslides, earthquakes)

➤ **Extreme climatic conditions** (like in **Siachen Glacier**)

➤ **High cost** of Construction and maintenance.

● Key initiatives

➤ **BOLD-QIT (Border Electronically Dominated QRT Interception Technique)** on Indo-Bangladesh and Pakistan border patches.

➤ **Technological border surveillance through Comprehensive Integrated Border Management System**.

➤ **All-weather roads and tunnels like Atal tunnel** (connecting Manali to Lahaul-Spiti) and tunnel at **Shinku-La (for an all-weather road to Ladakh)**.

➤ **Vibrant villages programme** and cross-border connectivity initiatives like **Myanmar Trilateral highway**.

➤ **Forest (Conservation) Amendment Bill, 2023** exempts **land within 100 km of the country's borders**.

■ It will facilitate construction of **strategic linear projects for national importance or security**.

INDIA SURPASSED BRAZIL TO BECOME THE LARGEST SUGAR PRODUCER IN THE WORLD IN 2021-2022

● In 2021-2022 total sugar production in India was **35.9 million ton** (32 million ton in Brazil).

➤ **Uttar Pradesh and Maharashtra** are **main sugar procuring states** of India.

● Center is implementing a fair and remunerative price (FRP) scheme, and State governments issue **State Advised Prices to support sugarcane growers**.

● **Advantage of Rising Production:**

➤ Creates **employment opportunities**

➤ **Sugar export** earned **foreign currency** of about Rs. 40,000 crores.

➤ Helpful in achieving **20% of ethanol-blended petrol by 2025**.

▪ Ethanol-blended petrol (EBP) Programme was launched in 2003.

● **Issues Associated with Rising Production:**

➤ **Groundwater exploitation** particularly in **drought prone regions** (such as Marathwada of Maharashtra).

▪ 100 kg of sugar consumes around 2 lakh litres of groundwater for irrigation alone.

➤ **Soil acidification, pollution to freshwater ecosystems, causes of biodiversity loss, etc.**

● **Measures Required:** Diversify cultivations of crops, Promote **drip irrigation, rainwater harvesting, wastewater treatment, etc.**

RELATED NEWS

● According to the Central Ground Water Board (CGWB) **61.1% of the wells monitored have registered a rise in ground water level from (2012-2021)**.

● **Water is a State subject hence** effective rainwater harvesting/recharge of groundwater for increasing its levels in the country falls under States' mandate.

ALSO IN NEWS



Government of National Capital Territory of Delhi (GNCTD) (Amendment) Bill, 2023

● Parliament has passed GNCTD (Amendment) Bill 2023.

● **Key features**

➤ Establishes **National Capital Civil Services Authority (NCCSA)**, which consists of **CM, Chief Secretary of Delhi, Principal Home Secretary of Delhi**.

➤ **Empower Central Government to make rules in connection with the affairs of GNCTD** including the functions, terms and other conditions of service of officers and employees.

Note: For more details about GNCTD (Amendment) Bill 2023, please refer News Today dated 2nd August, 2023.



North East Venture Fund (NEVF)

● North Eastern Development Finance Corporation Ltd. (NEDFi) under **Ministry of Development of North Eastern Region (DoNER)** has set up **NEVF for North East Region (NER)**.

➤ It is the **only dedicated Venture Fund for NER with an initial corpus of Rs. 100 crores**. **Venture fund** is money invested in startups or small businesses with high-growth potential.

➤ It is registered **under SEBI Alternative Investment Funds (AIF) Regulations, 2012**.

➤ **Investment size:** Minimum Rs. 25.00 lakhs; Maximum Rs.10.00 crore.

➤ **Nature** of financial instrument includes Equity, Convertible preference shares, and Debentures.



Swathi Weapon Locating Radar Mountains (WLR-M)

● Indian Army has inducted **Swathi WLR-M to locate hostile artillery and enhance combat potential**.

➤ It is advanced **electronically scanned phased array radar**, specifically designed for **operations in mountainous and high-altitude areas**.

➤ It was developed by Bharat Electronics Limited (BEL) in Bengaluru.

➤ Swathi radar also comes in **WLR-Plains version**.

● **WLR uses advanced signal processing techniques to detect and track mortars, rocket launchers and fire trajectories for more accurate artillery strikes**.

➤ Its hallmark is **high mobility and swift deployment capabilities**, allowing it to adapt to changing operational requirements efficiently.



New dinosaur species 'Tharosaurus Indicus'

● It is a **long-necked, plant-eating dicraeosaurid dinosaur** found in Jaisalmer, Rajasthan by India Scientists.

● It is **167 million years old** and belongs to a **new species, unknown to scientists** thus far.

➤ Theories so far had suggested that the **oldest dicraeosaurid was from China (about 166-164 million years old)**.

➤ Also, fossils of dicraeosaurid dinosaurs have been found previously in **North and South Americas, Africa and China**.

● It is named after the **'Thar desert'** of Rajasthan where it was found.

 <p>International Whaling Commission (IWC)</p>	<ul style="list-style-type: none"> IWC issued its first 'extinction alert' for the Vaquita Porpoise whales. These whales are Critically Endangered and found only in northern Gulf of California. <div style="border: 1px solid black; padding: 10px;">  <p style="text-align: center;">International Whaling Commission</p> <p style="text-align: right;"> Cambridge, England</p> <p>Genesis: Set up as an inter-governmental organisation under the International Convention for the Regulation of Whaling (1946).</p> <p>Mandate: Provide for the proper conservation of whale stocks and thus make possible the orderly development of the whaling industry.</p> <p>Membership: 88 countries including India.</p> </div>
 <p>Darwinian Paradox</p>	<ul style="list-style-type: none"> Recently scientist decoded Darwinian paradox and suggested homosexuality in genetics. Darwinian Paradox argued that if reproduction is critical to evolution, then same-sex sexual behaviour (SSB), which is non-reproductive, should have ceased to exist. <ul style="list-style-type: none"> It is impossible to maintain genes which do not promote reproduction, as in the case of homosexuality. Since homosexuals reproduce significantly less than heterosexuals, the genes promoting this trait should rapidly go extinct. Scientists have reported SSB in pigeons, lions, bats, elephants, monkeys, lizards etc.
 <p>Havana Syndrome</p>	<ul style="list-style-type: none"> Central government has informed the Karnataka High Court that it will look into the matter of the Havana Syndrome in India. Havana Syndrome refers to a set of mental health symptoms that are experienced by United States intelligence and embassy officials in various countries. <ul style="list-style-type: none"> It traces its roots to Cuba in late 2016 when US intelligence officials and members of the staff at the embassy suffered from it. It results in persistent headaches, feelings of disorientation and insomnia.
 <p>Personalities in news</p>	<p>Abanindranath Tagore (1871-1951)</p> <ul style="list-style-type: none"> The nation celebrated 152nd birth anniversary of Abanindranath tagore. Tagore is known for infusing the spirit of swadeshi in the art of paintings. He Established 'Indian Society of Oriental Art' and 'Bengal school of art' He modernized the Mughal and Rajput styles. <ul style="list-style-type: none"> His paintings reflected a medley of the influences of the Japanese 'wash' style and Chinese ink painting, English pre-Raphaelite and Art-Nouveau trends. Famous painting: 'Arabian Nights' Ganesh Janani, Bharat Mata, The Victory of Buddha Books: 'BudoAngla, 'KhirerPutul' and 'Rajkahini' Ethical values: Nationalist, Spiritual, empathy, etc.
 <p>Places in news</p>	<p>Red Sea</p> <ul style="list-style-type: none"> US have deployed new forces and warships to Red Sea. Political Boundaries <ul style="list-style-type: none"> It is an inlet of Indian Ocean between Africa and Asia. Boundary countries are Egypt, Saudi Arabia, Yemen, Sudan, Eritrea and Djibouti. Connected to Indian Ocean in south through Bab el Mandeb strait and Gulf of Aden. Geographical features <ul style="list-style-type: none"> Occupies a part of Great Rift Valley (Afro-Arabian Rift Valley). Lies in a fault depression that separates two great blocks of Earth's crust—Arabia and North Africa. One of the saltiest bodies of water in world. 