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### Global TB Report 2024

**Context:** Recently, WHO released Global TB Report 2024, highlighted that India has made remarkable strides in its fight against tuberculosis (TB), recording a 17.7% decline in incidence from 237 cases per lakh population in 2015 to 195 in 2023.

- This achievement is more than double the global decline of 8.3%. The success is largely attributed to the government's efforts in decentralizing healthcare services through the establishment of over 1.7 lakh Ayushman Arogya Mandirs nationwide.

#### Key Achievements:

- **Treatment Coverage:** India's treatment coverage has surged to 89% in 2023, a significant increase from 72% in 2015. This progress has been crucial in bridging the gap of missing cases.
- **Reduced Mortality Rate:** The country has experienced a 21.4% decline in TB-related deaths, with rates falling from 28 deaths per lakh population to 22.
- **Increased Funding:** The tuberculosis budget has seen an unprecedented 5.3-fold increase in allocation, rising from Rs. 640 crores in 2015 to Rs. 3,400 crores in 2022-23. This financial boost has allowed for enhanced resources in TB management.



**World Health Organization**

#### Government Initiatives:

- **Nikshay Poshan Yojana (NPY):** The government has bolstered support under the NPY, raising the monthly allowance for TB patients from 500 to 1,000. This increase aims to provide better nutritional support to those undergoing treatment.
- **Energy Dense Nutritional Supplementation (EDNS):** The introduction of EDNS is benefiting approximately 12 lakh under-nourished TB patients, ensuring they receive the necessary nutritional support to aid recovery.
- **Artificial Intelligence-Enabled Diagnostic Tools:**

To enhance diagnostic capabilities, the government is procuring over 800 AI-enabled portable chest X-ray machines. These will complement India's extensive TB laboratory network, which includes 7,767 rapid molecular testing facilities.

#### About Tuberculosis:

- **Definition:** Tuberculosis (TB) is an infectious disease primarily affecting the lungs, caused by the bacillus *Mycobacterium tuberculosis*.
- **Prevention:** The Bacille Calmette-Guerin (BCG) vaccine provides immunity against TB.

#### What is Drug-Resistant TB?

- **Definition:** Drug-resistant TB occurs when the *Mycobacterium tuberculosis* bacteria become resistant to one or more anti-TB drugs, complicating treatment efforts.

#### Types of Drug-Resistant TB:

- **Multi-Drug-Resistant TB (MDR-TB):** Resistant to at least two first-line TB drugs: isoniazid and rifampicin.
- **Extensively Drug-Resistant TB (XDR-TB):** Resistant to any fluoroquinolone and at least one of three injectable second-line drugs, in addition to being MDR-TB.
- **Totally Drug-Resistant TB (TDR-TB):** Resistant to all available TB drugs.

#### Conclusion:

The WHO's recognition of India's progress signifies a paradigm shift in TB care over the past eight years. With continued government commitment, innovative healthcare strategies, and a focus on patient welfare, India is well-positioned to further reduce the burden of tuberculosis and move closer to its goal of TB elimination.

### Black Hole Triple System

**Context:** Astronomers recently identified a "black hole triple" system named V404 Cygni, located in the Cygnus constellation around 8,000 light-years from Earth.

- This discovery, published in *Nature* by researchers from the California Institute of Technology and MIT, marks the first recorded triple black hole system and offers new insights into black hole formation.

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### The Black Hole Triple System:

- Black holes are regions in space with such immense gravitational pull that no light or matter can escape them, typically forming after massive stars explode in supernova events. However, V404 Cygni's unique structure challenges this model, suggesting an alternative origin.
- V404 Cygni is a "black hole triple" system, featuring a central black hole with two companion stars: one in a close orbit and a second, more distant star that circles every 70,000 years.
- Researchers identified V404 Cygni while examining astronomical data, locating it in the constellation Cygnus. This black hole is about nine times the mass of the Sun, positioned centrally between two orbiting stars.
- The close star orbits the black hole every 6.5 days, while the distant star's orbit, confirmed by gravitational interactions, occurs over millennia.



### Key Insights on Black Hole Formation:

- **Traditional Model:** Most black holes are thought to form from supernovae, massive explosions that end the life of a star.
- **Direct Collapse:** V404 Cygni suggests an alternative formation known as "direct collapse," where a star collapses under its own gravity without a violent explosion. This "failed supernova" or gentle collapse preserves outer stars, forming triple systems.

### Implications of the Discovery:

- **Binary to Triple Evolution:** V404 Cygni's gradual consumption of its inner star suggests that some previously known binary systems could have initially been triple systems.
- **Impact on Black Hole Studies:** This discovery opens the door to reassessing the formation and structure of black hole systems, indicating that other triple systems

may exist but evolve to binary states over time.

- This finding provides valuable insights into the life cycles of black holes and may redefine theories on the evolution of black hole systems, offering new directions for space exploration and astrophysical research.

### Brazil's Withdrawal from China's Belt and Road Initiative

**Context:** Recently, Brazil officially announced its decision not to join China's Belt and Road Initiative (BRI), making it the second member of the BRICS bloc, after India, to decline participation in this multi-billion-dollar infrastructure project.

- Brazil's administration expressed a preference for exploring synergies with Chinese investors while prioritizing its own infrastructure projects rather than signing an accession contract with China.

### About the Belt and Road Initiative (BRI):

- The BRI, initially launched as 'One Belt One Road' in 2013, aims to connect Asia with Africa and Europe through land and maritime networks. Its primary objectives include improving regional integration, increasing trade, and stimulating economic growth. The initiative encompasses:
  - » Silk Road Economic Belt: A trans-continental passage.
  - » Maritime Silk Road: A sea route.
- The BRI involves significant investments in various infrastructure projects, including ports and transportation networks.

### Key Concerns of India Regarding the BRI:

- **Sovereignty Issues:** The BRI's flagship project, the China-Pakistan Economic Corridor (CPEC), traverses Gilgit Baltistan in Pakistan-occupied Kashmir, which India regards as a violation of its sovereignty.
- **Geopolitical Competition:** The BRI's financial incentives and low-interest loans for infrastructure development may undermine India's influence in South Asia.
- **Debt Sustainability:** Concerns about unsustainable debt burdens incurred by partner countries due to Chinese loans lead to a perception of debt traps, making them vulnerable to China's influence.
- **Security Threats:** China's expanding presence in the

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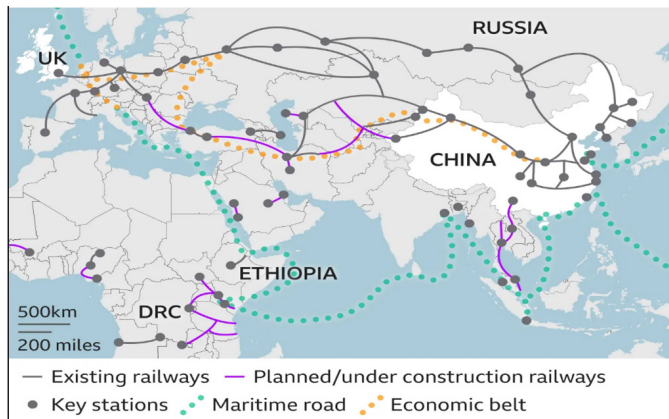


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Indian Ocean region is viewed by India as a security concern, particularly under the String of Pearls policy.

### Key Steps Taken to Counter BRI:

- Partnership for Global Infrastructure and Investment (PGII) and Build Back Better World (B3W) Partnerships by the G7 group.
- India-Middle East-Europe Economic Corridor (IMEC), launched during India's G-20 Presidency.
- International North-South Transport Corridor (INSTC), connecting the Indian Ocean and Persian Gulf to the Caspian Sea.



### Geopolitical Implications:

- Brazil has joined a growing list of countries, including Italy and the Philippines, that have withdrawn from the Belt and Road Initiative (BRI). While trade relations between Brazil and China are substantial—approximately \$180 billion annually—there is increasing caution within Brazil regarding reliance on Chinese investments.
- Currently, Brazil receives around \$3 billion in Chinese investments each year, prompting a critical reassessment of its economic strategy and regional partnerships.
- This rejection of the BRI aligns with India's earlier opposition, which raised concerns about sovereignty, potential debt traps, and a lack of transparency in BRI projects. India's stance was particularly influenced by the China-Pakistan Economic Corridor (CPEC), which traverses Pakistan-occupied Kashmir and poses significant sovereignty issues.
- As Brazil prepares to host the G-20 summit, this decision underscores a shift in its diplomatic approach, prioritizing national interests and regional stability over expansive external influence.

## Strategic Dimensions of India-Spain Relations

**Context:** On October 28-29, 2024, Mr. Pedro Sanchez, the President of the Government of Spain, undertook an official visit to India, marking a significant milestone in bilateral relations.

- This visit not only represents President Sanchez's inaugural trip to India but also the first visit by a Spanish head of government in 18 years.

### India-Spain Economic and Trade Relations:

- India-Spain trade relations have shown consistent growth, with Spain as India's sixth-largest trading partner within the European Union.
- **Total Trade (2023):** USD 8.25 billion, a 4.2% increase from 2022.
- **India's Exports to Spain:** USD 6.33 billion (growth of 5.2%) in mineral fuels, chemicals, iron and steel, electrical machinery, apparel, and marine products.
- **India's Imports from Spain:** USD 1.92 billion (growth of 1.05%), primarily in machinery and manufactured goods.
- The India-Spain Joint Commission on Economic Cooperation (JCEC), established in 1972, and the India-Spain CEOs Forum (2015) are key platforms supporting these economic ties. These bodies promote trade and investment, enabling regular dialogue on economic cooperation.

### Foreign Direct Investment (FDI):

- FDI forms a crucial part of India-Spain economic relations:
- **Spanish FDI in India:** USD 3.94 billion (April 2000 - December 2023), ranking Spain as India's 16th largest investor. More than 280 Spanish companies operate across sectors in India, including metallurgy, renewable energy, automotive, and infrastructure, with Maharashtra, Tamil Nadu, and Gujarat as major investment hubs.
  - **Indian FDI in Spain:** Nearly USD 900 million, with around 80 Indian companies in Spain, largely in IT, pharmaceuticals, chemicals, and logistics. This makes India one of Spain's top 30 global investors and among the top 5 from Asia.

### Strategic and Defense Cooperation:

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- Defense collaboration has become a critical area of India-Spain relations.
- The Final Assembly Line (FAL) plant for the C295 tactical transport aircraft, inaugurated in Vadodara, is India's first private military transport aircraft facility. Developed by Tata Advanced Systems Ltd (TASL) in partnership with Airbus Defence and Space, the project will see 40 of 56 C295 aircraft assembled in India under a \$2.5 billion contract.
- The facility will deliver its first "Made-in-India" C295 by 2026, with all deliveries completed by 2031. This project is building a complete aerospace manufacturing ecosystem in India, involving contributions from Bharat Electronics Ltd, Bharat Dynamics Ltd, and several private MSMEs.

### Counter-Terrorism and Cybersecurity:

- India and Spain have ongoing collaborations on counter-terrorism and intelligence sharing, addressing mutual concerns over global security.

### Sustainable Development and Climate Action

- India and Spain both support the Paris Agreement and work together on climate change initiatives. Spain's expertise in renewable energy complements India's goals to expand its green energy sources, particularly solar energy. Both countries collaborate under the International Solar Alliance (ISA), with Spain aligning with India's focus on sustainable development.

### Multilateral Cooperation:

- India and Spain share platforms for multilateral engagement:
  - » **United Nations (UN):** Both countries cooperate on global peace, sustainable development, and humanitarian efforts.
  - » **G20:** As members of the G20, India and Spain are committed to tackling global economic issues, climate change, and trade reforms.
  - » **International Solar Alliance (ISA):** Spain's ISA membership strengthens cooperation on solar energy and sustainable initiatives.

### Indian Diaspora in Spain:

- The Indian community in Spain, though relatively small, is growing. As of 2023, approximately 55,000 Indians reside in Spain, contributing to sectors like hospitality, retail, IT, and healthcare, enriching Spanish society.

### Conclusion:

India and Spain's deepening relationship reflects mutual commitments to defense modernization, economic collaboration, and sustainable growth. The C295 FAL plant in Vadodara signifies a new phase in defense manufacturing and highlights both countries' dedication to creating a resilient, cooperative alliance that benefits both economies.

## Power Packed News

### Duma Boko Becomes Botswana's New President

- Duma Boko has been named the new president of Botswana, marking a big change in the country's politics. He comes from the Umbrella for Democratic Change (UDC) party and takes over from the Botswana Democratic Party (BDP), which has ruled for many years. Chief Justice Terence Rannowane announced the news on national television.
- In Botswana, elections are held to choose 61 members for the National Assembly and 609 local councilors. To win the election, a party needs at least 31 seats in the National Assembly. In the recent elections, the UDC won 34 seats, while the BDP, which has been in power since Botswana became independent in 1966, only won 4 seats. This is a historic change because it is the first time the BDP has lost its majority in almost 60 years. The outgoing president, Mokgweetsi Masisi, accepted defeat.
- Duma Boko started his studies at the University of Botswana in 1987 and earned a law degree. He later attended Harvard Law School to get a Master of Laws degree. Boko also worked as a law lecturer at the University of Botswana, helping train future lawyers.



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### India opened a New Consulate in Brisbane

- Recently, India opened a new consulate in Brisbane, marking an important step in strengthening ties with Australia. This is the first Indian consulate in Queensland and adds to the existing consulates in Melbourne, Perth, and Sydney, showing India's growing presence in Australia.
- The consulate will be led by Consul General Neetu Bhagotia, who has experience working in various Indian missions. The team at the consulate will support the Indian community, students, and businesses in Queensland, and will work to strengthen partnerships in economic, educational, and research fields.
- Queensland is key to India-Australia trade and is home to nearly 100,000 people of Indian origin, making up a significant part of the Indian community in Australia.
- The Economic Cooperation and Trade Agreement (ECTA) has created new trade opportunities in areas like investment, agriculture, manufacturing, and renewable energy, with India being the second-largest export market for Queensland.



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