

23rd Jan, 2025

1. It's Russian Roulette in the Skies GS 2 (International Relations)

• Why in News:

- Over the past century, aviation has transformed the way we connect across the globe, however, as history has shown, this progress is not without risk.
- The issue of civilian aircraft being shot down, often due to misidentification, poses a significant threat to aviation safety.
- Therefore, it is important to examine the incidents that highlight this danger, the underlying causes, and the pressing need for global regulatory and operational reforms to ensure safer skies.

• Historical Cases of Aircraft Shoot-Downs Due to Misidentification

- Korean Airlines Flight 007**
 - On September 1, 1983, Korean Airlines Flight 007 deviated from its flight path due to a navigational error and was tragically shot down by a Russian Sukhoi fighter plane.
 - All 269 on board lost their lives, sparking outrage and propelling Hans Ephraimson-Abt, who lost his daughter in the crash, to advocate for aviation safety
 - Unfortunately, international efforts to prevent such tragedies have often been obstructed by geopolitical interests, as demonstrated by Russia's opposition to conflict risk regulations proposed by the International Civil Aviation Organization (ICAO).
- DHL Cargo plane**
 - On November 22, 2003, a DHL Cargo plane took off from Baghdad for Bahrain.
 - As the flight was making a rapid climb out, a surface to air missile launched by terrorists struck the left wing between the engine and the wing tip.
 - The crew lost all hydraulics and because the fuel tank was full, there were no fuel vapours to explode in the exposed fuel tank.
 - The crew controlled the flight using only differential engine thrust and managed to carry out a safe landing, displaying exceptional skill.
- Iran Air Flight 655**
 - Another catastrophic case occurred on July 3, 1988, when Iran Air Flight 655 was mistakenly identified as a fighter jet by the U.S. Navy warship USS Vincennes and subsequently shot down over the Strait of Hormuz, killing 290 civilians.
 - This misidentification during the Iran-Iraq war stemmed from procedural failures and reliance on inaccurate assumptions, demonstrating the lethal consequences of flawed decision-making in conflict zones.
- Indian Air Force Mi-17 Helicopter**
 - On February 27, 2019, India's own air defence system tragically downed an Indian Air Force Mi-17 helicopter during a post-Balakot operation, misidentifying it as a hostile target.
 - Such errors emphasise the risks posed by inadequate identification protocols and the need for robust training and technology to mitigate human errors.

• Contemporary Risks in Conflict Zones

- The 2014 downing of Malaysia Airlines Flight MH17 over eastern Ukraine by Russian-backed forces with a surface-to-air missile underscores the dangers posed by armed conflicts and rogue elements.
- Similarly, the crash of an Azerbaijani airliner in December 2024 near Aktau, Kazakhstan, attributed to Russian anti-aircraft systems, reveals a troubling pattern of negligence or miscalculation.
- Fog and GPS interference may have contributed to the tragedy, highlighting the vulnerabilities of modern navigation systems.

It's Russian roulette in the skies

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- **Post-9/11 measures have introduced specific protocols for handling deviations and radio communication failures to prevent civilian aircraft from being perceived as threats.**
- **However, as illustrated by the 2017 interception of Jet Airways Flight 9W 118 by German fighter jets, these procedures are not foolproof.**
- **The Indian safety regulator's dismissal of the incident as a mere communication failure underscores the lack of accountability and transparency in addressing such close calls.**
- **A Closer Look of Challenges in Indian Aviation**
 - **Navigational Vulnerabilities**
 - **India's geographical location places it in proximity to conflict-prone regions, including Pakistan, Afghanistan, and Myanmar.**
 - **Reports of GPS interference, jamming, and signal spoofing in these areas raise concerns about the reliability of navigational systems.**
 - **For instance, modern aircraft rely heavily on GPS for precise navigation, yet disruptions in these systems can lead to deviations from assigned flight paths, making aircraft susceptible to misidentification by military defence systems.**
 - **Airlines must have contingency plans and alternative navigation methods, such as inertial navigation systems, to counter these risks.**
 - **However, the extent to which Indian carriers have implemented such measures remains unclear, highlighting a potential gap in preparedness.**
 - **Pilot Training and Skill Proficiency**
 - **The rapid expansion of India's aviation industry has created a high demand for skilled pilots.**
 - **To meet this demand, some airlines have resorted to accelerated training programs, which may compromise the depth and quality of pilot education.**
 - **The Swiss Cheese Model of accident causation highlights how insufficient training can act as a critical "hole" in the safety net, allowing minor errors to escalate into major incidents.**
 - **For example, pilots must be equipped to handle scenarios involving GPS interference or communication failures.**
 - **Yet, there are concerns about whether Indian airlines provide adequate training to address these modern challenges.**
 - **Aging Aircraft and Operational Risks**
 - **Another challenge is the reliance on older, leased aircraft in some fleets.**
 - **Reports suggest that certain aircraft operated by Indian carriers, including Air India, are not adequately equipped for extended flights over challenging terrains, such as mountainous regions.**
 - **This is particularly concerning given that many Indian airlines operate long-haul routes, including non-stop flights to destinations on the west coast of the United States.**
 - **These routes demand aircraft with robust technical capabilities and redundancy systems to handle emergencies.**
 - **Regulatory Gaps and Accountability**
 - **India's aviation safety regulator, the Directorate General of Civil Aviation (DGCA), has faced criticism for its lack of transparency and proactive oversight.**
 - **The Jet Airways Flight 9W 118 incidents in 2017, where the aircraft lost radio contact over multiple airspaces, exemplifies this issue.**
 - **The DGCA attributed the incident to a communication system malfunction but failed to explain why established protocols, such as transponder codes for communication failure, were not followed.**
 - **This raises questions about the DGCA's ability to enforce accountability and implement corrective measures.**
 - **Regulatory gaps not only undermine public trust but also weaken India's standing in global aviation safety rankings.**

- **Outdated Classification System:** India's outdated resource classification system leaves many auctioned mineral blocks in early exploration stages, deterring investment.

data. Exploration is at the heart of mitigating the environmental and economic risks of mining companies and the other (government) do not share a clear view of the resource's true value. They discount geological surveys, many bidders discount their efforts to understand the results in suboptimal actions, with some potentially valid. It is possible to simply overinvest in a possible resource to get a sufficient financial incentives during the exploration phase. In other words, the solution might be to approach the problem from extraction and not from the fabrication project. In chip manufacturing—another sector with enormous explicit costs—this also might be a solution. The traditional approach, pledging direct capital support early in the construction phase. A similar model could be followed for mining. Instead of subsidizing exploration costs instead of reimbursing them only after production begins. Upfront capital support for exploration might be a solution to failure and help unlock value many times over in downstream mining, exploration, sales, and recycling.

- **Low Demand for Exploration Licenses:** Despite reforms, the demand for exploration licenses remains low, reflecting the risk perception and lack of interest from private and foreign investors.
- **Need for Fiscal Incentives:** Offering larger upfront fiscal incentives for exploration could mitigate the risks, encouraging both domestic and foreign participation in mineral extraction projects.

3. U.S.'s new rule for exporting AI chips GS 2 (International Relations)

- **Why in News:** The **U.S. Bureau of Industry and Security (BIS)** has introduced new rules about the **export of AI chips and AI technology** to certain countries. These changes are meant to protect U.S. **national security** and **foreign policy interests**, making sure that advanced AI technologies don't end up in the wrong hands or are used irresponsibly.

● **What Do the New Rules Propose?**

- The new rules mainly focus on **advanced computing chips** (which power AI systems) and **AI models** (software programs that process data to create outputs like information or media). These chips are crucial for developing AI technologies.
- The BIS is dividing countries into **three tiers** with different rules for exporting AI chips and technology:
 - **Tier 1:** No restrictions for 18 U.S. allies and partners (like **Australia, UK, Japan, South Korea**). They can get AI chips without extra approvals.
 - **Tier 2:** Countries like **China and India** are in this group. These countries can get chips, but only under certain conditions. For example, if the technology is used for advanced AI development, they need special permission (called **Validated End User** authorization). Basic chips with less computing power don't need approval.
 - **Tier 3:** Countries like **North Korea, Iran, and Russia** are restricted from getting this technology at all due to national security concerns.

● **Why Are the Restrictions in Place?**

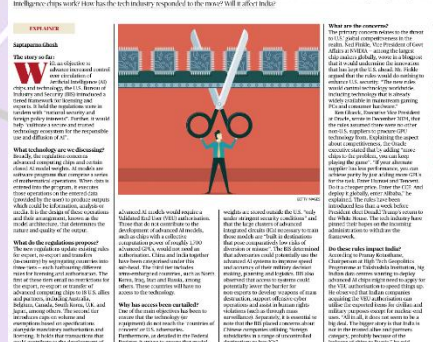
- The main concern is that **S. adversaries** could use advanced AI systems for **military** purposes, like improving their decision-making, planning, or logistics.
- There's also a fear that these technologies could help make **weapons of mass destruction** or support **cyber attacks** and **human rights abuses**.
- The U.S. government also worries about **Chinese companies** using subsidiaries in other countries to bypass these restrictions and buy U.S. chips.
- **Impact on India:** For **India**, the rules could affect companies that want to use **advanced AI chips** for big data centers. Indian companies may need to apply for special authorization to get these chips quickly.
- However, India is **not in the group of trusted U.S. allies** because of past issues with chips being sold to **Russia**. This means that Indian companies may face extra hurdles when buying advanced technology from the U.S.

4. Crosspathy in India GS 2 (Health)

- **Why in News:** The Maharashtra Food & Drugs Administration has, in a recent directive, allowed homeopathic practitioners, who have completed a certificate course in modern pharmacology, to prescribe allopathic medications.

What is U.S.'s new rule for exporting AI chips?

What is the main objective behind one of the last orders of the Biden administration from the latest framework for licensing and exporting sensitive technologies to China?



• Crosspathy in India:

- Crosspathy refers to the practice where medical practitioners trained in one system of medicine (e.g., Ayurveda, Homeopathy, or Unani) prescribe medicines or perform treatments from another system (primarily Allopathy, or modern medicine).
- This practice is a significant issue in India's healthcare sector due to its implications for patient safety, legal frameworks, and medical ethics.

Is the government encouraging 'crosspathy'?

Why did the Maharashtra Food and Drugs Administration issue a directive allowing homeopathic practitioners to prescribe allopathic medicines?

Is there a shortage of doctors?

The Maharashtra Food and Drugs Administration has issued a recent directive, allowing homeopathic practitioners, who have completed a certificate course in modern pharmacology, to prescribe allopathic medications.

Why is it being challenged?

In 2017, the Maharashtra Medical Education and Drug Inspection Department had issued a notification allowing homeopathic practitioners to prescribe modern medicine. As per this notification, doctors who had obtained the License of the Council of Examiners of Homeopathic Practitioners in 1951/52, the degree was abolished in 1982, and were replaced with the Maharashtra Medical Council, were allowed to practice

modern medicine. This directive was challenged in the Bombay High Court by the Indian Medical Association (IMA). The High Court issued a stay, with the bench questioning the risk that could be posed to patients if these doctors were allowed to practice allopathy.

IMA Maharashtra president Ganesh Kulkarni said he was unclear why the Maharashtra FDA had now issued this directive. He said that even the central body for homeopathy had no provision to allow its practitioners to practice another system of medicine and that 'crosspathy' was banned by the Supreme Court.

The Maharashtra government allowing homeopathic practitioners to prescribe modern medicine – which is not the case, as this has already been stayed by the High Court. "This was a directive to chemists to extend allopathic prescriptions of homeopathic practitioners, that who has given the FDA, the authority to issue such a directive, in light of the fact that court has stayed the order allowing homeopathic practitioners to practice modern medicine," he added.

What is NCA's stance on 'crosspathy'? In 1986, in *Poonam Verma v. Ashwin Patel*, the Supreme Court held that homeopathic practitioners practicing allopathic medicine and the patient subsequently dying, the Supreme Court held that homeopathic practitioners who had prescribed medicines that had not been prescribed by the NCA, were not qualified to practice modern medicine. A 2005 research paper by Ganesh Kulkarni et al. states:

"Recent judgments, the judiciary has held that cross-system practice is a form of medical negligence. However, it is permitted only in those states where the concerned governments have authorized it by a general or special order."

Is there a shortage of doctors?

The Central government has been promoting AYUSH medicine for some years now, with a push being brought in the form of a general order. The rationale, in general, has been that India has a shortage of doctors, particularly in rural areas, and that the AYUSH cadre of practitioners can help fill these gaps.

As per a Parliament statement in December 2024, there are 15,00,000 allopathic doctors registered with the State medical councils and the National Medical Commission as on June 2022, and 1,60,00,000 AYUSH doctors. The shortage of specialists in the Health Department of India 2022-23 report reveals a shortfall of 10% in specialists across all states. Public Health Specialist Doctors (PHSDs) are not available in all states. Although pointed out that while there is evidence that doctors can provide care of comparable quality to that of medical doctors, both widely integration into the system is crucial.

"Integrating not one cadre of alternative medical practitioners to assume roles and functions that are required for medical doctors is a recipe for disaster."

THE GST

In 2017, the Maharashtra Medical Education and Drug Inspection Department had issued a notification allowing homeopathic practitioners to prescribe modern medicine. This directive was challenged in the Bombay High Court by the Indian Medical Association.

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• Legal and Regulatory Framework:

- **Permissibility:**
 - Crosspathy is generally deemed illegal unless explicitly authorized by state laws or special government orders.
- **Judicial Rulings:**
 - The Supreme Court of India has ruled that practicing medicine outside one's expertise without explicit authorization amounts to **medical negligence**.
 - Crosspathy practitioners have faced legal actions under the Indian Medical Council Act and other state-specific medical laws.

• Reasons Behind Crosspathy in India:

- **Doctor Shortages:**
 - India faces a critical shortage of allopathic doctors, especially in rural areas, with an 80% shortfall of specialists in Community Health Centres (CHCs) as of 2022-23.
 - AYUSH (Ayurveda, Yoga, Unani, Siddha, Homeopathy) practitioners are often utilized to fill this gap.
- **Policy Gaps:**
 - Some states have allowed limited crosspathy to address accessibility challenges, such as in Maharashtra and Goa.
- **Economic Factors:**
 - Patients in rural areas often cannot afford specialist doctors or urban healthcare facilities, making AYUSH practitioners a more accessible option.

• Challenges & Criticism:

- **Patient Safety:**
 - Crosspathy practitioners may lack comprehensive training in modern medicine, increasing risks of incorrect diagnoses, improper prescriptions, and complications.
- **Legal Ambiguity:**
 - Conflicting laws and court rulings create confusion about what constitutes permissible crosspathy.
 - Regulatory oversight is often weak, particularly in rural areas.
- **Professional Conflicts:**
 - The Indian Medical Association (IMA) strongly opposes crosspathy, citing it as a dilution of healthcare standards.

• News Summary:

- The Maharashtra Food & Drugs Administration (FDA) has permitted homeopathic practitioners with a certificate in modern pharmacology to prescribe allopathic medicines.
- This move aims to address challenges in healthcare delivery but has invited strong opposition from the Indian Medical Association (IMA) and others.

• Background of the Directive:

- In 2014, the Maharashtra government redefined "registered medical practitioner" under the Maharashtra Medical Council Act to include certified homeopathic practitioners.
- A directive in late 2024 clarified that chemists must honour prescriptions by these practitioners, resolving confusion regarding their authority.

- **Controversies Surrounding Prescriptions:**
 - **IMA's Opposition:**
 - The IMA labelled the move as "crosspathy," stating it undermines patient safety.
 - Critics argue that a short pharmacology course cannot substitute for the rigorous MBBS training required for modern medicine.
 - **Judicial Challenges:**
 - A 2017 notification permitting homeopaths to practice allopathy was stayed by the Bombay High Court. The new directive contradicts this ruling.
 - Past Supreme Court rulings have labelled cross-system practice as medical negligence unless explicitly authorized.
- **Government's Rationale:**
 - The directive aims to address India's acute shortage of doctors, particularly in rural areas. According to a 2022-23 report, there is an 80% shortfall of specialist doctors in rural health centres.
 - With over 13 lakh registered allopathic doctors and 5.65 lakh AYUSH practitioners, the government seeks to utilize alternative practitioners to bridge healthcare gaps.
- **Implications for the Move:**
 - **For Patients:**
 - Concerns about the safety and efficacy of treatments prescribed by non-MBBS practitioners.
 - Potential risks of medical negligence in rural and underserved areas.
 - **For the Healthcare System:**
 - Challenges in regulating prescribing practices, particularly in rural settings.
 - Dilution of general practice standards, potentially weakening India's already strained healthcare infrastructure.
 - **For Policy and Governance:**
 - Highlights the urgent need for structural reforms, better rural incentives, and improved working conditions for MBBS graduates.
- **Conclusion:**
 - Maharashtra's directive represents a critical juncture in healthcare policy. While the intention to bridge healthcare gaps is commendable, the implementation raises ethical, legal, and practical questions.
 - Resolving these challenges requires a balanced approach that prioritizes patient safety, respects medical standards, and addresses workforce shortages sustainably.

5. Beti Bachao Beti Padhao (BBBP) GS 2 (Governance)

- **Why in News:** Prime Minister Narendra Modi marked the 10th anniversary of the **Beti Bachao Beti Padhao (BBBP)** initiative.
- **About Beti Bachao Beti Padhao (BBBP) initiative**
 - The scheme was launched in 2015 in Panipat, Haryana.
 - The flagship initiative was aimed at addressing gender disparities, improving the **Child Sex Ratio (CSR)**, and promoting education for girls.
 - Beti Bachao Beti Padhao has partnered with the **Ministry of Skill Development and Entrepreneurship** to promote vocational training for young girls and women.
 - Initiatives such as '**Khelo India**' have also contributed to identifying and nurturing talent in sports among girls.
 - The government has integrated **Mission Shakti** into BBBP, which has expanded the scheme's scope, ensuring safety, education, and economic empowerment of women.
 - **Significant Achievement**

Flagship scheme for girl child has helped defeat bias: Modi

Disturbs with historically low child sex ratios have reported significant improvement, awareness campaigns have instilled a deeper sense of the importance of gender equality, says Prime Minister

The Hindu Bureau
NEW DELHI

As the 10th anniversary of the Beti Bachao Beti Padhao (BBBP) scheme is celebrated, Prime Minister Narendra Modi on Wednesday said that the scheme has helped overcome gender bias, improve the child sex ratio, and ensure the growth of a nation of health and education.



The scheme was launched in 2015 in Panipat, Haryana, to address the declining child sex ratio and related issues of women empowerment. (AI) (PTI)

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- **Improvement in the sex ratio at birth:** Over the decade, **sex ratio at birth** rose from 918 in 2014-15 to 933 in 2022-23.
- **Increased enrolment in secondary education:** In 2014-15, 75.51% of girls were enrolled in secondary education. The numbers have seen a substantial boost, with the **Gross Enrolment Ratio (GER)** increasing from 75.51% in 2014-15 to 79.4% in 2021-22.
- **Institutional Deliveries:** The percentage of institutional deliveries surged from 61% in 2014-15 to 97.3% in 2023-24, ensuring safer childbirth.
- **Ante-natal Care:** First-trimester ante-natal care registrations rose from 61% to 80.5%, ensuring better maternal health.
- **Challenge:** In FY24, India's **Female Labour Force Participation (FLFP)** stood at **7%**, still lower than men's participation. The rate is particularly low in urban areas, with many women engaged in **unpaid domestic work**. To improve this, more opportunities for women to enter formal employment and **care work** as a valid profession are essential.

6. National Health Mission (NHM) GS 2 (Governance)

- **Why in News:** The Union Cabinet approved the continuation of the **National Health Mission (NHM)** for another five years.
- **About National Rural Health Mission (NRHM)**
 - The NHM, launched in 2005 as the **National Rural Health Mission (NRHM)**, aimed to improve public health systems and provide affordable and quality healthcare, especially in rural areas and for vulnerable groups.
 - In 2012, the mission expanded to include the **National Urban Health Mission (NUHM)** to address urban healthcare needs, which led to the restructuring of NRHM into the broader **National Health Mission (NHM)**.
 - **Achievements:** Over the past decade, the NHM has achieved significant milestones:
 - **Maternal Mortality Ratio (MMR)** declined by 25 per cent, from 130 per 100,000 live births in 2014-16 to 97 per 100,000 in 2018-20.
 - **Infant Mortality Rate (IMR)** dropped from 39 per 1,000 live births in 2014 to around 28 in 2020.
 - **Healthcare Workforce:** Between 2021 and 2022, nearly **12 lakh health workers** joined the NHM.
 - NHM has contributed significantly to reducing the incidence and improving the surveillance of **non-communicable diseases (NCDs)** such as **tuberculosis (TB)**.
 - India has seen a decline in the incidence of TB, from 237 per 100,000 population in 2015 to 195 in 2023. The mortality rate for TB has also dropped from 28 to 22 in the same period.
 - **COVID-19 Response:** NHM played a pivotal role in the response to the COVID-19 pandemic, utilizing its healthcare facilities and workforce to deliver **over 220 crore COVID-19 vaccine doses** from January 2021 to March 2024.
 - NHM has also overseen the expansion of key programmes, including the
 - **Measles-Rubella Elimination Campaign**
 - **Pradhan Mantri National Dialysis Programme**
 - **National Sickle Cell Anaemia Elimination Mission**

National Health Mission has curbed several public health concerns, says Centre's report

With NHM, maternal mortality ratio has declined by 25% since 2014, which is higher than the global decline of 45%.

Bindu Shalan Perampalam
NEW DELHI

The National Health Mission (NHM) has significantly contributed to improving India's public health, including lowering of the maternal mortality ratio, incidence of tuberculosis (TB), and sickle cell anaemia.

It has also contributed to expanding human resources in the field while fostering an integrated response to health emergencies, the Union government said on Wednesday in its assessment report (2023-24) presented to the Union Cabinet.

Listing out key achievements of the NHM in the past three years, the Centre noted that there had been a significant increase in human resources within the healthcare sector. "In FY 2023-24, NHM facilitated the engagement of 2.69 lakh additional healthcare workers, including general duty medical officers, specialists, staff nurses, 81,331 doctors, allied healthcare workers, and public health managers. Additionally, 90,740 community health officers (CHOs) were engaged. This number grew in subsequent years, with 4.21 lakh additional healthcare professionals engaged in FY 2022-23, including 1.29 lakh CHOs, and 5.23 lakh workers engaged in FY 2023-24, which included 1.38 lakh CHOs," the report stated.

It further noted that under NHM, the Maternal Mortality Ratio (MMR) has declined by 25% since 2014, which is higher than the global decline of 45%. Infant Mortality Rate (IMR) has fallen from 39 per 1,000 live births in 2014 to 28 in 2020.

Moreover, the Total Fertility Rate (TFR) decreased from 2.3 in 2015 to 2.0 in 2020, according to the National Family Health Survey (NFHS-5). These improvements indicate that India is on track to meet its U.N. Sustainable Development Goals (SDG) targets for maternal, child, and infant mortality well ahead of 2030. The NHM has also been instrumental in the elimination and control of various diseases, including the incidence of TB.

7. Tax Avoidance Treaty GS 3 (Economy)

- **Why in News:** The **Central Board of Direct Taxes (CBDT)** has clarified its stance on **Principal Purpose Test (PPT)** regarding **Double Taxation Avoidance Agreement (DTAA)**, stating that it will be applicable prospectively, allowing grandfathering of prior investments. This clarification is especially important for investments made before the **PPT** was introduced in certain treaties, specifically the **India-Mauritius, India-Cyprus, and India-Singapore DTAA**s.

Tax avoidance treaties: India sets new norms for claiming benefits

The Central Board of Direct Taxes has issued fresh guidelines for applying the Principal Purpose Test (PPT) provisions under Double Tax Avoidance Agreements or DTAA with Cyprus, Mauritius and Singapore to remain outside for now

Press Trust of India
NEW DELHI

The Income Tax department has come out with a fresh guidance note on applicability of Principal Purpose Test (PPT) for claiming tax treaty benefits, which will apply prospectively.



The Central Board of Direct Taxes (CBDT) in its guidance note on PPT also clarified the grandfathering provisions under the India-Cyprus Double Tax Avoidance Agreement (DTAA), and the similar provisions with Mauritius and

most Indian tax DTAA. Crucially, it establishes the primacy of the grandfathering article featuring in some treaties, namely Cyprus, Mauritius and Singapore. The circular protects such treaty-specific bilateral commitments and carves them out of the purview of the PPT provisions.

April 1, 2025," he said. Nungia Andersen LLP partner Vishnu Pundir said as per the note, PPT provisions shall apply prospectively and would also not be applicable in cases where India has entered into treaty-specific bilateral commitments in the form of grandfathering. "The guidelines nudge tax authorities to refer to BEPS Action Plan 6 as well as UN Model Tax Convention for supplementary source of guidance while deciding on invocation and application of PPT provisions," Mr. Pundir added.

- **What is the Principal Purpose Test (PPT)?**
 - The PPT is a test used to determine whether the main purpose of a transaction or arrangement is to gain tax benefits from a **Double Taxation Avoidance Agreement (DTAA)** between countries.
 - **Substance requirements:** To pass the PPT, taxpayers must prove that their activities have real substance in the country where they claim tax benefits (e.g., employees, offices, turnover, expenses).
- **Key Points in the New Guidance Note:**
 - **Applicability of PPT:** The PPT provisions will **only apply prospectively**. This means that it will apply to agreements made after the guidance note was issued, and not retroactively to agreements or transactions entered into before this.
 - **Grandfathering Provisions in Some DTAA's:** India has made **special bilateral commitments** in its treaties with **Cyprus, Mauritius, and Singapore**. These commitments are known as **grandfathering provisions**.
 - These grandfathering provisions **will not be affected** by the new PPT guidelines. They will continue to apply as per the terms agreed in the respective DTAA's.
 - **Clarification on Treaty-Specific Commitments:** The CBDT (Central Board of Direct Taxes) has clarified that these **grandfathering commitments** in the **India-Cyprus, India-Mauritius, and India-Singapore** treaties are **separate** from the new PPT provisions.
 - These commitments will be governed by the specific terms outlined in the treaties with these countries, and **won't be impacted by the PPT**.
 - **Impact on the India-Mauritius Treaty:** Before this clarification, there was some **uncertainty** about how the **India-Mauritius treaty** would be affected by the PPT provisions. With this guidance note, it is now clear that the **grandfathering provisions** in the **India-Mauritius treaty** will remain intact, which might allow the protocol for this treaty to come into effect starting **April 1, 2025**.
 - **Reference to BEPS Action Plan 6 and UN Model Tax Convention:** The guidance also **encourages tax authorities** to refer to the **BEPS Action Plan 6** (Base Erosion and Profit Shifting) and the **UN Model Tax Convention** when deciding how to apply the PPT provisions.
 - **BEPS Action Plan 6** aims to prevent tax avoidance through treaty abuse.
 - The **UN Model Tax Convention** provides a framework for countries to draft their tax treaties, with certain reservations by India.
- **What is a Double Taxation Avoidance Agreement (DTAA)?**
 - A **Double Taxation Avoidance Agreement (DTAA)** is a tax treaty signed between two countries to avoid the situation where a taxpayer is taxed on the same income in both countries. The main objectives of DTAA's are to:
 - **Avoid Double Taxation:** Prevent individuals and companies from paying taxes in both countries on the same income.
 - **Promote Investment:** By reducing tax barriers, DTAA's encourage cross-border investment and economic cooperation between countries.
 - **Allocate Taxing Rights:** DTAA's specify which country has the right to tax specific types of income (e.g., interest, dividends, capital gains).
 - India has **over 90 DTAA's** with countries worldwide, including major ones like the **United States, United Kingdom, Mauritius, Singapore, and Cyprus**.

• Grandfathering Provisions

- **Grandfathering provisions** are exceptions made for **pre-existing investments** or transactions, ensuring that they continue to receive the same tax benefits that were available at the time the agreement was signed, even if new rules (like PPT) are introduced later.
- **Example:** In some DTAAs (like with **Mauritius, Cyprus, and Singapore**), there are specific grandfathering provisions to protect the **tax benefits of earlier investments**, even when PPT is introduced.

8. Discovery of a Supermassive Black Hole Defying Expectations GS 3 (Science and tech)

- **Why in News:** A team of researchers using NASA's **James Webb Space Telescope (JWST)** and the **Chandra X-ray Observatory** has discovered a surprising black hole, named **LID-568**, that could help to understand how supermassive black holes form and grow.

• What Is a Supermassive Black Hole?

- **Supermassive black holes** are huge black holes found at the centers of many galaxies, including our own Milky Way.
- They can be **millions to billions of times** heavier than the Sun.
- For example, the supermassive black hole **Sagittarius A*** at the center of the Milky Way is about **3 million times** the mass of our Sun.
- Despite their size, scientists aren't entirely sure how these black holes grow so massive, especially when the universe was still young.

• What Makes LID-568 Special?

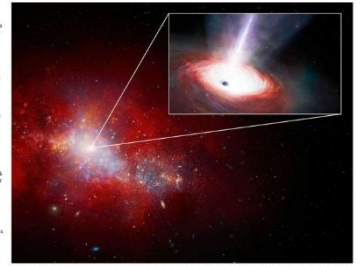
- **LID-568** is a **low-mass supermassive black hole** that existed only **5 billion years after the Big Bang** (when the universe was around 8 years old in human terms).
- This black hole was found to be feeding (eating matter) at an incredibly **fast rate—40 times faster** than what scientists thought was the upper limit for black holes.
- It's a **"super-Eddington" black hole**, meaning it is pulling in matter at a rate higher than the normal limit.
- **Why Is This Important?** Normally, black holes can only pull in matter until the energy from the material (as it heats up and radiates) pushes back, preventing the black hole from growing any faster. This is known as the **Eddington limit**.
 - **LID-568** is breaking this rule by feeding at a much higher rate, which has puzzled scientists.
 - This discovery could change how we think about the growth of **supermassive black holes**, especially how they became so massive in the early universe when there wasn't enough time or matter to feed them for long periods

Space telescopes stumble on rule-breaking black hole

LID-568 is a tiny supermassive black hole that existed just 5 billion years after the Big Bang. Its analysis of its effects on its neighborhood has indicated that it was feeding on a surrounding cloud of matter at almost 40 times greater than what astrophysicists thought was the upper limit.

Illustration: NASA/ESA

Astronomers using NASA's James Webb Space Telescope (JWST) and the Chandra X-ray Observatory have discovered a surprising black hole, named LID-568, that could help to understand how supermassive black holes form and grow. The discovery of LID-568 is a low-mass supermassive black hole that existed just 5 billion years after the Big Bang. Its analysis of its effects on its neighborhood has indicated that it was feeding on a surrounding cloud of matter at almost 40 times greater than what astrophysicists thought was the upper limit.



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9. US to clamp down Illegal Immigration GS 2 (International Relations)

- **Why in News:** United States President Donald Trump launched a crackdown on immigration, soon after assuming office. From his bid to end birthright citizenship to mobilising troops along the US-Mexico border, he took a hardline approach to illegal immigration. Amid Trump's sweeping immigration clampdown, reports have emerged that **India is planning to take back all its nationals living illegally in the US**.
- **Illegal Indian Migrants in the US:**
 - As of 2022, there were around **220,000 illegal Indian immigrants** in the US. Indians make up the **third-largest group** of undocumented migrants in the country, after **Mexico and El Salvador**.
 - The total number of undocumented migrants in the US is approximately 11 million, with many of them facing deportation orders.

- Among them, about 20,407 Indians are either in detention or facing final removal orders by the US authorities.
- India is actively engaged in repatriating illegal Indian immigrants. The US is planning to deport about 18,000 Indians back to India, and the process of identifying and returning these migrants has already started.
- Major **border points** for **S. entry**.

- **Land Border Points (with Canada and Mexico):**

- **S.-Mexico Border:** Key crossings include **San Ysidro (California)**, **El Paso (Texas)**, **Laredo (Texas)**, **Nogales (Arizona)**, and **Brownsville (Texas)**.
- **S.-Canada Border:** Key crossings include **Detroit-Windsor (Michigan-Ontario)**, **Niagara Falls (New York-Ontario)**, **Seattle-Vancouver (Washington-British Columbia)**, and **Port Huron-Sarnia (Michigan-Ontario)**.

- **Sea Ports of Entry:** Major sea ports include **Port of Los Angeles**, **Port of New York/New Jersey**, **Port of Miami**, **Port of Houston**, and **Port of Seattle**.

- **Why India is cooperating?**

- By agreeing to take back its nationals, India is strengthening its relationship with the US under Trump's administration. India hopes that this cooperation will help protect the interests of its citizens, particularly in securing visas and work opportunities.
- India is also hoping that this move will help deter secessionist movements, such as the **Khalistan movement**, among the Indian diaspora in the US.
- Additionally, India is trying to avoid a trade dispute with the US. Trump has criticized India's high import taxes, and India wants to prevent any retaliatory measures that could hurt trade.

- **India's challenges with illegal immigration**

- Both India and the U.S. face significant challenges with illegal immigration, but the scale, causes, and responses differ greatly.
- India's challenge primarily comes from Bangladesh, with an estimated 20 million illegal immigrants residing in the country, according to 2016 estimates. The issue is particularly concentrated in border states like **Assam**, where tensions are high due to the influx of migrants, especially after political turmoil in Bangladesh.
- India shares a **4,096-km border** with Bangladesh, which is largely porous and difficult to control. The border includes rivers, marshes, and densely populated villages, making fencing and surveillance challenging.
- **Resistance:** India's efforts to fence this border have been met with resistance from Bangladesh. In January 2025, there was a confrontation between India's Border Security Force (BSF) and Bangladesh's Border Guard (BGB) over fencing projects, with Bangladesh citing a **1975 agreement** that prohibits certain border construction.

FIRST BILATERAL TALKS WITH TRUMP ADMIN

US brings up irregular immigration, India says always open to return

Levels of trust very high: Jaishankar



External Affairs Minister S. Jaishankar with Quad counterparts Penny Wong of Australia, Marco Rubio of the US and Takeshi Iwaya of Japan in Washington, DC. (PI)



SHUBHAJITROY
NEW DELHI, JANUARY 22

NEWLY-APPOINTED US Secretary of State Marco Rubio raised the issue of "irregular immigration" in his very first meeting with External Affairs Minister S. Jaishankar in

INSIDE

QUAD SENDS STRONG MESSAGE TO CHINA

Washington DC Wednesday. While there was no word on the discussion on tariffs, Rubio

underlined the new administration's desire to "advance economic ties".

The two sides are also discussing the possibility of a meeting between Prime Minister Narendra Modi and US President Donald Trump on the sidelines of the AI summit in Paris on

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