



DAILY CURRENT AFFAIRS

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Loss and Damage Fund

Syllabus :GS 3/Environment

In News

As the climate crisis intensifies, two terms are in sharp focus – adaptation and **'loss and damage' (L&D)**.

Adaptation

- It is the proactive response to climate change, the art of survival by which communities and countries make deliberate choices to prepare for and cope with climate-related challenges.

About 'Loss and Damage' (L&D).

- L&D represents the **irreversible consequences** of climate change: impacts that can't be avoided or mitigated through adaptation efforts.
- It encompasses the **real losses** that extend **beyond monetary value** and cut to the core of human rights and well-being.

- It includes **economic losses, human casualties, and the degradation of ecosystems and cultural heritage.**

What is the Loss and Damage fund?

- At the 27th Conference of Parties (COP27) to the United Nations Framework Convention on Climate Change (UNFCCC) held in Egypt in November 2022, a historic agreement was reached to establish a **Loss and Damage Fund**.
 - It was designed as a multilateral entity that will disburse money to recover from damage that poor countries have suffered due to climate change-induced weather disasters and other impacts.
- **Timeline :** At the **COP 19** to UNFCCC in Warsaw, Poland, in 2013, representatives of member countries **formally agreed to establish the L&D fund**.
 - At **COP 25**, the Santiago Network for L&D was set up, but countries didn't commit any funds.
 - Subsequently, at **COP 26**, the Glasgow Dialogue on finance for L&D was established to continue discussions over the next three years on the fund.
 - Finally, at **COP 27** in November 2022, after intense negotiations, representatives of the UNFCCC's member states agreed to set up the L&D fund and a **Transitional Committee (TC)** to figure out how the new funding mechanisms under the fund would operate.
- **Purpose :** The call for affluent nations to acknowledge their accountability for historic pollution is more than 30 years old.
 - Historic pollution has elevated the world's average surface temperature by more than 1 degree Celsius and is currently inflicting damage worldwide, but especially in the poorest nations.
 - It was being created to provide financial and technical assistance to economically developing nations that were incurring L&D due to climate change.

Issues and Concerns

- **No commitments :** The **developed nations, particularly the U.S., have remained non-committal about being primary donors** to the fund and have rejected references to the CBDR, equity, and liability in the draft.
- **No indication of the size :** There is **currently no indication of the size** of the fund because such a statement was quashed under pressure from the U.K. and Australia.
 - The current draft simply urges and invites developed nations to provide money.
- **No consensus:** The fourth meeting of the Transitional Committee (TC) concluded in October 2023, with **no clear consensus on operationalising the L&D fund**.

- The principal **bones of contention** had to do with **hosting the fund** at the World Bank, the foundational principle of common but differentiated responsibilities (CBDR), climate reparations, and the eligibility of all developing nations for the funds.
 - The differences on these counts deepened the rift between developed and developing nations at the TC4 meeting.

Implications

- **Lack of trust** : The unwillingness of wealthy nations to fulfil intended commitments **undermines faith in global climate negotiations** and hampers the cooperative spirit necessary to address climate change.
- **Diplomatic repercussions**: It represents a missed chance to take concrete steps to combat the escalating consequences of climate change on vulnerable communities and **signifies a breakdown in diplomatic efforts**, leading to doubts about nations' ability to collaborate effectively.
 - The discontent among developing nations stems from the perception that their concerns and needs are not adequately addressed by the international community, making the path to climate action — and indeed **other global issues — even more complicated.**
- **Suffering of vulnerable People**: It threatens **climate justice and exacerbates** the suffering of vulnerable communities in developing nations.
 - These communities have contributed minimally to global emissions but today bear the brunt of climate change.
- **Humanitarian crises**: The watering down can also increase the number of **humanitarian crises**, including food shortage, people displacement, and conflict, and force communities to cope independently with a worsening climate and its consequences.
- **Economic consequences**: The absence of support has economic consequences for both developing and developed nations; financial crises and economic downturns in one region can have extensive repercussions due to the interconnectedness of the global economy.
- **Finally, climate-change-induced instability can have security implications as well, as conflicts and tensions emerge in vulnerable nations and threaten to spill across borders.**

Latest Developments

- An impromptu fifth meeting of the TC in Abu Dhabi concluded a few days back, and a set of recommendations have been drafted and forwarded to COP 28.
- At the TC5 meeting, developing nations conceded to the fund being hosted by the World Bank Financial Intermediary Fund for an interim period of four years, serviced by a new dedicated and independent secretariat.
- While the World Bank is yet to confirm that it is willing, it is important to note that it charges an exorbitant overhead fee.

Suggestions and Way Forward

- As we strive to mitigate the worst impacts of climate change, we must remember that adaptation and L&D are not mutually exclusive concepts.
 - They exist on a continuum of climate resilience, and both have a place in our collective efforts to combat climate change.
- A successful response to climate change requires to **balance the proactive measures of adaptation** with the **moral and financial responsibility of addressing the losses and damages** that are — regrettably — an inescapable part of a climate-altered world.
- The L&D fund was conceived as a critical component of global climate action, recognising that some of the consequences of climate change are irreversible and beyond the capacity of vulnerable nations to handle.
 - So to achieve climate justice, **rich countries must meet their obligations to reduce emissions and deliver finance** in line with what is fair, and thus uphold the principles of equity, justice, and solidarity in the face of a changing climate.
 - Otherwise, global climate action will get derailed, putting more pressure on the already beleaguered COP 28 talks later this month.

Source: [TH](#)

Production Gap Report 2023

Syllabus: **GS3/Environment/Conservation**

In News

- The **2023 Production Gap Report** titled “Phasing down or phasing up” is released.

About the Report

- The first edition was released in **2019**.
- It is produced by the Stockholm Environment Institute (SEI), Climate Analytics, E3G, International Institute for Sustainable Development (IISD) and the UN Environment Programme (UNEP).
- It tracks the **discrepancy** between governments’ **planned fossil fuel production** and **global production levels** consistent with limiting warming to 1.5°C or 2°C.

Findings of the Report

- **Production Gap:** If global carbon dioxide (CO₂) emissions continue at the current pace, the world could exceed the remaining emissions budget compatible with a 50% chance of limiting long-term warming to 1.5°C by 2030.

- Governments are planning on producing around 110% more fossil fuels in 2030 than would be consistent with limiting warming to 1.5°C, and 69% more than would be consistent with limiting warming to 2°C.
- The magnitude of the production gap is also projected to grow over time.
- **Conflicts between Commitments:** Major producer countries have pledged to achieve net-zero emissions and launched initiatives to reduce emissions from fossil fuel production, but none have committed to reduce coal, oil, and gas production in line with limiting warming to 1.5°C.
- **Increase in Production of Fossil Fuels:** Government plans and projections would lead to an increase in global coal production until 2030, and in global oil and gas production until at least 2050.
- **India:** India's updated Nationally Determined Contribution (NDC) pledges a reduction in the emissions intensity of its GDP of 45% by 2030, compared to 2005 levels, and an increase in the share of non-fossil power capacity to 50% by 2030 which has a goal of reaching net-zero by 2070.
 - While India has made significant investments and set ambitious targets for renewable energy no government policies or discourses to support a managed wind-down of fossil fuel production were identified.

Suggestions

- Governments should be **more transparent** in their plans, projections, and support for fossil fuel production and how they align with national and international climate goals.
- There is a strong need for governments to adopt **near- and long-term reduction targets** in fossil fuel production and use them to complement other climate mitigation targets.
- An **equitable transition** away from fossil fuel production must recognize countries' **differentiated responsibilities and capabilities**.
 - Governments with greater transition capacity should aim for more ambitious reductions and help finance the transition processes in countries with limited capacities.

Source: [TH](#)

India's Energy Conservation Building Code

Syllabus: GS3/Environment/Conservation

In News

- India was cited as a “**notable exception**” by the International Energy Agency (IEA) for being among the few emerging markets and developing economies to have **energy efficiency building codes**.

About Energy Conservation Building Code (ECBC)

- ECBC was launched by the Ministry of Power (MoP) in **2007**, as the first step towards **promoting energy efficiency in the commercial building sector**.
- It defines **norms of energy performance** for various building components, and takes into consideration the climatic region.
 - The code is applicable to commercial buildings like hospitals, hotels, schools, shopping complexes, and multiplexes which have a connected load of 100 kW or more, or contract demand of 120 kVA or more.
- Currently, **23 states** have notified rules to enforce ECBC compliance, while large states like Maharashtra and Gujarat are still in the process of drafting rules.
 - While ECBC acts as a national standard, states across India have the **flexibility to modify** the code depending on unique regional needs.
 - To enforce the code, **states have to draft rules and notify them** as state laws.

International Energy Agency

- It is an international energy forum of 31 member Nation under the **Organisation for Economic Development and Cooperation (OECD)**.
- The IEA was established in **1974**, in the wake of the 1973-1974 oil crisis, to help its members respond to major oil supply disruptions, a role it continues to fulfill today.
- IEA's mandate has expanded over time to include tracking and analyzing global key energy trends, promoting sound energy policy, and fostering multinational energy technology cooperation.

Significance

- It sets **minimum energy standards** for commercial buildings, with the objective of enabling **energy savings** of between **25 and 50 percent** in compliant buildings.
- Implementation of ECBC is important as buildings in India account for **30 per cent of total electricity consumption**, a figure that is expected to touch 50 percent by 2042.
- The application of these norms **lowers the building's energy requirement** without affecting the function, comfort, health or productivity of the occupants.

Source: [IE](#)

Discovery of Oldest Black Hole

Syllabus: GS3/ Science & Technology

In News

- Scientists have recently discovered the oldest black hole, dating back to 470 million years after the Big Bang.

About

- **Black Hole:**
 - **Age:** Given the universe is 13.7 billion years old, that puts the age of this newly discovered black hole at 13.2 billion years.
 - **Size:** Even more astounding to scientists, this black hole is a whopper 10 times bigger than the black hole in our own Milky Way.
 - **Formation:** The researchers believe the black hole formed from colossal clouds of gas that collapsed in a galaxy next door to one with stars.
 - The two galaxies merged, and the black hole took over.
- **How was it discovered?**
 - The two space telescopes — Webb and Chandra — used a technique called **gravitational lensing** to **magnify the region of space** where this galaxy, UHZ1, and its black hole are located.
 - The telescopes used the light from a **much closer cluster of galaxies**, a mere 3.2 billion light-years from Earth, to magnify **UHZ1** and its black hole much farther in the background.
 - With X-rays we can capture the gas that is being gravitationally pulled into the black hole, sped up and it starts glowing in the X-rays.

The Webb Telescope

- **About:**
 - Launched in 2021, Webb is the **biggest and most powerful astronomical observatory** ever sent into space; it sees the universe in the **infrared**.
 - It is the **world's premier space** science observatory.
 - It will solve mysteries in our solar system, **look beyond distant worlds** around other stars, and probe the mysterious structures and origins of our universe and our place in it.
 - NASA's \$10 billion James Webb Telescope was developed with the **assistance of the European Space Agency** and the **Canadian Space Agency**.
 - The telescope launched on an **Ariane 5** from Europe's Spaceport in **French Guiana**.

Chandra x-ray observatory

- The much older Chandra has X-ray vision; it rocketed into orbit in 1999.
- Chandra allows scientists worldwide to obtain X-ray images of exotic environments to help understand the structure and evolution of the universe.
- The Chandra X-ray Observatory is part of NASA's fleet of "Great Observatories" along with the Hubble Space Telescope, the Spitzer Space Telescope and the now deorbited Compton Gamma Ray Observatory.

What are Quasars?

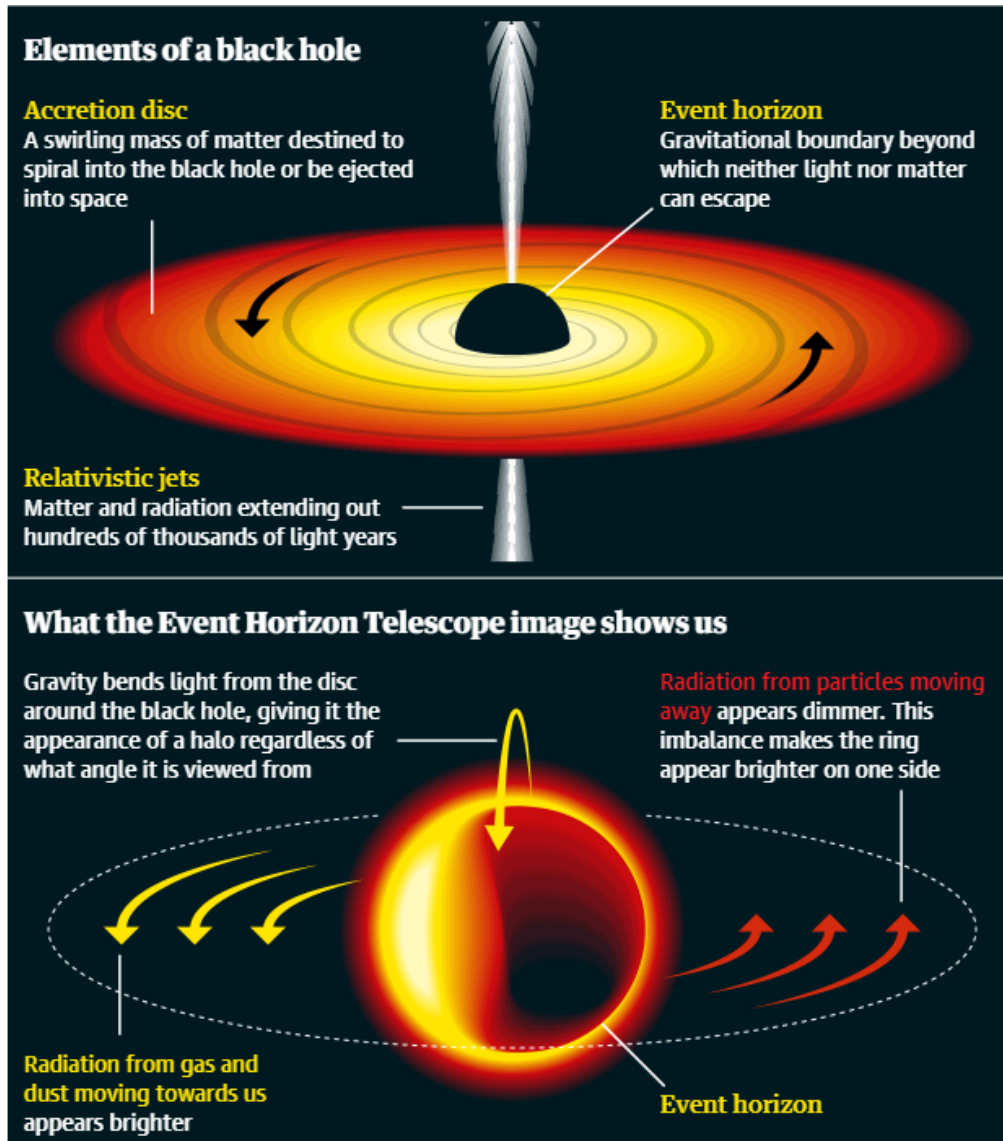
- A quasar (also known as a QSO or quasi-stellar object) is an extremely luminous active galactic nucleus (AGN).
- Quasars were first discovered six decades ago. They are located in supermassive black holes, which sit in the centre of galaxies.
- As a supermassive black hole feeds on gas and dust, it releases extraordinary amounts of energy in the form of radiation, resulting in a quasar.
- Black hole is a point in space where matter is so compressed as to create a gravity field from which even light cannot escape.

Significance of Quasars

- Quasars play a key role in our understanding of the history of the universe, and possibly also the future of the Milky Way.
- Quasars act as “cosmic lighthouses”, allowing researchers to see the outer reaches of the universe.
- NASA’s James Webb Space Telescope will study the earliest galaxies in the universe. The telescope is capable of detecting light from even the most distant quasars, emitted nearly 13 billion years ago.

Black Holes

- **About:** It is an astronomical object with a gravitational pull so strong that nothing, not even light, can escape it.
 - A black hole’s “surface,” called its event horizon, defines the boundary where the velocity needed to escape exceeds the speed of light, which is the speed limit of the cosmos.
 - Matter and radiation fall in, but they can’t get out.
- **Role of Einstein's theory:** Most famously, black holes were predicted by Einstein's theory of general relativity, which showed that when a massive star dies, it leaves behind a small, dense remnant core.



Source: TH

Facts In News

QS Asia University Rankings 2024

Syllabus: GS2/Education

In News

- The QS Quacquarelli Symonds has released the **QS Asia University Rankings 2024**.

About

- The Quacquarelli Symonds (QS) is a UK-based company specialised in the analysis of higher education institutions around the world and it ranks institutions on the basis of 10 indicators.
- 2024 Ranking features a total of **856 Universities** out of which 148 Universities are from India.

Findings

- A total of **seven Indian institutions** feature in the **top 100 ranks** of QS World University Rankings.
- The **Indian Institute of Technology Bombay (IIT Bombay)** grabbed the top spot in India with the **40th position** followed by **IIT-Delhi at the 46th position** and **IIT-Madras at the 53rd position**.
- **IIT Kharagpur** was ranked **59** and **IIT Kanpur** was ranked **63**.
- The **two non-IIT institutions** from India in top 100 Asia ranks are **Indian Institute of Science Bangalore and Delhi University**.
- With 148 universities in the ranking list, India also becomes the country in Asia with the **highest number of universities being featured** surpassing China with 133 and Japan with 96 universities.
- **Peking University, Beijing** has been listed as the best in the region.

Source: [IE](#)

India's Hypertension Map

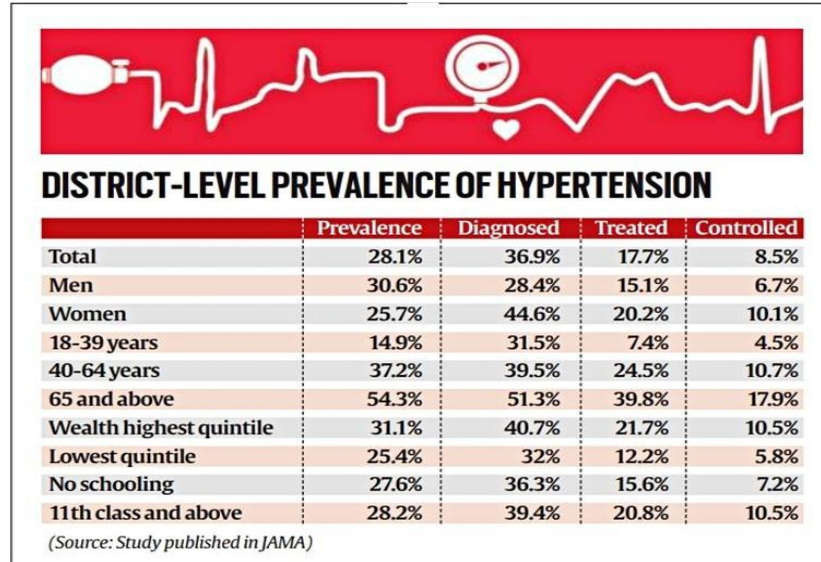
Syllabus: GS3/Science and Technology

In News

- According to the recent study based on **National Family Health Survey data**, there is a significant variation in the level of prevalence, diagnosis, treatment, and control of hypertension within Indian states and districts.

Key Findings of Study

- Hypertension prevalence in **southern states slightly exceeded the national average** (29.9% vs. 26.8%).
- In Meghalaya, the prevalence of **hypertension was similar in the districts of Garo Hills, Jaintia Hill and Khasi Hills** but the proportion of those diagnosed was lower in Garo Hills as compared to Khasi Hills and Jaintia Hills.
- Men are **more prone to hypertension**. But women are more likely to be diagnosed, treated and have controlled blood pressure.
- The prevalence, diagnosis, treatment, and control were all higher among those over the age of 65 years when compared with youngsters.



What is Hypertension?

- **Hypertension (high blood pressure)** is when the pressure in your blood vessels is too high (140/90 mmHg or higher).
- It can happen because of **unhealthy lifestyle choices** like unhealthy diet, obesity, lack of exercise, genetics, age, stress, and certain medical conditions.
- An estimated **1.28 billion adults aged 30–79 years** worldwide have hypertension, most (two-thirds) living in low- and middle-income countries.

Govt of India Initiatives

- India has set a target of 25% relative reduction in the prevalence of hypertension (raised blood pressure) by 2025.
- Launched the Indian Hypertension Control Initiative (IHCI) to fast-track access to treatment services for over 220 million people in India who have hypertension.

Source: [IE](#)

e-FIR

Syllabus: GS2/Polity

In News

- The Law Commission of India recommended that “in cases where the accused is not known, registration of an e-FIR should be allowed for all cognisable offences”.
 - Where an accused is known, e-FIRs may be allowed for offenses punishable up to three years under the Indian Penal Code (IPC).

About

- **e-FIR** is obtaining information/complaint through electronic means using a common national portal or state portals.
- Verification of e-FIR needs to be done with OTP received on complainant phone and uploading valid Id like Aadhaar.
- It needs to be signed by the complainant physically within three days to convert the complaint into an actual FIR.

Cognisable and Non-Cognisable Offences

- Cognizable offences case means a case in which a police officer can arrest the accused without warrant.
- Non-cognizable offences case means a case in which a police officer has no authority to arrest without warrant.

Source: [TH](#)

Pralay' Missile

Syllabus: GS3/Internal Security

In News

- India successfully test-fires 'Pralay' missile from Odisha coast.

About

- It is a short-range, surface-to-surface ballistic missile (SRBM).
- **Developed by:** Defence Research and Development Organisation (DRDO).
- **Range:** 150-500km.
- **Speed:** 1to6 Mach.
- **Payload capacity:**500-1,000 kg.
- It has been developed for deployment along the Line of Actual Control (LAC) and Line of Control (LoC).

Ballistic and Cruise Missile

- Ballistic missiles are based on rocket technology and follow the principle of projectile.
- Cruise missiles are based on jet technology and travel only in endoatmosphere and thus are difficult to detect by ground-based radars.

Source: [TH](#)

PRALAY: Surface-to-Surface Missile

Pralay is a canisterised tactical, surface-to-surface, and short-range ballistic missile for battlefield use developed by the Defence Research and Development Organisation of India

ENGINE: **Two stage** rocket motor with third stage MaRV

SPEED: **Mach 1 to 1.6**

RANGE: **150-500 km**

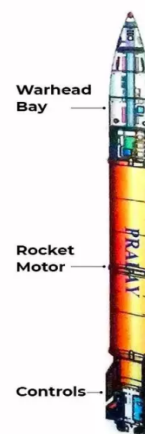
TRAJECTORY: **low**

GUIDANCE SYSTEM: Inertial navigation system

LAUNCH PLATFORM: **8x8 BEML-**Tatra transporter erector launcher

MASS: **5 tonnes** (4.9 long tons; 5.5 short tons)

OPERATIONAL RANGE: **150-500 km** (93-311 mi)



Can change its path after covering certain range mid-air and is difficult to be tracked

It is capable of being launched from a mobile launcher and has latest navigation system and integrated avionics

It has the capability to defeat interceptor missiles

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First-past-the-post voting system and the mixed member proportional (MMP) system

Syllabus: GS2/Polity

In News

- The MMP (Mixed Member Proportional) system used in New Zealand differs significantly from India's first-past-the-post (FPTP) voting system.

Differences

Aspect	MMP System	FPTP System
Number of Votes	Two votes - Party vote and Electorate vote	One vote - For a local candidate

Determination of Party Representation	Party vote determines party composition in the Parliament	The candidate who gets the most votes in a constituency wins a seat
Allocation of List Seats	Parties submit ranked party lists, and MPs are elected from these lists to ensure proportional representation.	No provision for party list seats; each constituency elects only one candidate.
Representation of Marginalized Groups	Improved representation of women, indigenous communities, etc.	May have lower representation of marginalized groups.
Entry Barriers for Young Politicians	Lower entry barriers for young politicians.	May have higher entry barriers for young politicians as they often need to compete against established candidates in individual constituencies.
Countries with this System	New Zealand, Germany, Scotland, and other countries use variations of the MMP system.	Used in countries like the United Kingdom, the United States, Canada, and India.

Source: [TH](#)

MiG-21

Syllabus: GS3/ Defence

In News

The Number 4 Squadron (Oorials) of the Indian Air Force (IAF) based at Air Force Station Uttarlai (Barmer) is converting from the **MiG-21 to the Su-30 MKI**.

- This change signifies the unwavering commitment of the Indian Air Force to modernise and at the same time protect the skies of the nation.

About MiG-21

- The (Mikoyan-Gurevich)MiG-21 was the **first supersonic fighter** in service of the IAF and was inducted in 1963.
 - The purchase of 12 MiG-21 fighters from the **Soviet Union** and for Soviet technical assistance in setting up production facilities for the fighter in India was followed by the procurement of SA-2 (Dvina) surface-to-air missiles
- It has **participated in all major conflicts** since then.
- More than 800 variants of the supersonic fighter have been inducted into service, and it remained the frontline fighter jet of the IAF for a long time.
- The **IAF now has two MiG-21 squadrons** in service comprising the upgraded Bison variants, the No. 3 squadron 'Cobras' at Bikaner and No. 23 squadron 'Panthers' at Suratgarh, which will be phased out by 2025

Do you know ?

- In the last few years, the IAF has inducted two squadrons of the LCA Tejas and two squadrons of Rafale fighter jets procured from France which pushed the squadron strength to over 30.
- In January 2021, the IAF signed a contract with Hindustan Aeronautics Limited (HAL) for 83 LCA Mk1A which it will start receiving from early 2024 onwards.

Source:[TH](#)