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NON-ALIGNED MOVEMENT (NAM)

Members of the Non-Aligned Movement (NAM) should harness the initiative to advance the aspirations of the Global South, said Minister of State for External Affairs.



Background: The Non-Aligned Movement was formed during the Cold War as an organization of States that did not seek to formally align themselves with either the United States or the Soviet Union, but sought to remain independent or neutral.

Origin: The basic concept for the group originated in 1955 during discussions that took place at the Asia-Africa Bandung Conference held in Indonesia.

Foundation: The Non-Aligned Movement was founded and held its first conference in Belgrade, Yugoslavia, in 1961 under the leadership of Josip Broz Tito of Yugoslavia, Gamal Abdel Nasser of Egypt, Jawaharlal Nehru of India, Kwame Nkrumah of Ghana, and Sukarno of Indonesia.

Objective: The purpose of the organization was enumerated in Havana Declaration of 1979 to ensure "the national independence, sovereignty, territorial integrity and security of non-aligned countries" in their struggle against imperialism, colonialism, neo-colonialism, racism, and all forms of foreign subjugation.

Members: It has 120 members comprising 53 countries from Africa, 39 from Asia, 26 from Latin America and the Caribbean and 2 from Europe (Belarus, Azerbaijan). There are 17 countries and 10 international organizations that are Observers at NAM.

Significance: During the cold war era, the NAM played a vital role in stabilizing the world order and preserving peace and security. Non alignment of NAM doesn't mean the neutrality of state on global issues, it was always a peaceful intervention in world politics.

Panchsheel: The principles of NAM was largely guided by Panchsheel principles, some of them are:

- Respecting each other's territorial integrity and sovereignty.
- Not to take aggressive action against each other.
- Not to interfere in each other's internal matters.
- To follow the policy of equality and mutual benefit.
- Believe in the policy of peaceful co-existence.



FOREST RIGHTS ACT (FRA)

The Chhattisgarh High Court for the first time, addressed the question of whether forest rights granted under the 2006 Forest Rights Act (FRA) can be revoked or cancelled, given that the law does not explicitly provide for any such measure.

Forest Rights Act

Enacted in 2006, the Forest Rights Act came into effect in 2008. Considered a landmark piece of legislation as it attempts to correct historical injustices against forest dwellers in the colonial era and in independent India, it recognises forest dwellers' individual rights over their land and a village's rights to manage and conserve the forest:

Individual Forest Rights: Any person belonging to a scheduled tribe can claim rights to live in and cultivate up to 4 ha if he occupied it and depended on it as of December 13, 2005. A non-tribal, in addition, will have to prove his family's residence in the vicinity of the forest for 75 years prior to December 2005

community Forest Rights: The Act recognises the rights of a gram sabha over forest land within the village boundaries or seasonal use of landscape for pastoral communities. This allows the villagers to own and collect, use and dispose of minor forest produce besides timber, including the right to use grazing land and water bodies and the right to protect and regenerate any community resource, among others

- Landmark legislation: The Forest Rights Act, 2006 (officially known as the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act) is a landmark legislation aimed at recognizing and securing the rights of forest-dwelling communities in India.
- Reasons behind bringing the Act:
 - The FRA, 2006 was implemented to recognize and vest the forest rights and occupation in forest land in forest dwelling Scheduled Tribes and other traditional forest dwellers who have been residing in such forests for generations but whose rights could not be recorded.
 - The Act also aimed to undo the historical injustice occurred to the forest dwelling communities due to the forest management policies of colonial and post-colonial India, which did not acknowledge their symbiotic relationship with the forests.
 - The Act further intended to empower the forest dwellers to access and use the forest resources in a sustainable manner, to conserve the biodiversity and ecological balance, and to protect them from unlawful evictions and displacement.



- Major provisions of the Act:
 - The Act recognizes and vests the forest rights and occupation in Forest land in Forest Dwelling Scheduled Tribes (FDST) and Other Traditional Forest Dwellers (OTFD) who have been residing in such forests for generations.
 - Forest rights can also be claimed by any member or community who has for at least three generations (75 years) prior to the 13th day of December, 2005 primarily resided in forest land for bona fide livelihood needs.
 - The Gram Sabha is the authority to initiate the process for determining the nature and extent of Individual Forest Rights (IFR) or Community Forest Rights (CFR) or both that may be given to FDST and OTFD.
- Four types of rights, identified by the Act:
 - Title rights: It gives FDST and OTFD the right to ownership to land farmed by tribals
 or forest dwellers subject to a maximum of 4 hectares. Ownership is only for land that
 is actually being cultivated by the concerned family and no new lands will be granted.
 - Use rights: The rights of the dwellers extend to extracting Minor Forest Produce, grazing areas etc.
 - Relief and development rights: To rehabilitate in case of illegal eviction or forced displacement and to basic amenities, subject to restrictions for forest protection.
 - Forest management rights: It includes the right to protect, regenerate or conserve or manage any community forest resource which they have been traditionally protecting and conserving for sustainable use.
- Importance: It strengthens the conservation regime of the forests while ensuring livelihood and food security of the FDST and OTFD.

GREEN CRACKERS

Ahead of Deepavali, the Supreme Court relaxed the blanket ban on fireworks in Delhi and the National Capital Region (NCR) and allowed the sale of green fireworks approved by Petroleum and Explosives Safety Organisation (PESO).

Toxic nature Conventional firecrackers contain chemicals which produce effects like bright lighting and colours. However, these chemicals can have adverse effects on human health and the environment		
Initial ingredient	Use in crackers	Health hazards
Charcoal, potassium nitrate and sulphur	Black powder which is the primary fuel in the cracker	The dust released is hazardous when inhaled; different compounds formed can be carcinogenic
Strontium and lithium	Colouring agent (Red)	Strontium can replace calcium in the body which can be toxic; Lithium releases harmful fumes
Barium	Colouring agent (Orange)	Fumes can cause respiratory and other health issues
Nitrates, chlorates/ perchlorates	Oxidising agents	The compounds can hamper the growth of small children; they remain airborne for days and can be poisonous



- Nature: Green crackers are dubbed as 'eco-friendly' crackers and are known to cause less air and noise pollution as compared to traditional firecrackers.
- Designed by: These crackers were first designed by the National Environmental and Engineering Research Institute (NEERI), under the aegis of the Council for Scientific and Industrial Research (CSIR) in 2018.
- Objective: These crackers replace certain hazardous agents in traditional crackers with less polluting substances with the aim to reduce the noise intensity and emissions.
- Range of sound: Regular crackers also produce 160-200 decibels of sound, while that from green crackers are limited to about 100-130 decibels.

• Features:

- Most green crackers do not contain barium nitrate, which is the most dangerous ingredient in conventional crackers.
- Green crackers use alternative chemicals such as potassium nitrate and aluminium instead of magnesium and barium as well as carbon instead of arsenic and other harmful pollutants.

• Types of green crackers:

- SWAS Safe Water Releaser: These crackers do not use sulphur or potassium nitrate, and thus release water vapour instead of certain key pollutants. It also deploys the use of diluents, and thus is able to control particulate matter (PM) emissions by upto 30%.
- STAR Safe Thermite Cracker: Just like SWAS, STAR also does not contain sulphur and potassium nitrate, and besides controlling particulate dust emissions, it also has lower sound intensity.
- SAFAL Safe Minimal Aluminium: It replaces aluminium content with magnesium and thus produces reduced levels of pollutants.
- Production: All three types of green crackers can currently only be produced by licensed manufacturers, approved by the CSIR.
- Certification: The Petroleum and Explosives Safety Organisation (PESO) is tasked with certifying that the crackers are made without arsenic, mercury, and barium, and are not loud beyond a certain threshold.

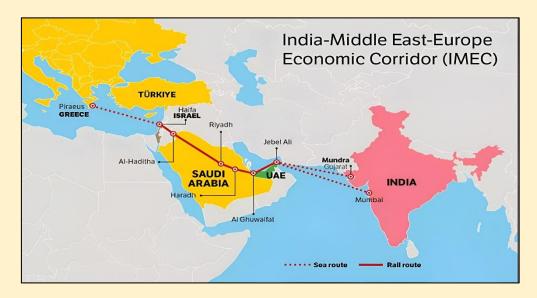
About Petroleum and Explosives Safety Organisation (PESO):

- Ministry: PESO is an office under the Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industries.
- Establishment: It was established in 1898 as a nodal agency for regulating safety of substances such as explosives, compressed gases and petroleum.
- Head office: Its head office is located in Nagpur, Maharashtra.



INDIA-MIDDLE EAST-EUROPE ECONOMIC CORRIDOR (IMEC)

The IMEC visualises the upgradation of maritime connectivity between India and the Arabian Peninsula, as well as high-speed trains running from the ports in the UAE to the Haifa port in Israel through Saudi Arabia and Jordan.

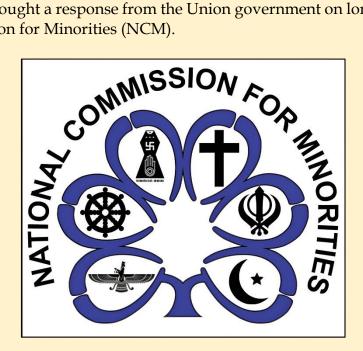


- Launch: The IMEC is a strategic multi-modal connectivity initiative launched through a Memorandum of Understanding (MoU) during the G20 Summit 2023 in New Delhi.
- Members: Signatories include India, US, Saudi Arabia, the United Arab Emirates, France, Germany, Italy and the European Union.
- Objective: It aims to develop an integrated network of ports, railways, roads, sea lines, energy pipelines, and digital infrastructure aimed at enhancing trade between India, the Middle East, and Europe.
- Alternative to BRI: IMEC seeks to position itself as a viable alternative to China's Belt and Road Initiative (BRI) by promoting transparent, sustainable, and debt-free infrastructure without compromising national sovereignty.
- Part of PGII: The initiative is a part of the Partnership for Global Infrastructure and Investment (PGII), launched by the G7 in 2021.
- Focus on cooperation: IMEC includes energy pipelines, clean energy infrastructure, and undersea cables to enhance trade and energy cooperation.
- Corridors: IMEC has two parts the Eastern Corridor (India to Gulf) and the Northern Corridor (Gulf to Europe).
- Significance for India:
 - IMEC is set to reduce logistics costs by up to 30% and transportation time by 40%, compared to the Suez Canal Maritime route making Indian exports more competitive globally.
 - In sync with OSOWOG: India's One Sun One World One Grid (OSOWOG) initiative aligns with IMEC's energy goals, enabling India to harness solar and green hydrogen power from the Middle East, a region rich in renewable energy potential.
 - It will attract Foreign Direct Investment into India, particularly in infrastructure, logistics, green energy, and digital technologies, helping India access low-cost renewable energy and transition to a low-carbon economy.
- Setback: The project faced a major setback due to the Israel-Hamas conflict in 2023. Geopolitical instability in the Middle East has temporarily slowed momentum.



NATIONAL COMMISSION FOR MINORITIES (NCM)

The Delhi High Court sought a response from the Union government on long-pending vacancies in the National Commission for Minorities (NCM).



- Genesis: The Minorities Commission (MC) was established in 1978 through a Ministry of Home Affairs Resolution and was moved to the newly created Ministry of Welfare in 1984.
- Nature: It is a statutory body established under the National Commission for Minorities Act, 1992. The first statutory Commission was constituted on 17th May 1993. In 1988, the Ministry of Welfare excluded linguistic minorities from the Commission's jurisdiction.
- Objective: It was formed with the vision to safeguard and protect the interests of minority communities.
- Composition: It consists of a Chairperson, a Vice-Chairperson, and five Members, all nominated by the Central Government but absence of a full body has led to concerns over inefficiency.
- Eligibility of members: Each member must belong to one of the six notified minority communities: Muslim, Christian, Sikh, Buddhist, Parsi, and Jain.
- Powers: It has quasi-judicial powers and each member serves a three-year term from the date they assume office.
- Removal: The Central Government may remove the Chairperson or any Member of the NCM if they:
 - Are adjudged insolvent,
 - Take up paid employment outside their duties,
 - Refuse or become incapable of acting,
 - Are declared of unsound mind by a court,
 - Abuse their office, or
 - Are convicted of an offence involving moral turpitude.

About Minorities in India:

- Not defined by Constitution: The Constitution of India does not provide a definition for the term 'Minority', but the Constitution recognises religious and linguistic minorities. The NCM Act, 1992 defines a minority as "a community notified as such by the Central government.
- List of Minority Communities: As per a 1993 notification by the Ministry of Welfare, the Government of India initially recognized five religious communities – Muslims, Christians, Sikhs, Buddhists, and Zoroastrians (Parsis) as minority communities. Later, in 2014, Jains were also notified as a minority community.



HENLEY PASSPORT INDEX

In a changing global mobility landscape, both India and the United States have seen notable drops in their passport power, according to the 2025 Henley Passport Index, which ranks the world's most travel-friendly passports.



- Nature: The Henley Passport Index ranks global passports based on the number of destinations their holders can travel to without a visa, with data sourced from the International Air Transport Association (IATA).
- Definition of a powerful passport: It is defined by travel openness, the freedom to enter more countries without having to deal with visa applications, long processing times, or bureaucratic hurdles.
- Published by: It is compiled and published by Henley & Partners, a global citizenship and residence advisory firm.
- Findings from Henley Passport Index 2025:
 - Leading the rankings in 2025 are three Asian countries: Singapore holds the top spot with access to 193 destinations visa-free, followed by South Korea with 190 destinations and Japan with 189 destinations.
 - India's passport has fallen to 85th place, offering visa-free access to 57 countries, down from 59 in 2024. This marks a further decline from the 77th position earlier this year, underscoring a steady reduction as per the index.
 - For the first time in the Index's 20-year history, the United States has dropped out of the global top 10. The US passport now ranks 12th, tied with South East Asian Malaysia, offering visa-free access to 180 destinations out of 227.



NATIONAL SECURITY GUARD (NSG)

A new hub of the National Security Guard (NSG), the elite counter-terror and counter-hijack force, will be established at Ayodhya in Uttar Pradesh.

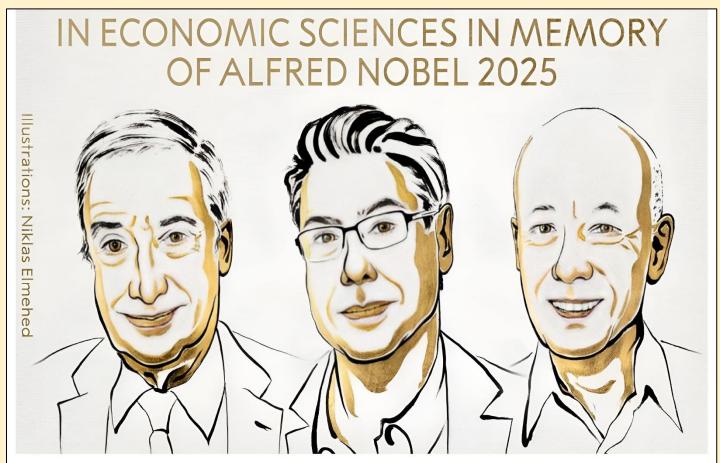


- Establishment: The NSG is a counter-terrorism unit that formally came into existence in 1986 by an act of Parliament- 'National Security Guard Act, 1986'.
- Incidents that led to its formation: The idea behind raising such force came in the aftermath of Operation Blue Star in 1984, Akshardham Temple attack and the assassination of former PM Indira Gandhi.
- Objective: It aims for 'combating terrorist activities with a view to protect states against internal disturbances.'
- Specialisations: The NSG is trained to conduct counter-terrorist task including counter hijacking tasks on land, sea, and air; Bomb disposal (search, detection, and neutralization of IEDs), Post Blast Investigation (PBI), and Hostage Rescue missions.
- Distinctive uniform: The NSG personnel are often referred to in the media as Black Cat Commandos because of the black outfit and black cat insignia worn on their uniform.
- Motto: The motto of 'Sarvatra, Sarvottam, Suraksha' has always been upheld by it with a
 focus on its basic philosophy of swift and speedy strike and immediate withdrawal from the
 theatre of action.
- Ministry: It operates under the Ministry of Home Affairs and is a task-oriented force that has two complementary elements in the form of:
 - Special Action Group (SAG) comprising of the Army personnel- is the main offensive or the strike wing of the NSG, and
 - Special Ranger Groups (SRG) comprising of personnel drawn from the Central Armed Police Forces/State Police Forces. They generally handle VIP securities.



NOBEL PRIZE IN ECONOMICS

The Nobel prize in Economics was declared for year 2025 by Royal Swedish Academy of Sciences.



Joel Mokyr (US-Israel), Philippe Aghion (France) and Peter Howitt (Canada) win economics Nobel | Photo Credit: © Johan Jarnestad/The Royal Swedish Academy of Sciences

- Awardees: Joel Mokyr, Philippe Aghion and Peter Howitt won the 2025 Nobel economics prize. Mr. Mokyr was awarded half the prize with the other half being shared between Aghion and Howitt.
- Awarded for: They were awarded the Nobel economics prize for "having explained innovation-driven economic growth."
- Significance: The laureates have taught us that sustained growth cannot be taken for granted.
- Economic stagnation, not growth, has been the norm for most of human history. Their work shows that we must be aware of, and counteract, threats to continued growth.



SNOW LEOPARD

Snow leopard that inhabits the rugged ranges of 12 Asian countries, including India, has the lowest genetic diversity of any big cat species in the world, even lower than that of the dwindling cheetah.



Physical features

- Extra paws: Its extra large paws act like a pair of natural snow shoes preventing the cat from sinking into the snow.
- Short ears: Its round, short ears reduce heat loss, and the wide, short nasal cavity warms the air before it reaches the cat's lungs.
- Longer hind limbs: The cat has strong, short front limbs and longer hind limbs helping launch the cat up to 30 feet (10 meters) in one leap.

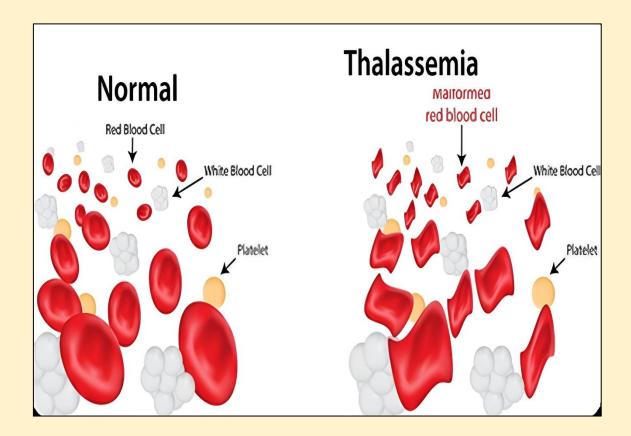
• Difference with other cats:

- Unlike other big cats, snow leopards can't roar.
- Despite being called the snow 'leopard', this big cat is more closely related to the tiger than the leopard.
- Habitat: Snow leopards (Panthera uncia) are considered medium-sized cats that are known for their elusive nature and ability to thrive in harsh, high-altitude environments.
- Native areas: They are native to the mountains of Central and South Asia and typically found at elevations between 9,800 and 17,000 feet in mountain ranges, including the Himalayas.
- Adaptations: They are known as "ghosts of the mountains" due to their elusive nature and ability to blend into their surroundings.
- Reproduction: They usually mate between January and March, a time when both sexes mark their territories intensively leaving signs such as scrapes, faeces, urine and scent-spray in prominent locations along their travel routes.
- Ecological Importance: They serve as top predators and Indicator species, as their presence reflects the health of their high-altitude ecosystems. Their kills provide food for scavengers like vultures and wolves, supporting other species.
- Conservation status:
 - o IUCN: Vulnerable
 - CITES: Appendix 1
 - Wildlife (Protection) Act, 1972 :- Schedule 1



THALASSEMIA

Thalassemia patients flagged shortage of leukocyte filter sets and iron chelation drugs in Kerala.



- Nature: Thalassemia is an inherited blood disorder that reduces the body's ability to produce normal hemoglobin, leading to fewer healthy red blood cells and anemia.
- Cause: Thalassaemia is caused by inheriting a gene mutation (change in the normal DNA) from one or both parents.
- Symptoms: Symptoms range from growth issues, delayed puberty, and bone abnormalities in mild cases to poor appetite, jaundice, dark urine, and facial bone irregularities in severe cases.
- Types of Thalassemia:
 - Alpha Thalassemia: It is caused by defective alpha-globin genes inherited from both parents.
 - Beta Thalassemia: It is caused by defects in beta-globin genes.

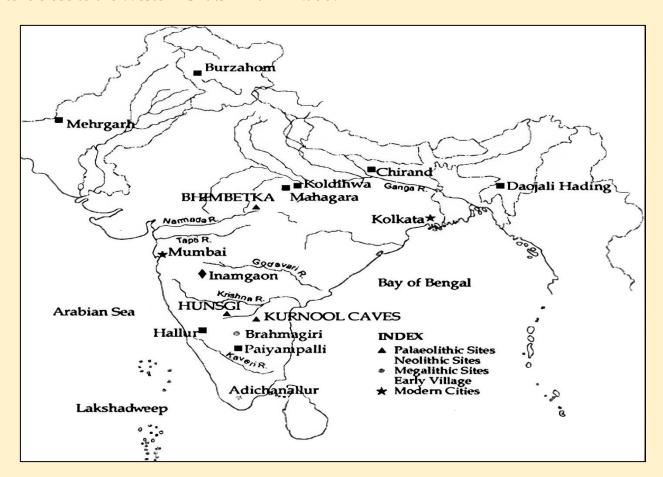
Treatments:

- Blood transfusions regular blood transfusions treat and prevent anaemia; in severe cases these are needed around once a month.
- Chelation therapy treatment with medicine to remove the excess iron from the body that builds up as a result of having regular blood transfusions.
- The only possible cure for thalassaemia is a stem cell or bone marrow transplant, but this is not done very often because of the risks involved.



IRON AGE CULTURE

The first season of excavations carried out by the Tamil Nadu State Department of Archaeology (TNSDA) at Thirumalapuram in Tenkasi district has brought to light the presence of Iron Age culture close to the Western Ghats in Tamil Nadu.



- According to 'Archaeological Excavations in Tamil Nadu: A Preliminary Report', the burial site at Thirumalapuram covers nearly 35 acres and lies about 10 km northwest of the presentday village, between two seasonal streams that rise from the Western Ghats near the Kulasegarapereri tank.
- The excavations also yielded a rich collection of ceramics found in graves and among grave goods. These included white-painted black-and-red ware, red ware, red-slipped ware, black-polished ware, and coarse red ware.
- The black-and-red ware, black ware, and black-slipped ware types had white-painted designs, a unique feature first reported from T. Kallupatti and later from Adichanallur, Sivagalai, Thulukkarpatti, and Korkai.
- According to the report, symbols on the urns were among the most striking discoveries at Thirumalapuram. One red-slipped pot featured dotted designs showing a human figure, a mountain, a deer, and a tortoise.
- A total of 78 antiquities made of bone, gold, bronze, and iron were also found. They include a tweezer, sword, spearhead, gold ring, axe, dagger, chisel, bonehead, and arrowhead.



About Iron Age:

- Nature: The Iron Age is a prehistoric period that followed the Bronze Age, characterized by the widespread use of iron for tools, weapons, and other implements.
- Various cultures associated with it:
 - Black-and-Red Ware (BRW): It is characterized by distinctive pottery with black interiors and red exteriors due to inverted firing techniques. It is found in Harappan context (Gujarat), Pre-PGW context (northern India), and Megalithic context (southern India).
 - Painted Grey Ware (PGW) Culture: It is characterized by grey pottery with black geometric patterns. Iron reported at multiple sites in the Ganga valley and South Indian Megaliths (1st millennium BCE).
 - Northern Black Polished Ware (NBPW) Culture: It is characterized by wheel-made pottery which is fine, black, and highly polished. It is significant in north India.
 - Megalithic Culture: Megaliths (large stones used to construct a prehistoric structure), linked to iron, are found in the Vindhyas (southern Uttar Pradesh), Vidisha region, and much of South India.

WORLD FOOD DAY 2025

World Food Day 2025, observed on 16 October, focuses on global food security and sustainable agriculture. The theme, Hand in Hand for Better Foods and a Better Future, stresses worldwide cooperation to transform food systems. India's recent strides in food production, nutrition, and public distribution show its commitment to combating hunger and malnutrition.

Significance of World Food Day

World Food Day commemorates the founding of the Food and Agriculture Organization (FAO) in 1945.

It raises awareness about food security challenges and promotes sustainable agricultural practices. Over 150 countries participate annually, emphasising collective action for hunger eradication and sustainable food systems.





India's Progress in Food Production

India has seen increases in foodgrain, fruit, and vegetable production over the last decade. It leads globally in milk and millet production and ranks second in fish, fruit, and vegetable output.

Agricultural exports have almost doubled in 11 years. Honey and egg production have also doubled since 2014, reflecting enhanced agricultural productivity and diversification.

Key Government Schemes for Food Security

India's food security framework balances production and distribution through major schemes:

National Food Security Mission (NFSM) – Launched in 2007-08, it boosts production of rice, wheat, pulses, and coarse cereals while improving soil health and farmer incomes.

Renamed National Food Security & Nutrition Mission (NFSNM) in 2024-25, it now integrates nutrition goals. – National Food Security Act (NFSA), 2013 – Covers over 78 crore beneficiaries, guaranteeing subsidised foodgrains to priority households and Antyodaya Anna Yojana families. Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY) – Provides free foodgrains to vulnerable groups, extended till 2028 with substantial government funding.

PM POSHAN Scheme – Provides nutritious mid-day meals to children in government schools to improve health and attendance.

Rice Fortification and Nutrition Enhancement

India's rice fortification programme began in 2019 to combat micronutrient deficiencies.

Fortified rice kernels contain iron, folic acid, and vitamin B12, blended with regular rice. By March 2024, all rice under central schemes was fortified. The government has approved continuation of universal fortified rice supply till 2028.

Modernisation of Public Distribution System

The SMART-PDS initiative aims to digitise and streamline foodgrain procurement, supply chain, ration card management, and biometric distribution. The Mera Ration 2.0 app enhances transparency, providing real-time beneficiary data.

Nearly all ration cards are Aadhaar-seeded, and most Fair Price Shops use electronic point-of-sale devices. The One Nation, One Ration Card scheme ensures portability of benefits nationwide.

Market Measures and Pulses Self-Reliance

The Open Market Sales Scheme (Domestic) stabilises foodgrain prices and availability. Bharat Atta and Bharat Rice offer subsidised wheat flour and rice to consumers.

The Mission for Aatmanirbharta in Pulses (2025-31) aims to increase pulse production by expanding cultivation area and supporting two crore farmers, enhancing nutritional security and self-sufficiency.

Global Recognition and Sustainable Diets

World Food India 2025 showcased India as a global food hub with participation from 90+ countries. The Indian Thali diet, rich in plant-based foods, received acclaim for its low environmental impact and nutritional benefits. It exemplifies sustainable food practices that could reduce global resource use by 2050.



INDIA BRAZIL DEFENCE COLLABORATION

India and Brazil have recently intensified their defence collaboration. On 15 October 2025, Defence Minister Rajnath Singh met Brazilian Vice-President Geraldo Alckmin and Defence Minister José Múcio Monteiro Filho in New Delhi. The talks focused on expanding bilateral defence ties, including the potential supply of India's Akash missile system to Brazil.

Recent Defence Talks

The meeting marked step in India-Brazil defence relations. Both sides discussed military cooperation and identified priority areas for joint work.

The talks included possibilities for co-development and co-production of defence equipment. India proposed supplying the Akash surface-to-air missile system to Brazil, enhancing Brazil's air defence capabilities.



Strategic Partnership Context

India and Brazil share a long-standing strategic partnership. Both countries aim to deepen defence ties as part of broader bilateral relations. This cooperation is seen as relevant to global strategic stability. The partnership includes military exchanges, joint exercises, and training visits, encouraging mutual trust and interoperability.

Akash Missile System

The Akash missile is an indigenously developed medium-range surface-to-air missile. It is capable of targeting multiple aerial threats simultaneously. The system is known for its cost-effectiveness and reliability. Exporting Akash to Brazil would mark a key milestone in India's defence exports.

Co-Development and Co-Production Prospects

Both nations expressed interest in exploring joint defence projects. Co-development and coproduction could boost local defence industries in India and Brazil. This collaboration would promote technology transfer and enhance self-reliance. It aligns with India's 'Make in India' and Brazil's defence modernisation goals.



Military-to-Military Exchanges

The leaders reaffirmed commitments to increase military-to-military contacts. Joint exercises and training visits are planned to improve operational coordination. These exchanges help build strategic trust and share best practices. They also prepare forces for potential joint operations.

Impact on Global Defence Dynamics

The India-Brazil defence cooperation reflects shifting global defence partnerships. It signals South-South cooperation beyond traditional alliances. This collaboration may influence regional security balances in Latin America and Asia. It also enhances India's role as a global defence supplier.

SUSTAINABLE AQUACULTURE IN MANGROVE ECOSYSTEMS (SAIME) MODEL

The Nature Environment and Wildlife Society (NEWS) of West Bengal's Sundarbans has earned global acclaim for its Sustainable Aquaculture in Mangrove Ecosystems (SAIME) model. The Food and Agriculture Organization (FAO) of the United Nations honoured NEWS with Global Technical Recognition on 15 October 2025.

This award was given during FAO's 80th Anniversary Celebrations and the World Food Forum in Rome, Italy. SAIME is a pioneering approach that integrates aquaculture with mangrove conservation, climate adaptation, and sustainable livelihoods.

Sundarbans Aquaculture Model Wins FAO Global Recognition

The Sustainable Aquaculture in Mangrove Ecosystems (SAIME) model, developed by Nature Environment and Wildlife Society has received Global Technical Recognition from the UN's Food and Agriculture Organization (FAO).







Background and Recognition

The SAIME model was developed to address the environmental and economic challenges in the Sundarbans, a unique mangrove ecosystem. It promotes aquaculture that sustains 5% to 30% mangrove coverage in shrimp farming ponds.

This balance helps maintain ecosystem health while supporting farmers' incomes. The FAO's recognition marks the global importance of such ecosystem-based approaches amid climate change.

Implementation and Impact

SAIME has been implemented over nearly 30 hectares by 42 fish farmers in North and South 24 Parganas districts.

The farmers cultivate Black Tiger Shrimp (Penaeus monodon) using mangrove litter as natural fodder. This reduces reliance on costly external inputs.

After several years, the average annual net profit for these farmers more than doubled. Cost savings and improved practices contributed to this financial success.

Community Participation and Good Practices

The model emphasises community involvement. Farmers collectively adopt good aquaculture practices that protect mangroves and sustain shrimp production.

The participatory approach ensures shared responsibility and knowledge exchange. It also helps in adapting to climate challenges like sea-level rise, which threatens coastal areas including the Sundarbans.

Environmental and Climate Benefits

SAIME supports coastal resilience by preserving mangroves that act as natural buffers against storms and erosion. The chemical-free shrimp farming reduces environmental pollution.

Mangrove conservation under this model aids carbon sequestration, contributing to climate change mitigation. This integrated approach aligns with global climate action goals and sustainable development.

Significance in the Sundarbans Context

Rampant shrimp farming has altered land use in the Sundarbans, often at the expense of mangroves. SAIME offers a sustainable alternative that balances economic needs with environmental conservation.

It serves as a replicable model for other mangrove regions facing similar pressures from aquaculture expansion and climate threats.



UNITED NATIONS HUMAN RIGHTS COUNCIL

India has secured an unopposed election to the United Nations Human Rights Council for the seventh time. The new term will run from 2026 to 2028.

This repeated election marks India's consistent dedication to promoting human rights globally. India's Permanent Representative to the UN, P Harish, expressed gratitude for the widespread support and affirmed India's commitment to advancing fundamental freedoms during its tenure.



About the UN Human Rights Council

The Human Rights Council is the principal UN body focused on human rights. It has 47 member states elected by the UN General Assembly.

The Council monitors human rights conditions worldwide. It reviews member states' situations and provides a platform for dialogue on human rights issues. Established in 2006, it replaced the earlier Commission on Human Rights to strengthen global human rights governance.

India's Role in the Council

India joined the Council in its inaugural year, 2006. Since then, it has been elected seven times, reflecting its active participation. India advocates for human rights based on its own constitutional values and democratic traditions.

It emphasises cooperation, dialogue, and respect for sovereignty in addressing human rights challenges. India also supports development and capacity-building initiatives within the Council's framework.

Election Process and Significance

Members of the Human Rights Council are elected by the UN General Assembly. Elections are often competitive but India's unopposed election indicates strong diplomatic support. Each term lasts three years with a limit of two consecutive terms.

The Council's membership represents regional groups to ensure geographic balance. Being a member allows countries to influence global human rights policies and respond to violations.

Challenges and Opportunities for India

India faces complex human rights challenges domestically and internationally. Its membership offers a platform to address these issues constructively.

India can promote dialogue on emerging human rights concerns such as digital rights, migration, and climate justice. It can also contribute to reforms in the UN human rights system. India's tenure helps strengthen multilateralism and global cooperation on human rights.

India's Diplomatic Engagement

India's election reflects its growing diplomatic stature. It has built alliances through consistent engagement with other UN members. India's approach combines advocacy with respect for cultural diversity and development needs.

It uses the Council to show issues affecting developing countries. India supports balanced and fair mechanisms to protect human rights without politicisation.



GOMTI REJUVENATION MISSION

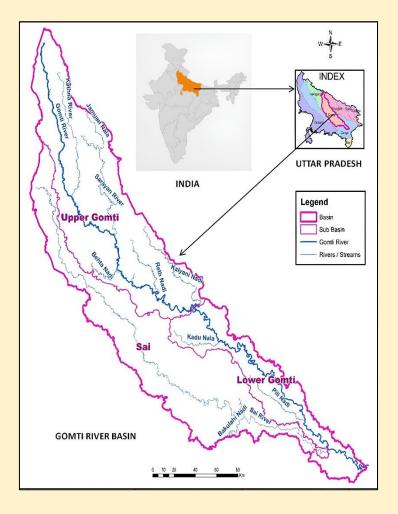
The Uttar Pradesh government launched the Gomti Rejuvenation Mission in October 2025. The mission aims to restore the Gomti River's natural flow by intercepting 95 per cent of urban sewage entering the waterway. Spanning from Pilibhit to Ghazipur, the initiative seeks to revive the river's ecosystem and improve water quality.

Scope and Objectives

The mission covers the entire Gomti river basin. Its primary goal is to ensure the river remains clean, uninterrupted, and pristine. Officials plan to intercept nearly all sewage from urban drains feeding into the river. This will reduce pollution and prevent untreated waste from entering the water.

Sewage Treatment Infrastructure

Currently, six sewage treatment plants (STPs) operate along the river with a combined capacity of 605 million litres per day. The mission includes expanding this capacity by constructing new STPs and upgrading existing ones. Additional drains will be diverted to these treatment plants to prevent untreated discharge.



Pollution Control Measures

The mission targets 39 major drains flowing into the Gomti. Of these, 13 drains currently release untreated sewage. These will be intercepted and treated. The government plans to remove encroachments that have narrowed the river's flow. This will help restore the river's natural width and improve water movement.



Ecological and Beautification Initiatives

New wetlands such as Ekana Wetland and Sajan Lake in Lucknow will be developed to support biodiversity and improve water retention.

Campaigns will focus on removing encroachments, beautifying river ghats, and increasing green cover along the banks. These efforts aim to revive the ecosystem and enhance the river's aesthetic appeal.

Governance and Monitoring

The Gomti Task Force, formed under the National Mission for Clean Ganga, oversees the project. It includes representatives from various state departments and experts. Monthly reviews and quarterly progress reports will ensure accountability. The Chief Minister's Office will closely monitor implementation.

Resource Allocation and Equipment

The government has assured adequate funding for the mission. Essential equipment such as track boats, floating barriers, and excavators will be provided without delay. This will support efficient cleaning and restoration activities along the river.

About Gomti River

It is a tributary of the Ganges (Ganga) River, flowing entirely through the state of Uttar Pradesh.

The river is also known by the names Gumti or Gomati.

Course:

It originates from the Gomat Taal, otherwise called Fulhaar Jheel, a lake located in the Pilibhit District in Uttar Pradesh.

The river drains the area between the Ramganga and Sharda Rivers.

After flowing southwards through the districts of Lucknow, Barabhanki, Sultanpur, Faizabad, and Jaunpur, it joins with the River Ganga.

The river extends to about 900 km.

It drains a basin of about 18,750 sq.km.

The entire Gomti basin is underlain by thick alluvial sediments of the Quaternary age.

The alluvial sediments consist of boulders, pebbles, gravel, sand, silt, clay, and kankars.

The unconsolidated unit may be further subdivided into younger alluvium and older alluvium.

The younger alluvium occupies the present-day flood plains, while the older group occupies elevated portions, mainly the doab portions.

The older alluvium is characterized by kankar nodules at depth otherwise it is similar to the younger alluvium.

It is a perennial river. The river is characterised by sluggish flow throughout the year, except during the monsoon season, when heavy rainfall causes a manifold increase in the runoff.

Significant tributaries of the Gomti include the Sai River, Chowka River, Kathina River, and Saryu River.

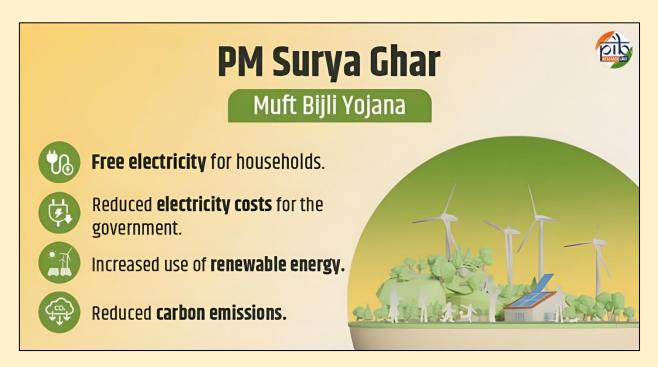
There are various cities that are situated on the banks of River Gomti, such as Sultanpur, Lucknow, Jaunpur, and Lakhimpur Kheri.

Over the years, Gomti has become one of the most polluted rivers in Uttar Pradesh.



PM SURYA GHAR: MUFT BIJLI YOJANA

Despite a near four-fold increase in applications between March 2024 and July 2025, only 13.1% of the targeted 1 crore solar rooftop installations, under the PM Surya Ghar: Muft Bijli Yojana, has been achieved.



- Feature: It is a central scheme to promote the adoption of solar rooftop systems by providing substantial financial subsidies and ensuring ease of installation.
- Objective: It aims to provide free electricity to one crore households in India, who opt to install roof top solar electricity units. The households will be able to get 300 units of electricity free every month.
- Implementation Agencies: The scheme will be executed at two levels.
 - National Level: Managed by the National Programme Implementation Agency (NPIA).
 - State Level: Managed by State Implementation Agencies (SIAs), which are the Distribution Utilities (DISCOMs) or Power/Energy Departments of the respective states or UTs.
- Supervision: As SIAs, DISCOMs are responsible for facilitating various measures to promote rooftop solar adoption, including ensuring the availability of net metres, and conducting timely inspections and commissioning of installations.
- Capping of subsidy: The scheme provides subsidies to reduce the cost of installing solar rooftop systems. The subsidy is capped at a maximum of 3kW capacity.
- Eligibility: Grid-connected rooftop solar systems on residential properties, including roofs, terraces, balconies, and elevated structures are eligible for Central Financial Assistance (CFA).



PUNCH SPACE MISSION

The PUNCH Space Mission, launched by NASA in 2025, is providing new vital information about the solar wind and the Sun's outer atmosphere.

It aims to visualise phenomena previously invisible to scientists. The mission is crucial during the current solar maximum, a period of intense solar activity that affects space weather and human technology.

Overview of the PUNCH Mission

PUNCH stands for Polarimeter to Unify the Corona and Heliosphere. It focuses on the Sun's corona and the solar wind as a connected system. The mission uses advanced imaging to capture the solar wind's behaviour as it moves away from the Sun. This helps scientists understand how solar particles travel through space.

Why Is PUNCH in the News?

- "NASA's PUNCH Mission is gaining attention for its unique approach to studying the Sun's outer atmosphere & space weather.
- First mission using polarization of light to study the Sun's corona in 3D
- Helps predict solar storms that impact GPS, communication, & power grid





Scientific Importance of Visualising Solar Wind

Solar wind is a stream of charged particles released by the Sun. It is invisible to the naked eye and difficult to study.

PUNCH makes this invisible visible by capturing detailed images. This allows researchers to track solar wind patterns and predict space weather events more accurately. Such events can disrupt satellites, power grids and communication systems on Earth.

Solar Maximum and Its Effects

The Sun is currently in a solar maximum phase. This means it has increased sunspots, solar flares and coronal mass ejections. These events release large amounts of energy and particles into space.

PUNCH helps monitor these ejections to improve forecasting. Although exact timings of ejections cannot be predicted, their frequency during solar maximum is known.

Applications in Space Weather Forecasting

Space weather forecasting is vital for protecting technology and astronauts. Solar storms can damage spacecraft and affect GPS and radio signals.

By understanding solar wind dynamics, PUNCH contributes to early warnings. This allows preventive measures to be taken to protect infrastructure on Earth and in space.

Collaborations and Public Engagement

The mission's findings are shared through lectures and scientific collaborations worldwide. Public talks, like the one in Thiruvananthapuram, help raise awareness of space science. Partnerships between NASA, academic institutions and science societies promote knowledge exchange and inspire future research.

FREE TRADE AGREEMENTS (FTAS) & FARMER'S RIGHTS

Recent reports reveal that free trade agreements (FTAs) are increasingly used by wealthy nations to impose strict intellectual property (IP) rules on seeds and biodiversity.

These rules threaten farmers' traditional rights and increase corporate control over agriculture globally. This trend is particularly evident in countries of the global South.

Role of Free Trade Agreements

FTAs now compel many countries to adopt UPOV 1991 standards. These deals are negotiated outside the World Trade Organization (WTO) framework.

Countries in the global South face pressure to accept these restrictive rules. FTAs often include clauses that go beyond WTO requirements, limiting public debate on their impact.

UPOV is an intergovernmental organization established in 1961 to provide an effective system of plant variety protection.

It administers the UPOV Convention, which provides a legal framework for plant variety protection implemented by its members.

Purpose: Under this framework, breeders of new plant varieties are granted an intellectual property right known as the breeder's right, which incentivizes innovation in plant breeding.



The UPOV Convention

The UPOV Convention entered into force in 1968 and was revised in 1972, 1978 and 1991, each time strengthening plant breeders' rights.

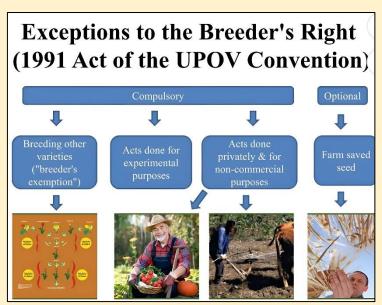
Member countries: 80 members have become members of UPOV. (India is not a member of this organization)

Headquarter: Geneva (Switzerland).

Governance of International Union for the Protection of New Varieties of Plants (UPOV)

The UPOV member countries hold annual meetings of the UPOV Council, a permanent body under the UPOV Convention.

Other UPOV bodies include the Consultative Committee, the Administrative and Legal Committee, and the Technical Committee



Key Players in Enforcing UPOV Rules

The United States, European Union, Australia and Japan have long pushed UPOV-aligned laws through FTAs. Recently, the United Arab Emirates (UAE) has emerged as a new force. The UAE has inserted UPOV-style clauses in agreements with Cambodia, Malaysia and Mauritius. However, India has resisted such pressure.

Implications for Food Sovereignty

The UAE's growing influence in global trade and overseas farming investments raises concerns. Its promotion of UPOV standards threatens food sovereignty worldwide. Corporations gain monopoly control over seeds, undermining farmers' independence. This shift favours industrial agriculture over traditional farming systems.

Additional Legal Measures in FTAs

Besides UPOV, many FTAs require countries to adopt plant patent laws or sign the Budapest Treaty. The Budapest Treaty facilitates patenting of micro-organisms. These measures further extend corporate control over biodiversity. They bypass democratic processes and reduce transparency.

Global Data and Visualisation

A newly updated global dataset maps two decades of FTAs containing UPOV-style seed clauses. It marks countries promoting restrictive seed laws and those pressured to comply. This data reveals the scale and geographic spread of the issue. It shows how trade deals shape agricultural policies worldwide.



WOMEN ENTREPRENEURSHIP PLATFORM(WEP)

The NITI Aayog's Women Entrepreneurship Platform(WEP) and DP World have launched a major programme titled 'We Rise: Women Entrepreneurs Reimagining Inclusive and Sustainable Enterprises'.

This initiative aims to help Indian women-led Micro, Small and Medium Enterprises (MSMEs) expand globally. It focuses on trade facilitation, mentorship, and strategic partnerships to boost women entrepreneurs' international market access.



Recent Initiative and Partnership

The 'We Rise' programme is part of WEP's Award to Reward (ATR) initiative. It was formalised through a Statement of Intent signed by Ms Anna Roy, Mission Director of WEP, in the presence of Shri B.V.R. Subrahmanyam, CEO of NITI Aayog.

DP World brings its global logistics and trade expertise to support 100 selected women entrepreneurs. The collaboration aims to enhance export readiness and strengthen business capacities.

Programme Objectives and Support Mechanisms

The initiative targets high-growth potential women-led MSMEs across India. It offers mentorship and curated interventions to help these enterprises meet global trade standards.

DP World will provide access to its global logistics network. Selected entrepreneurs will also showcase products at Bharat Mart in Dubai, a key international marketplace in the Jebel Ali Free Zone, connecting them to global buyers.

Role of Women Entrepreneurship Platform (WEP)

WEP was incubated by NITI Aayog in 2018 and became a public-private partnership in 2022. It acts as a national aggregator to strengthen India's women entrepreneurship ecosystem.

WEP addresses six ecosystem needs – access to finance, market linkages, training and skilling, mentoring and networking, compliance and legal assistance, and business development services. It currently engages over 90,000 women entrepreneurs and partners with 47 organisations.



Award to Reward (ATR) Initiative

Launched in 2023, ATR institutionalises WEP's partnership framework. It brings together stakeholders to address specific challenges faced by women entrepreneurs.

ATR promotes scalable collaborations and celebrates women's entrepreneurial success. 'We Rise' is a flagship ATR programme focusing on expanding trade access and global growth opportunities.

Significance and Impact

The partnership reflects a commitment to inclusive trade and women-led economic growth. It aligns with the Government of India's vision to create an enabling environment for women entrepreneurs.

The collaboration leverages DP World's supply chain expertise and WEP's ecosystem support to drive long-term impact and sustainable enterprise development.

RAKCHHAM CHITKUL WILDLIFE SANCTUARY

An international bird-watching programme was recently organised at the scenic Rakchham area of the Rakchham-Chitkul Wildlife Sanctuary in Himachal Pradesh.

About Rakchham Chitkul Wildlife Sanctuary

It is located in the Kinnaur district of Himachal Pradesh.

It is spread over an area of 30.98 sq.km.

It is situated at an elevation ranging from 3200 to 5486 meters above sea level.



It is a part of the Western Himalayan range.

It is surrounded by snow-capped mountains, lush green valleys, and gushing rivers.

The perilous Lamkhanga Pass is one of the many trekking routes that pass through this sanctuary. This pass connects the Himachal Pradesh province of Kinnaur to the Uttarakhand region of Gangotri.

Unlike the climate of other sanctuaries in Himachal Pradesh, the sanctuary is located in a dry zone, hence it does not experience monsoons.

Flora: Some of the common flora found in the sanctuary include rhododendrons, oak trees, pine trees, and medicinal herbs.

Fauna: It is also home to various species of wildlife, such as snow leopards, Himalayan black bears, musk deer, and numerous bird species.



SOUTH ATLANTIC ANOMALY

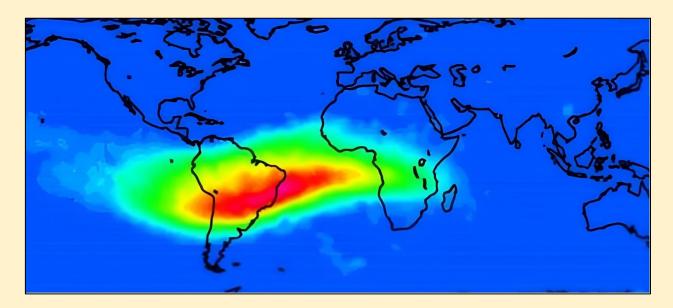
A giant dent in Earth's magnetic field, called the South Atlantic Anomaly, is continuing to expand, according to the latest data from a trio of satellites monitoring our world.

About South Atlantic Anomaly

It is a unique location on Earth where the magnetic field is weaker than normal.

It is southeast of South America and southwest of Africa. In this area, the planet's magnetic field dips down.

It was first identified in the 19th century.



Why does it occur?

Earth's magnetic field acts like a protective shield around the planet, repelling and trapping charged particles from the Sun.

SAA exists because the Earth's inner Van Allen radiation belt comes closest to the planet's surface, causing an increased flux of energetic particles.

This leads to the penetration of solar energetic particles deep into Earth's atmosphere, posing severe problems for airplanes and ships' positioning systems as well as spacecraft electronic systems.

What are the Van Allen Radiation Belts?

The Van Allen radiation belt is a zone of energetic charged particles, most of which originate from the solar wind.

The particles are captured by and held around a planet by that planet's magnetic field.

It surrounds Earth, containing a nearly impenetrable barrier that prevents the fastest, most energetic electrons from reaching Earth.

The outer belt is made up of billions of high-energy particles that originate from the Sun and become trapped in Earth's magnetic field, an area known as the magnetosphere.

The inner belt results from interactions of cosmic rays with Earth's atmosphere.

The Van Allen belts are most intense over the Equator and are effectively absent above the poles.



TAFTAN VOLCANO

New research shows that Taftan volcano in Iran seems to be waking up after a 700,000-year-long sleep.

About Taftan Volcano

It is a 12,927-foot (3,940 meters) semi-active stratovolcano located in southeastern Iran, 56 km from the Pakistan border.

It is the only active volcano in the Makran continental volcanic arc.

It is situated among a rumple of mountains and volcanoes that was formed by the subduction of the Arabian ocean crust under the Eurasian continent.



It hosts an active hydrothermal system and smelly, sulfur-emitting vents called fumaroles.

The volcano contains two summits (Narkuh and Matherkuh).

It isn't known to have erupted in human history.

What is a Stratovolcano?

It is a tall, steep, and cone-shaped type of volcano.

Unlike flat shield volcanoes, they have higher peaks.

They are typically found above subduction zones, and they are often part of large volcanically active regions, such as the Ring of Fire that frames much of the Pacific Ocean.

Stratovolcanoes comprise the largest percentage (~60%) of the Earth's individual volcanoes, and most are characterized by eruptions of andesite and dacite, lavas that are cooler and more viscous than basalt.

These more viscous lavas allow gas pressures to build up to high levels. Therefore, these volcanoes often suffer explosive eruptions.

They are usually about half-half lava and pyroclastic material, and the layering of these products gives them their other common name of composite volcanoes.

At the peak, stratovolcanoes usually have a small crater.

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